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**County specific computer generated reports.*

ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Garden County, Nebraska: Published

Map symbol	Soil name	Acres	Percent
Ao	Alliance Loam, 0 To 1 Percent Slopes-----	3,168	0.3
AoB	Alliance Loam, 1 To 3 Percent Slopes-----	21,813	2.0
Ar	Almeria Fine Sandy Loam, Channeled, 0 To 2 Percent Slopes-----	3,849	0.3
AsF	Ashollow-Tassel Complex, 9 To 30 Percent Slopes-----	29,759	2.7
Bh	Bayard Fine Sandy Loam, 0 To 1 Percent Slopes-----	2,630	0.2
BhB	Bayard Fine Sandy Loam, 1 To 3 Percent Slopes-----	4,789	0.4
BhC	Bayard Fine Sandy Loam, 3 To 6 Percent Slopes-----	1,478	0.1
BmB	Bayard Very Fine Sandy Loam, 1 To 3 Percent Slopes-----	265	*
Bn	Bayard Loam, 0 To 1 Percent Slopes-----	1,585	0.1
BpB	Blanche Loamy Fine Sand, 0 To 3 Percent Slopes-----	444	*
BrF	Blueridge Coarse Sand, 6 To 30 Percent Slopes-----	12,122	1.1
Bw	Broadwater Loamy Sand, Channeled, 0 To 2 Percent Slopes-----	10,242	0.9
BxD	Busher-Tassel Complex, 3 To 9 Percent Slopes-----	1,340	0.1
BxE	Busher-Tassel Complex, 9 To 20 Percent Slopes-----	1,533	0.1
Cw	Crowther Loam, 0 To 1 Percent Slopes-----	1,212	0.1
Cx	Crowther Loam, Wet, 0 To 1 Percent Slopes-----	854	*
DbB	Dailey Loamy Fine Sand, 0 To 3 Percent Slopes-----	5,006	0.5
DdC	Dankworth Loamy Sand, 3 To 6 Percent Slopes-----	2,817	0.3
Dw	Duroc Loam, 0 To 1 Percent Slopes-----	14,598	1.3
Eh	Els Fine Sand, Calcareous, 0 To 2 Percent Slopes-----	4,697	0.4
EuG	Epping-Rock Outcrop Complex, 30 To 60 Percent Slopes-----	5,544	0.5
Fu	Fluvaquents, Sandy, 0 To 1 Percent Slopes-----	1,601	0.1
GP	Gravel Pit-----	43	*
Gt	Gothenburg Loamy Sand, 0 To 2 Percent Slopes-----	7,905	0.7
Hh	Hoffland Fine Sandy Loam, 0 To 1 Percent Slopes-----	6,169	0.6
Ho	Hoffland Fine Sandy Loam, Wet, 0 To 1 Percent Slopes-----	2,709	0.2
INT	Aquolls-----	186	*
IsB	Ipage Fine Sand, Calcareous, 0 To 3 Percent Slopes-----	11,468	1.0
Ja	Jankosh Loam, 0 To 2 Percent Slopes-----	4,932	0.4
JeB	Jayem Loamy Fine Sand, 0 To 3 Percent Slopes-----	11,491	1.0
JeC	Jayem Loamy Fine Sand, 3 To 6 Percent Slopes-----	2,402	0.2
Jg	Jayem Fine Sandy Loam, 0 To 2 Percent Slopes-----	5,087	0.5
JgC	Jayem Fine Sandy Loam, 2 To 6 Percent Slopes-----	5,522	0.5
KeB	Keith Loam, 1 To 3 Percent Slopes-----	24,164	2.2
KeC	Keith Loam, 3 To 6 Percent Slopes-----	6,386	0.6
Ku	Kuma Loam, 0 To 1 Percent Slopes-----	10,286	0.9
La	Lemoyne Sand, 0 To 2 Percent Slopes-----	1,576	0.1
Lb	Lewellen Loam, 0 To 2 Percent Slopes-----	6,060	0.5
Lc	Lewellen-Mcculigan Complex, 0 To 2 Percent Slopes-----	2,625	0.2
Lf	Lodgepole Silt Loam, 0 To 1 Percent Slopes-----	681	*
M-W	Miscellaneous Water (sewage Lagoons)-----	47	*
Ma	Marlake Fine Sandy Loam, 0 To 1 Percent Slopes-----	221	*
Mc	Marlake Mucky Peat, 0 To 1 Percent Slopes-----	7,256	0.7
MtC	Mitchell Very Fine Sandy Loam, 3 To 6 Percent Slopes-----	269	*
MtD	Mitchell Very Fine Sandy Loam, 6 To 9 Percent Slopes-----	148	*
MxF	Mitchell-Epping Complex, 9 To 30 Percent Slopes-----	1,267	0.1
Ru	Rushcreek Loam, 0 To 2 Percent Slopes-----	2,045	0.2
SaB	Sarben Loamy Fine Sand, 0 To 3 Percent Slopes-----	2,374	0.2
SaC	Sarben Loamy Fine Sand, 3 To 6 Percent Slopes-----	11,952	1.1
SaD	Sarben Loamy Fine Sand, 6 To 9 Percent Slopes-----	11,982	1.1
SaE	Sarben Loamy Fine Sand, 9 To 20 Percent Slopes-----	9,326	0.8
Sc	Scoville Loamy Fine Sand, 0 To 2 Percent Slopes-----	9,625	0.9
SnC	Sidney Loam, 3 To 6 Percent Slopes-----	11,022	1.0
StD	Sidney-Canyon Complex, 6 To 9 Percent Slopes-----	3,081	0.3
SuG	Sulco Loam, 30 To 60 Percent Slopes-----	1,623	0.1
SxC2	Sulco-Mcconaughey Complex, 3 To 6 Percent Slopes, Eroded-----	4,699	0.4
SxD2	Sulco-Mcconaughey Complex, 6 To 9 Percent Slopes, Eroded-----	3,074	0.3
SxE2	Sulco-Mcconaughey Complex, 9 To 20 Percent Slopes, Eroded-----	5,974	0.5
SxF	Sulco-Mcconaughey Complex, 9 To 30 Percent Slopes-----	7,062	0.6
TkG	Tassel-Ashollow-Rock Outcrop Complex, 20 To 60 Percent Slopes-----	21,214	1.9
VaD	Valentine Fine Sand, 3 To 9 Percent Slopes-----	92,019	8.3
VaE	Valentine Fine Sand, Rolling-----	171,706	15.5
VaF	Valentine Complex, Rolling And Hilly-----	425,810	38.4
VdB	Valentine Loamy Fine Sand, 0 To 3 Percent Slopes-----	2,674	0.2
Vt	Vetal Fine Sandy Loam, 0 To 2 Percent Slopes-----	4,961	0.4
W	Water-----	14,478	1.3
WeB	Wildhorse Fine Sand, 0 To 3 Percent Slopes-----	9,106	0.8
WhB	Wildhorse-Hoffland Complex, 0 To 3 Percent Slopes-----	8,494	0.8
WkB	Wildhorse-Ipage, Calcareous Complex, 0 To 3 Percent Slopes-----	23,037	2.1
	Total-----	1,107,584	100.0

* Less than 0.1 percent.

NONTECHNICAL SOIL DESCRIPTIONS
Garden County, Nebraska

Nontechnical soil descriptions describe soil properties or management considerations specific to a soil map unit or group of map units, shown in the NonTechnical Descriptions report. These descriptions are written in terminology that Non-technical users of soil survey information can understand. Nontechnical soil descriptions are a powerful tool for creating reports. These high quality, easy to read reports can be generated by conservation planners and other NRCS employees for distribution to land users. Soil map unit descriptions and National Soil Information System records are the basis for these descriptions.

Ao Alliance Loam, 0 To 1 Percent Slopes

Alliance soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level plain on tableland. The runoff class is low. The parent material consists of loess over sandstone. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

AoB Alliance Loam, 1 To 3 Percent Slopes

Alliance soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a gently sloping plain on tableland. The runoff class is medium. The parent material consists of loess over sandstone. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

Ar Almeria Fine Sandy Loam, Channeled, 0 To 2 Percent Slopes

Almeria soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is negligible. The parent material consists of sandy alluvium. This soil is poorly drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 9 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil contains a very slightly saline horizon. This soil is in the Wet Subirrigated - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6w.

AsF Ashollow-Tassel Complex, 9 To 30 Percent Slopes

Ashollow soil makes up 70 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep hillslope on upland. The runoff class is low. The parent material consists of loamy residuum weathered from calcareous sandstone. This soil is well drained. The slowest permeability is moderately rapid. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

Tassel soil makes up 30 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a strongly sloping to steep hillslope on upland. The runoff class is high. The parent material consists of residuum weathered from calcareous sandstone. The soil is 6 to 20 inches deep to bedrock (paralithic). This soil is somewhat excessively drained. The slowest permeability is moderately rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. It has a horizon that is slightly sodic. This soil is in the Shallow Limy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

Bh Bayard Fine Sandy Loam, 0 To 1 Percent Slopes

Bayard soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level stream terrace on valley. The runoff class is negligible. The parent material consists of colluvial-alluvial sediments from calcareous sandstone. This soil is well drained. The slowest permeability is moderately rapid. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

BhB Bayard Fine Sandy Loam, 1 To 3 Percent Slopes

Bayard soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a gently sloping stream terrace on valley. The runoff class is very low. The parent material consists of colluvial-alluvial sediments from calcareous sandstone. This soil is well drained. The slowest permeability is moderately rapid. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Garden County, Nebraska

BhC Bayard Fine Sandy Loam, 3 To 6 Percent Slopes

Bayard soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping footslope hillslope on valley. The runoff class is very low. The parent material consists of colluvial-alluvial sediments from calcareous sandstone. This soil is well drained. The slowest permeability is moderately rapid. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

BmB Bayard Very Fine Sandy Loam, 1 To 3 Percent Slopes

Bayard soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a gently sloping stream terrace on valley. The runoff class is very low. The parent material consists of colluvial-alluvial sediments from calcareous sandstone. This soil is well drained. The slowest permeability is moderately rapid. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

Bn Bayard Loam, 0 To 1 Percent Slopes

Bayard soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level stream terrace on valley. The runoff class is negligible. The parent material consists of colluvial-alluvial sediments from calcareous sandstone. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1. It is in the nonirrigated land capability classification 3c.

BpB Blanche Loamy Fine Sand, 0 To 3 Percent Slopes

Blanche soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping plain on tableland. The runoff class is very low. The parent material consists of loamy residuum weathered from calcareous sandstone. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

BrF Blueridge Coarse Sand, 6 To 30 Percent Slopes

Blueridge soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping to steep hillslope on upland. The runoff class is medium. The parent material consists of sandy and gravelly material deposited over gravelly sand. This soil is excessively drained. The slowest permeability is rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Shallow To Gravel - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

Bw Broadwater Loamy Sand, Channeled, 0 To 2 Percent Slopes

Broadwater soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is negligible. The parent material consists of stratified sandy and gravelly alluvium. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Shallow To Gravel - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6w.

BxD Busher-Tassel Complex, 3 To 9 Percent Slopes

Busher soil makes up 60 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is low. The parent material consists of residuum weathered from sandstone. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

Tassel soil makes up 40 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping -- Error in Exists On --. The runoff class is high. The parent material consists of residuum weathered from calcareous sandstone. The soil is 6 to 20 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. It has a horizon that is slightly sodic. This soil is in the Shallow Limy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Garden County, Nebraska

BxE Busher-Tassel Complex, 9 To 20 Percent Slopes

Busher soil makes up 60 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep hillslope on upland. The runoff class is low. The parent material consists of residuum weathered from sandstone. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

Tassel soil makes up 40 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep -- Error in Exists On --. The runoff class is low. The parent material consists of residuum weathered from calcareous sandstone. The soil is 6 to 20 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. It has a horizon that is slightly sodic. This soil is in the Shallow Limy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

Cw Crowther Loam, 0 To 1 Percent Slopes

Crowther soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level interdune on sandhills. The runoff class is negligible. The parent material consists of calcareous alluvium. This soil is poorly drained. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 9 inches. The soil contains a maximum amount of 40 percent calcium carbonate. This soil is in the Wet Subirrigated range site. It is in the nonirrigated land capability classification 5w.

Cx Crowther Loam, Wet, 0 To 1 Percent Slopes

Crowther soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level interdune on sandhills. The runoff class is low. The parent material consists of calcareous alluvium. This soil is very poorly drained. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 6 inches. The soil contains a maximum amount of 40 percent calcium carbonate. This soil is in the Wet Land range site. It is in the nonirrigated land capability classification 5w.

DbB Dailey Loamy Fine Sand, 0 To 3 Percent Slopes

Dailey soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is negligible. The parent material consists of eolian sands. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil is in the Sandy 17-22" P.z. range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

DdC Dankworth Loamy Sand, 3 To 6 Percent Slopes

Dankworth soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is negligible. <parent material is missing> This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

Dw Duroc Loam, 0 To 1 Percent Slopes

Duroc soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level swale on tableland. The runoff class is negligible. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1. It is in the nonirrigated land capability classification 2c.

Eh Els Fine Sand, Calcareous, 0 To 2 Percent Slopes

Els soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is negligible. The parent material consists of sandy eolian deposits over sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 10 percent calcium carbonate. It has a horizon that is slightly sodic. This soil is in the Subirrigated range site. This soil is in the irrigated land capability class 4w. It is in the nonirrigated land capability classification 6e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Garden County, Nebraska

EuG Epping-Rock Outcrop Complex, 30 To 60 Percent Slopes

Epping soil makes up 75 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a steep to very steep hillslope on upland. The runoff class is very high. The parent material consists of loamy residuum weathered from siltstone. The soil is 10 to 20 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Shallow Limy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 7s.

Fu Fluvaquents, Sandy, 0 To 1 Percent Slopes

Fluvaquents soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level flood plain on valley. The runoff class is negligible. The parent material consists of silty alluvium. This soil is very poorly drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 6 inches. The soil contains a maximum amount of 5 percent calcium carbonate. It is in the nonirrigated land capability classification 8w.

Gt Gothenburg Loamy Sand, 0 To 2 Percent Slopes

Gothenburg soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is negligible. The parent material consists of sandy and gravelly alluvium. This soil is poorly drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 9 inches. The soil contains a maximum amount of 5 percent calcium carbonate. It is in the nonirrigated land capability classification 7w.

Hh Hoffland Fine Sandy Loam, 0 To 1 Percent Slopes

Hoffland soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level interdune on sandhills. The runoff class is negligible. The parent material consists of loamy alluvium. This soil is poorly drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 9 inches. The soil contains a maximum amount of 40 percent calcium carbonate. It has a horizon that is slightly sodic. This soil is in the Wet Subirrigated range site. It is in the nonirrigated land capability classification 5w.

Ho Hoffland Fine Sandy Loam, Wet, 0 To 1 Percent Slopes

Hoffland soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level interdune on sandhills. The runoff class is negligible. The parent material consists of loamy alluvium. This soil is very poorly drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 6 inches. The soil contains a maximum amount of 40 percent calcium carbonate. It has a horizon that is slightly sodic. This soil is in the Wet Land range site. It is in the nonirrigated land capability classification 5w.

INT Aquolls

Aquolls soil makes up 100 percent of the map unit. This map unit is in the This soil occurs on a nearly level depression. The runoff class is negligible. The parent material consists of alluvium. This soil is very poorly drained. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is occasional ponded. The top of the seasonal high water table is at 0 inches. It is in the nonirrigated land capability classification 5w.

IsB Ipage Fine Sand, Calcareous, 0 To 3 Percent Slopes

Ipage soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is negligible. The parent material consists of eolian sands over sandy alluvium. This soil is moderately well drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 48 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy Lowland 17-22" P.z. range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

Ja Jankosh Loam, 0 To 2 Percent Slopes

Jankosh soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is negligible. The parent material consists of loamy alluvium over sandy and gravelly alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a moderately saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Garden County, Nebraska

JeB Jayem Loamy Fine Sand, 0 To 3 Percent Slopes

Jayem soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping plain on tableland. The runoff class is very low. The parent material consists of sandy and silty eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

JeC Jayem Loamy Fine Sand, 3 To 6 Percent Slopes

Jayem soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on tableland. The runoff class is very low. The parent material consists of sandy and silty eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

Jg Jayem Fine Sandy Loam, 0 To 2 Percent Slopes

Jayem soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping plain on tableland. The runoff class is negligible. The parent material consists of sandy and silty eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

JgC Jayem Fine Sandy Loam, 2 To 6 Percent Slopes

Jayem soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a gently sloping to moderately sloping hillslope on tableland. The runoff class is very low. The parent material consists of sandy and silty eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

KeB Keith Loam, 1 To 3 Percent Slopes

Keith soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a gently sloping plain on tableland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

KeC Keith Loam, 3 To 6 Percent Slopes

Keith soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on tableland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a very high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Ku Kuma Loam, 0 To 1 Percent Slopes

Kuma soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level plain on tableland. The runoff class is negligible. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1. It is in the nonirrigated land capability classification 2c.

La Lemoyne Sand, 0 To 2 Percent Slopes

Lemoyne soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is negligible. The parent material consists of eolian sands over loamy alluvium. This soil is moderately well drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 54 inches. The soil contains a maximum amount of 40 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is moderately sodic. This soil is in the Sandy Lowland 17-22" P.z. range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Garden County, Nebraska

Lb Lewellen Loam, 0 To 2 Percent Slopes

Lewellen soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is negligible. The parent material consists of loamy alluvium over sandy alluvium over sandy and gravelly alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 20 percent calcium carbonate. This soil contains a moderately saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

Lc Lewellen-Mcculigan Complex, 0 To 2 Percent Slopes

Lewellen soil makes up 55 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is negligible. The parent material consists of loamy alluvium over sandy alluvium over sandy and gravelly alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 20 percent calcium carbonate. This soil contains a moderately saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

Mcculigan soil makes up 45 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is negligible. The parent material consists of stratified loamy alluvium over sandy and gravelly alluvium. This soil is poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 9 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is moderately sodic. This soil is in the Sandy Lowland 17-22" P.z. range site. It is in the nonirrigated land capability classification 5w.

Lf Lodgepole Silt Loam, 0 To 1 Percent Slopes

Lodgepole soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level depression on tableland. The runoff class is negligible. The parent material consists of loess. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 6 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Clayey Overflow - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4w. It is in the nonirrigated land capability classification 3w.

Ma Marlake Fine Sandy Loam, 0 To 1 Percent Slopes

Marlake soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level interdune on sandhills. The runoff class is low. The parent material consists of sandy eolian deposits over alluvium. This soil is very poorly drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 5 percent calcium carbonate. It is in the nonirrigated land capability classification 8w.

Mc Marlake Mucky Peat, 0 To 1 Percent Slopes

Marlake soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level interdune on sandhills. The runoff class is negligible. The parent material consists of sandy eolian deposits over alluvium. This soil is very poorly drained. The slowest permeability is rapid. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 0 inches. It is in the nonirrigated land capability classification 8w.

MtC Mitchell Very Fine Sandy Loam, 3 To 6 Percent Slopes

Mitchell soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is low. The parent material consists of loamy alluvium derived from siltstone. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

MtD Mitchell Very Fine Sandy Loam, 6 To 9 Percent Slopes

Mitchell soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is medium. The parent material consists of loamy alluvium derived from siltstone. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Garden County, Nebraska

MxF Mitchell-Epping Complex, 9 To 30 Percent Slopes

Mitchell soil makes up 60 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately steep to steep hillslope on upland. The runoff class is high. The parent material consists of loamy alluvium derived from siltstone. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

Epping soil makes up 40 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a strongly sloping to steep hillslope on upland. The runoff class is very high. The parent material consists of loamy residuum weathered from siltstone. The soil is 10 to 20 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a very low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Shallow Limy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

Ru Rushcreek Loam, 0 To 2 Percent Slopes

Rushcreek soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on valley. The runoff class is negligible. The parent material consists of loamy alluvium over sandy and gravelly alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 54 inches. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is moderately sodic. This soil is in the Saline Lowland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3s. It is in the nonirrigated land capability classification 4s.

SaB Sarben Loamy Fine Sand, 0 To 3 Percent Slopes

Sarben soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping hillslope on upland. The runoff class is very low. The parent material consists of sandy and loamy eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

SaC Sarben Loamy Fine Sand, 3 To 6 Percent Slopes

Sarben soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is very low. The parent material consists of sandy and loamy eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

SaD Sarben Loamy Fine Sand, 6 To 9 Percent Slopes

Sarben soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is low. The parent material consists of sandy and loamy eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

SaE Sarben Loamy Fine Sand, 9 To 20 Percent Slopes

Sarben soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep hillslope on upland. The runoff class is low. The parent material consists of sandy and loamy eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

Sc Scoville Loamy Fine Sand, 0 To 2 Percent Slopes

Scoville soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping stream terrace on valley. The runoff class is negligible. The parent material consists of sandy eolian deposits over loamy alluvium. This soil is somewhat excessively drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Garden County, Nebraska

SnC Sidney Loam, 3 To 6 Percent Slopes

Sidney soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is low. The parent material consists of calcareous loamy residuum weathered from weakly cemented fine grained sandstone. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 20 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

StD Sidney-Canyon Complex, 6 To 9 Percent Slopes

Sidney soil makes up 70 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is medium. The parent material consists of calcareous loamy residuum weathered from weakly cemented fine grained sandstone. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

Canyon soil makes up 30 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping upland on hillslope. The runoff class is high. The parent material consists of calcareous loamy residuum weathered from limestone and sandstone. The soil is 6 to 20 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Shallow Limy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

SuG Sulco Loam, 30 To 60 Percent Slopes

Sulco soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a steep to very steep hillslope on upland. The runoff class is high. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Thin Loess - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 7e.

SxC2 Sulco-Mcconaughey Complex, 3 To 6 Percent Slopes, Eroded

Sulco soil makes up 60 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Limy Upland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

Mcconaughey soil makes up 40 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping -- Error in Exists On --. The runoff class is low. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

SxD2 Sulco-Mcconaughey Complex, 6 To 9 Percent Slopes, Eroded

Sulco soil makes up 60 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Limy Upland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

Mcconaughey soil makes up 40 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is medium. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Garden County, Nebraska

SxE2 Sulco-Mcconaughey Complex, 9 To 20 Percent Slopes, Eroded

Sulco soil makes up 60 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Limy Upland - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

Mcconaughey soil makes up 40 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep hillslope on upland. The runoff class is medium. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

SxF Sulco-Mcconaughey Complex, 9 To 30 Percent Slopes

Sulco soil makes up 75 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a moderately steep to steep hillslope on upland. The runoff class is high. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Limy Upland - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

Mcconaughey soil makes up 25 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep hillslope on upland. The runoff class is medium. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

TkG Tassel-Ashollow-Rock Outcrop Complex, 20 To 60 Percent Slopes

Tassel soil makes up 50 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a steep to very steep hillslope on upland. The runoff class is very high. The parent material consists of residuum weathered from calcareous sandstone. The soil is 6 to 20 inches deep to bedrock (paralithic). This soil is somewhat excessively drained. The slowest permeability is moderately rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. It has a horizon that is slightly sodic. This soil is in the Shallow Limy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 7s.

Ashollow soil makes up 35 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a steep to very steep hillslope on upland. The runoff class is medium. The parent material consists of loamy residuum weathered from calcareous sandstone. This soil is well drained. The slowest permeability is moderately rapid. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 7e.

VaD Valentine Fine Sand, 3 To 9 Percent Slopes

Valentine soil makes up 100 percent of the map unit. This map unit is in the This soil occurs on a moderately sloping to strongly sloping dune on sandhills. The runoff class is very low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands 17-22" P.z. range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

VaE Valentine Fine Sand, Rolling

Valentine soil makes up 100 percent of the map unit. This map unit is in the This soil occurs on a strongly sloping to steep dune on sandhills. The runoff class is very low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands 17-22" P.z. range site. It is in the nonirrigated land capability classification 6e.

VaF Valentine Complex, Rolling And Hilly

Valentine soil makes up 50 percent of the map unit. This map unit is in the This soil occurs on a strongly sloping to steep dune on sandhills. The runoff class is very low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands 17-22" P.z. range site. It is in the nonirrigated land capability classification 6e.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Garden County, Nebraska

Valentine soil makes up 50 percent of the map unit. This map unit is in the This soil occurs on a steep to very steep dune on sandhills. The runoff class is low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Choppy Sands 17-22" P.z. range site. It is in the nonirrigated land capability classification 7e.

VdB Valentine Loamy Fine Sand, 0 To 3 Percent Slopes

Valentine soil makes up 100 percent of the map unit. This map unit is in the This soil occurs on a nearly level to gently sloping dune on sandhills. The runoff class is negligible. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy 17-22" P.z. range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

Vt Vetall Fine Sandy Loam, 0 To 2 Percent Slopes

Vetall soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level interdune on sandhills. The runoff class is negligible. The parent material consists of loamy alluvium over eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy 17-22" P.z. range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

WeB Wildhorse Fine Sand, 0 To 3 Percent Slopes

Wildhorse soil makes up 100 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is negligible. The parent material consists of sandy alluvium and/or eolian sands. This soil is somewhat poorly drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 30 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated 14-22" P.z. range site. It is in the nonirrigated land capability classification 6s.

WhB Wildhorse-Hoffland Complex, 0 To 3 Percent Slopes

Wildhorse soil makes up 65 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is negligible. The parent material consists of sandy alluvium and/or eolian sands. This soil is somewhat poorly drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 30 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated 14-22" P.z. range site. It is in the nonirrigated land capability classification 6s.

Hoffland soil makes up 35 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is negligible. The parent material consists of loamy alluvium. This soil is poorly drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 9 inches. The soil contains a maximum amount of 40 percent calcium carbonate. It has a horizon that is slightly sodic. This soil is in the Wet Subirrigated range site. It is in the nonirrigated land capability classification 5w.

WkB Wildhorse-Ipage, Calcareous Complex, 0 To 3 Percent Slopes

Wildhorse soil makes up 60 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is negligible. The parent material consists of sandy alluvium and/or eolian sands. This soil is somewhat poorly drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 30 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated 14-22" P.z. range site. It is in the nonirrigated land capability classification 6s.

Ipage soil makes up 40 percent of the map unit. This map unit is in the Central High Plains Major Land Resource Area. This soil occurs on a nearly level to gently sloping -- Error in Exists On --. The runoff class is negligible. The parent material consists of eolian sands over sandy alluvium. This soil is moderately well drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 48 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy Lowland 17-22" P.z. range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

Ao—Alliance loam, 0 to 1 percent slopes

Map Unit Composition

Alliance: 100 percent

Component Descriptions

Alliance

MLRA: 67 - Central High Plains*Landform:* Plain on tableland*Parent material:* Loess over sandstone*Slope:* 0 to 1 percent*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)*Drainage class:* Well drained*Slowest permeability:* Moderately slow (About 0.20 in/hr)*Available water capacity:* Moderate (About 8.3 inches)*Shrink-swell potential:* Moderate (About 4.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Silty - Veg. Zone 2*Land capability (irrigated):* 1*Land capability (nonirrigated):* 2c*Typical Profile:*

H1—0 to 8 inches; loam

H2—8 to 30 inches; clay loam

H3—30 to 44 inches; loam

H4—44 to 60 inches; weathered bedrock

**Minor Components
Lodgepole****AoB—Alliance loam, 1 to 3 percent slopes**

Map Unit Composition

Alliance: 100 percent

Component Descriptions

Alliance

MLRA: 67 - Central High Plains*Landform:* Plain on tableland*Parent material:* Loess over sandstone*Slope:* 1 to 3 percent*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)*Drainage class:* Well drained*Slowest permeability:* Moderately slow (About 0.20 in/hr)*Available water capacity:* High (About 9.3 inches)*Shrink-swell potential:* Moderate (About 4.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Medium*Ecological site:* Silty - Veg. Zone 2*Land capability (irrigated):* 2e*Land capability (nonirrigated):* 2e*Typical Profile:*

H1—0 to 12 inches; loam

H2—12 to 26 inches; clay loam

H3—26 to 34 inches; loam

H4—34 to 54 inches; very fine sandy loam

H5—54 to 60 inches; weathered bedrock

**Minor Components
Lodgepole****Ar—Almeria fine sandy loam,
Channeled, 0 to 2 percent slopes**

Map Unit Composition

Almeria: 100 percent

Component Descriptions

Almeria

MLRA: 67 - Central High Plains*Landform:* Flood plain on valley*Parent material:* Sandy alluvium*Slope:* 0 to 2 percent*Drainage class:* Poorly drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Low (About 5.5 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* Frequent*Depth to seasonal water saturation:* About 0 to 18 inches*Runoff class:* Negligible*Ecological site:* Wet Subirrigated - Veg. Zone 2*Land capability (nonirrigated):* 6w

Typical Profile:

H1—0 to 3 inches; fine sandy loam
 H2—3 to 60 inches; stratified sand to fine sandy loam

Minor Components
Fluvaquents

AsF—Ashollow-Tassel complex, 9 to 30 percent slopes

Map Unit Composition

Ashollow: 70 percent
 Tassel: 30 percent

Component Descriptions

Ashollow

MLRA: 67 - Central High Plains

Landform: Hillslope on upland

Parent material: Loamy residuum weathered from calcareous sandstone

Slope: 9 to 17 percent

Drainage class: Well drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: High (About 10.1 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sandy - Veg. Zone 2

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 3 inches; very fine sandy loam
 H2—3 to 60 inches; very fine sandy loam

Tassel

MLRA: 67 - Central High Plains

Landform: Hillslope on upland

Parent material: Residuum weathered from calcareous sandstone

Slope: 9 to 30 percent

Depth to restrictive feature: 6 to 20 inches to bedrock (paralithic)

Drainage class: Somewhat excessively drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: Very low (About 1.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Shallow Limy - Veg. Zone 2

Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 7 inches; fine sandy loam
 H2—7 to 18 inches; gravelly loamy very fine sand
 H3—18 to 60 inches; weathered bedrock

Bh—Bayard fine sandy loam, 0 to 1 percent slopes

Map Unit Composition

Bayard: 100 percent

Component Descriptions

Bayard

MLRA: 67 - Central High Plains

Landform: Stream terrace on valley

Parent material: Colluvial-alluvial sediments from calcareous sandstone

Slope: 0 to 1 percent

Drainage class: Well drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: Moderate (About 9.0 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Sandy - Veg. Zone 2

Land capability (irrigated): 2e

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 12 inches; fine sandy loam
 H2—12 to 60 inches; fine sandy loam

BhB—Bayard fine sandy loam, 1 to 3 percent slopes

Map Unit Composition

Bayard: 100 percent

Component Descriptions

Bayard

MLRA: 67 - Central High Plains

Landform: Stream terrace on valley

Parent material: Colluvial-alluvial sediments from calcareous sandstone

Slope: 1 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: Moderate (About 9.0 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sandy - Veg. Zone 2

Land capability (irrigated): 2e

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 13 inches; fine sandy loam

H2—13 to 60 inches; fine sandy loam

Minor Components**Perched Wt****BhC—Bayard fine sandy loam, 3 to 6 percent slopes**

Map Unit Composition

Bayard: 100 percent

Component Descriptions

Bayard

MLRA: 67 - Central High Plains

Landform: Hillslope on valley

Hillslope position: Footslope

Parent material: Colluvial-alluvial sediments from calcareous sandstone

Slope: 3 to 6 percent

Drainage class: Well drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: Moderate (About 8.9 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sandy - Veg. Zone 2

Land capability (irrigated): 3e

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 9 inches; fine sandy loam

H2—9 to 60 inches; fine sandy loam

BmB—Bayard very fine sandy loam, 1 to 3 percent slopes

Map Unit Composition

Bayard: 100 percent

Component Descriptions

Bayard

MLRA: 67 - Central High Plains

Landform: Stream terrace on valley

Parent material: Colluvial-alluvial sediments from calcareous sandstone

Slope: 1 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: High (About 9.3 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sandy - Veg. Zone 2

Land capability (irrigated): 2e

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 16 inches; very fine sandy loam

H2—16 to 60 inches; very fine sandy loam

Bn—Bayard loam, 0 to 1 percent slopes

Map Unit Composition

Bayard: 100 percent

Component Descriptions

Bayard

MLRA: 67 - Central High Plains*Landform:* Stream terrace on valley*Parent material:* Colluvial-alluvial sediments from calcareous sandstone*Slope:* 0 to 1 percent*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* High (About 9.8 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Negligible*Ecological site:* Sandy - Veg. Zone 2*Land capability (irrigated):* 1*Land capability (nonirrigated):* 3c*Typical Profile:*

H1—0 to 15 inches; loam

H2—15 to 60 inches; fine sandy loam

Slowest permeability: Moderately rapid (About 2.00 in/hr)*Available water capacity:* Low (About 4.5 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Very low*Ecological site:* Sandy - Veg. Zone 2*Land capability (irrigated):* 4e*Land capability (nonirrigated):* 4e*Typical Profile:*

H1—0 to 8 inches; loamy fine sand

H2—8 to 32 inches; fine sandy loam

H3—32 to 60 inches; weathered bedrock

BrF—Blueridge coarse sand, 6 to 30 percent slopes

Map Unit Composition

Blueridge: 100 percent

Component Descriptions

Blueridge

MLRA: 67 - Central High Plains*Landform:* Hillslope on upland*Parent material:* Sandy and gravelly material deposited over gravelly sand*Slope:* 6 to 30 percent*Drainage class:* Excessively drained*Slowest permeability:* Rapid (About 5.95 in/hr)*Available water capacity:* Very low (About 2.4 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Medium*Ecological site:* Shallow To Gravel - Veg. Zone 2*Land capability (nonirrigated):* 6s*Typical Profile:*

H1—0 to 4 inches; coarse sand

H2—4 to 60 inches; gravelly coarse sand

BpB—Blanche loamy fine sand, 0 to 3 percent slopes

Map Unit Composition

Blanche: 100 percent

Component Descriptions

Blanche

MLRA: 67 - Central High Plains*Landform:* Plain on tableland*Parent material:* Loamy residuum weathered from calcareous sandstone*Slope:* 0 to 3 percent*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)*Drainage class:* Well drained**Bw—Broadwater loamy sand, Channeled, 0 to 2 percent slopes**

Map Unit Composition

Broadwater: 100 percent

Component Descriptions

Broadwater

MLRA: 67 - Central High Plains

Landform: Flood plain on valley

Parent material: Stratified sandy and gravelly alluvium

Slope: 0 to 2 percent

Drainage class: Somewhat excessively drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Very low (About 3.0 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Frequent

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Shallow To Gravel - Veg. Zone 2

Land capability (nonirrigated): 6w

Typical Profile:

H1—0 to 3 inches; loamy sand

H2—3 to 9 inches; loamy sand

H3—9 to 60 inches; gravelly coarse sand

BxD—Busher-Tassel complex, 3 to 9 percent slopes

Map Unit Composition

Busher: 60 percent

Tassel: 40 percent

Component Descriptions

Busher

MLRA: 67 - Central High Plains

Landform: Hillslope on upland

Parent material: Residuum weathered from sandstone

Slope: 3 to 9 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)

Drainage class: Well drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: Moderate (About 7.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sandy - Veg. Zone 2

Land capability (irrigated): 4e

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 10 inches; fine sandy loam

H2—10 to 48 inches; fine sandy loam

H3—48 to 60 inches; weathered bedrock

Tassel

MLRA: 67 - Central High Plains

Landform: -- error in exists on --

Parent material: Residuum weathered from calcareous sandstone

Slope: 3 to 9 percent

Depth to restrictive feature: 6 to 20 inches to bedrock (paralithic)

Drainage class: Well drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: Very low (About 1.7 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Shallow Limy - Veg. Zone 2

Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 8 inches; fine sandy loam

H2—8 to 11 inches; gravelly fine sandy loam

H3—11 to 60 inches; weathered bedrock

BxE—Busher-Tassel complex, 9 to 20 percent slopes

Map Unit Composition

Busher: 60 percent

Tassel: 40 percent

Component Descriptions

Busher

MLRA: 67 - Central High Plains

Landform: Hillslope on upland

Parent material: Residuum weathered from sandstone

Slope: 9 to 20 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 7.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sandy - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 10 inches; fine sandy loam
 H2—10 to 44 inches; fine sandy loam
 H3—44 to 60 inches; weathered bedrock

Tassel

MLRA: 67 - Central High Plains
Landform: -- error in exists on --
Parent material: Residuum weathered from calcareous sandstone
Slope: 9 to 20 percent
Depth to restrictive feature: 6 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Very low (About 1.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Shallow Limy - Veg. Zone 2
Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 7 inches; fine sandy loam
 H2—7 to 18 inches; gravelly fine sandy loam
 H3—18 to 60 inches; weathered bedrock

Cw—Crowther loam, 0 to 1 percent slopes

Map Unit Composition

Crowther: 100 percent

Component Descriptions

Crowther
MLRA: 67 - Central High Plains
Landform: Interdune on sandhills
Parent material: Calcareous alluvium
Slope: 0 to 1 percent
Drainage class: Poorly drained
Slowest permeability: Moderate (About 0.57 in/hr)
Available water capacity: Moderate (About 8.0 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 0 to 18 inches
Runoff class: Negligible
Ecological site: Wet Subirrigated
Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 18 inches; loam
 H2—18 to 27 inches; loam
 H3—27 to 60 inches; loamy fine sand, fine sand

Minor Components

Marlake

Cx—Crowther loam, Wet, 0 to 1 percent slopes

Map Unit Composition

Crowther: 100 percent

Component Descriptions

Crowther
MLRA: 67 - Central High Plains
Landform: Interdune on sandhills
Parent material: Calcareous alluvium
Slope: 0 to 1 percent
Drainage class: Very poorly drained
Slowest permeability: Moderate (About 0.57 in/hr)
Available water capacity: Moderate (About 8.5 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 0 to 12 inches

Runoff class: Low
Ecological site: Wet Land
Land capability (nonirrigated): 5w

Typical Profile:
 H1—0 to 18 inches; loam
 H2—18 to 33 inches; loam
 H3—33 to 60 inches; fine sand

Minor Components
Marlake

DbB—Dailey loamy fine sand, 0 to 3 percent slopes

Map Unit Composition

Dailey: 100 percent

Component Descriptions
 Dailey
MLRA: 67 - Central High Plains
Landform: Interdune on sandhills
Parent material: Eolian sands
Slope: 0 to 3 percent
Drainage class: Somewhat excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 4.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy 17-22" P.z.
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
 H1—0 to 14 inches; loamy fine sand
 H2—14 to 60 inches; fine sand

Minor Components
Wt At 0-1 Foot

DdC—Dankworth loamy sand, 3 to 6 percent slopes

Map Unit Composition

Dankworth: 100 percent

Component Descriptions
 Dankworth
MLRA: 67 - Central High Plains
Landform: Hillslope on upland
Slope: 3 to 6 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 3.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sands - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 6e

Typical Profile:
 H1—0 to 6 inches; loamy sand
 H2—6 to 60 inches; sand, coarse sand

Dw—Duroc loam, 0 to 1 percent slopes

Map Unit Composition

Duroc: 100 percent

Component Descriptions
 Duroc
MLRA: 67 - Central High Plains
Landform: Swale on tableland
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 9.7 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:

H1—0 to 27 inches; loam
 H2—27 to 32 inches; loam
 H3—32 to 60 inches; loam

Eh—Els fine sand, Calcareous, 0 to 2 percent slopes

Map Unit Composition

Els: 100 percent

Component Descriptions

Els

MLRA: 67 - Central High Plains

Landform: Interdune on sandhills

Parent material: Sandy eolian deposits over sandy alluvium

Slope: 0 to 2 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Low (About 3.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 18 to 36 inches

Runoff class: Negligible

Ecological site: Subirrigated

Land capability (irrigated): 4w

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 7 inches; fine sand
 H2—7 to 15 inches; fine sand
 H3—15 to 60 inches; fine sand

Minor Components

Hoffland

EuG—Epping-Rock outcrop complex, 30 to 60 percent slopes

Map Unit Composition

Epping: 75 percent

Rock outcrop: 25 percent

Component Descriptions

Epping

MLRA: 67 - Central High Plains

Landform: Hillslope on upland

Parent material: Loamy residuum weathered from siltstone

Slope: 30 to 60 percent

Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very low (About 2.4 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Ecological site: Shallow Limy - Veg. Zone 2

Land capability (nonirrigated): 7s

Typical Profile:

H1—0 to 3 inches; very fine sandy loam
 H2—3 to 16 inches; very fine sandy loam
 H3—16 to 60 inches; weathered bedrock

Rock outcrop

MLRA: 67 - Central High Plains

Landform: Upland on hillslope

Slope: 30 to 60 percent

Depth to restrictive feature: 0 inches to bedrock (paralithic)

Available water capacity: Very low (About 0.0 inches)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Ecological site: No Site - Veg. Zone 2

Land capability (nonirrigated): 8s

Fu—Fluvaquents, sandy, 0 to 1 percent slopes

Map Unit Composition

Fluvaquents: 100 percent

Component Descriptions

Fluvaquents

MLRA: 67 - Central High Plains

Landform: Flood plain on valley

Parent material: Silty alluvium

Slope: 0 to 1 percent

Drainage class: Very poorly drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 5.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: About 0 to 12 inches
Runoff class: Negligible
Land capability (nonirrigated): 8w

Typical Profile:
 H1—0 to 60 inches; sand

Minor Components
Gothenburg

GP—Gravel Pit

Map Unit Composition

Pits: 100 percent

Component Descriptions

Pits

MLRA: -

Landform: Flood plain on valley

Slope: 0 to 30 percent

Drainage class: Excessively drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Low (About 3.5 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Land capability (nonirrigated): 8s

Gt—Gothenburg loamy sand, 0 to 2 percent slopes

Map Unit Composition

Gothenburg: 100 percent

Component Descriptions

Gothenburg

MLRA: 67 - Central High Plains

Landform: Flood plain on valley

Parent material: Sandy and gravelly alluvium

Slope: 0 to 2 percent

Drainage class: Poorly drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Low (About 3.9 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Frequent

Depth to seasonal water saturation: About 0 to 18 inches

Runoff class: Negligible

Land capability (nonirrigated): 7w

Typical Profile:

H1—0 to 6 inches; loamy sand

H2—6 to 14 inches; sand

H3—14 to 60 inches; stratified coarse sand to fine sand

Hh—Hoffland fine sandy loam, 0 to 1 percent slopes

Map Unit Composition

Hoffland: 100 percent

Component Descriptions

Hoffland

MLRA: 67 - Central High Plains

Landform: Interdune on sandhills

Parent material: Loamy alluvium

Slope: 0 to 1 percent

Drainage class: Poorly drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: Moderate (About 6.2 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 0 to 18 inches

Runoff class: Negligible

Ecological site: Wet Subirrigated

Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 10 inches; fine sandy loam

H2—10 to 20 inches; loamy fine sand

H3—20 to 60 inches; fine sand

Minor Components
Marlake

Ho—Hoffland fine sandy loam, Wet, 0 to 1 percent slopes

Map Unit Composition

Hoffland: 100 percent

Component Descriptions

Hoffland

MLRA: 67 - Central High Plains

Landform: Interdune on sandhills

Parent material: Loamy alluvium

Slope: 0 to 1 percent

Drainage class: Very poorly drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: Moderate (About 6.5 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 0 to 12 inches

Runoff class: Negligible

Ecological site: Wet Land

Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 13 inches; fine sandy loam

H2—13 to 42 inches; loamy fine sand

H3—42 to 60 inches; fine sand

Minor Components

Marlake

INT—Aquolls

Map Unit Composition

Aquolls: 100 percent

Component Descriptions

Aquolls

MLRA: -

Landform: Depression

Parent material: Alluvium

Slope: 0 to 1 percent

Drainage class: Very poorly drained

Flooding hazard: None

Ponding hazard: Occasional

Depth to seasonal water saturation: About 0 to 0 inches

Runoff class: Negligible

Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 72 inches; variable

General Considerations: This map unit was formerly labeled as an Intermittent Water spot symbol. These depressional areas contain soils that are occasionally ponded for long duration.

IsB—Ipage fine sand, Calcareous, 0 to 3 percent slopes

Map Unit Composition

Ipage: 100 percent

Component Descriptions

Ipage

MLRA: 67 - Central High Plains

Landform: Interdune on sandhills

Parent material: Eolian sands over sandy alluvium

Slope: 0 to 3 percent

Drainage class: Moderately well drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Low (About 4.2 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 36 to 60 inches

Runoff class: Negligible

Ecological site: Sandy Lowland 17-22" P.z.

Land capability (irrigated): 4e

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 5 inches; fine sand

H2—5 to 16 inches; fine sand

H3—16 to 60 inches; sand

Minor Components

Wt At 0-1 Foot

Ja—Jankosh loam, 0 to 2 percent slopes

Map Unit Composition

Jankosh: 100 percent

Component Descriptions

Jankosh

MLRA: 67 - Central High Plains

Landform: Flood plain on valley

Parent material: Loamy alluvium over sandy and gravelly alluvium

Slope: 0 to 2 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 6.9 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 18 to 36 inches

Runoff class: Negligible

Ecological site: Saline Subirrigated - Veg. Zone 2

Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 4 inches; loam

H2—4 to 18 inches; loam

H3—18 to 33 inches; very fine sandy loam

H4—33 to 60 inches; gravelly coarse sand

JeB—Jayem loamy fine sand, 0 to 3 percent slopes

Map Unit Composition

Jayem: 100 percent

Component Descriptions

Jayem

MLRA: 67 - Central High Plains

Landform: Plain on tableland

Parent material: Sandy and silty eolian deposits

Slope: 0 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: Moderate (About 7.6 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sandy - Veg. Zone 2

Land capability (irrigated): 3e

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 17 inches; loamy fine sand

H2—17 to 37 inches; fine sandy loam

H3—37 to 60 inches; fine sandy loam

Minor Components**Perched Wt****JeC—Jayem loamy fine sand, 3 to 6 percent slopes**

Map Unit Composition

Jayem: 100 percent

Component Descriptions

Jayem

MLRA: 67 - Central High Plains

Landform: Hillslope on tableland

Parent material: Sandy and silty eolian deposits

Slope: 3 to 6 percent

Drainage class: Well drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: Moderate (About 7.9 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sandy - Veg. Zone 2

Land capability (irrigated): 4e

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 10 inches; loamy fine sand

H2—10 to 18 inches; fine sandy loam

H3—18 to 60 inches; fine sandy loam, loamy very fine sand

Jg—Jayem fine sandy loam, 0 to 2 percent slopes

Map Unit Composition

Jayem: 100 percent

Component Descriptions

Jayem

MLRA: 67 - Central High Plains*Landform:* Plain on tableland*Parent material:* Sandy and silty eolian deposits*Slope:* 0 to 2 percent*Drainage class:* Well drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Moderate (About 8.3 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Negligible*Ecological site:* Sandy - Veg. Zone 2*Land capability (irrigated):* 2e*Land capability (nonirrigated):* 3e*Typical Profile:*

H1—0 to 9 inches; fine sandy loam

H2—9 to 22 inches; fine sandy loam

H3—22 to 60 inches; fine sandy loam

Minor Components**Perched Wt****JgC—Jayem fine sandy loam, 2 to 6 percent slopes****Map Unit Composition**

Jayem: 100 percent

Component Descriptions

Jayem

MLRA: 67 - Central High Plains*Landform:* Hillslope on tableland*Parent material:* Sandy and silty eolian deposits*Slope:* 2 to 6 percent*Drainage class:* Well drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Moderate (About 8.3 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Very low*Ecological site:* Sandy - Veg. Zone 2*Land capability (irrigated):* 3e*Land capability (nonirrigated):* 4e*Typical Profile:*

H1—0 to 11 inches; fine sandy loam

H2—11 to 18 inches; fine sandy loam

H3—18 to 60 inches; fine sandy loam

Minor Components**Perched Wt****KeB—Keith loam, 1 to 3 percent slopes****Map Unit Composition**

Keith: 100 percent

Component Descriptions

Keith

MLRA: 67 - Central High Plains*Landform:* Plain on tableland*Parent material:* Loess*Slope:* 1 to 3 percent*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* Very high (About 12.2 inches)*Shrink-swell potential:* Moderate (About 4.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Silty - Veg. Zone 2*Land capability (irrigated):* 2e*Land capability (nonirrigated):* 2e*Typical Profile:*

H1—0 to 13 inches; loam

H2—13 to 48 inches; silt loam, silty clay loam

H3—48 to 60 inches; very fine sandy loam

KeC—Keith loam, 3 to 6 percent slopes

Map Unit Composition

Keith: 100 percent

Component Descriptions

Keith

MLRA: 67 - Central High Plains

Landform: Hillslope on tableland

Parent material: Loess

Slope: 3 to 6 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very high (About 12.3 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Medium

Ecological site: Silty - Veg. Zone 2

Land capability (irrigated): 3e

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 7 inches; loam

H2—7 to 28 inches; silt loam, silty clay loam, loam

H3—28 to 60 inches; loam

**Minor Components
Lodgepole****Ku—Kuma loam, 0 to 1 percent slopes**

Map Unit Composition

Kuma: 100 percent

Component Descriptions

Kuma

MLRA: 67 - Central High Plains

Landform: Plain on tableland

Parent material: Loess

Slope: 0 to 1 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 11.4 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Silty - Veg. Zone 2

Land capability (irrigated): 1

Land capability (nonirrigated): 2c

Typical Profile:

H1—0 to 17 inches; loam

H2—17 to 44 inches; loam

H3—44 to 60 inches; loam

**Minor Components
Lodgepole****La—Lemoyne sand, 0 to 2 percent slopes**

Map Unit Composition

Lemoyne: 100 percent

Component Descriptions

Lemoyne

MLRA: 67 - Central High Plains

Landform: Flood plain on valley

Parent material: Eolian sands over loamy alluvium

Slope: 0 to 2 percent

Drainage class: Moderately well drained

Slowest permeability: Moderately slow (About 0.20 in/hr)

Available water capacity: Moderate (About 7.9 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: Rare

Depth to seasonal water saturation: About 36 to 72 inches

Runoff class: Negligible

Ecological site: Sandy Lowland 17-22" P.z.

Land capability (irrigated): 4e

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 6 inches; sand
 H2—6 to 18 inches; sand, loamy sand
 H3—18 to 36 inches; clay loam, loam
 H4—36 to 54 inches; clay loam
 H5—54 to 60 inches; coarse sand

Minor Components
Wt At 0-1 Foot

Lb—Lewellen loam, 0 to 2 percent slopes

Map Unit Composition

Lewellen: 100 percent

Component Descriptions

Lewellen

MLRA: 67 - Central High Plains

Landform: Flood plain on valley

Parent material: Loamy alluvium over sandy alluvium over sandy and gravelly alluvium

Slope: 0 to 2 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Low (About 4.7 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Rare

Depth to seasonal water saturation: About 18 to 36 inches

Runoff class: Negligible

Ecological site: Saline Subirrigated - Veg. Zone 2

Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 4 inches; loam
 H2—4 to 8 inches; loam
 H3—8 to 12 inches; very fine sandy loam
 H4—12 to 29 inches; fine sand
 H5—29 to 60 inches; coarse sand

Minor Components
Wt At 0-1 Foot

Lc—Lewellen-Mcculigan complex, 0 to 2 percent slopes

Map Unit Composition

Lewellen: 55 percent
 Mcculigan: 45 percent

Component Descriptions

Lewellen

MLRA: 67 - Central High Plains

Landform: Flood plain on valley

Parent material: Loamy alluvium over sandy alluvium over sandy and gravelly alluvium

Slope: 0 to 2 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Low (About 4.9 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Rare

Depth to seasonal water saturation: About 18 to 36 inches

Runoff class: Negligible

Ecological site: Saline Subirrigated - Veg. Zone 2

Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 4 inches; loam
 H2—4 to 11 inches; loam
 H3—11 to 14 inches; fine sandy loam
 H4—14 to 30 inches; fine sand, loamy fine sand
 H5—30 to 60 inches; coarse sand

Mcculigan

MLRA: 67 - Central High Plains

Landform: Flood plain on valley

Parent material: Stratified loamy alluvium over sandy and gravelly alluvium

Slope: 0 to 2 percent

Drainage class: Poorly drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Low (About 4.0 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Occasional

Depth to seasonal water saturation: About 0 to 18 inches

Runoff class: Negligible

Ecological site: Sandy Lowland 17-22" P.z.

Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 7 inches; loam
 H2—7 to 12 inches; loam, very fine sandy loam
 H3—12 to 18 inches; sand
 H4—18 to 60 inches; coarse sand

Minor Components
Fluvaquents

Lf—Lodgepole silt loam, 0 to 1 percent slopes

Map Unit Composition

Lodgepole: 100 percent

Component Descriptions

Lodgepole

MLRA: 67 - Central High Plains

Landform: Depression on tableland

Parent material: Loess

Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Very slow (About 0.00 in/hr)

Available water capacity: High (About 11.7 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 0 to 12 inches

Runoff class: Negligible

Ecological site: Clayey Overflow - Veg. Zone 2

Land capability (irrigated): 4w

Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 5 inches; silt loam

H2—5 to 32 inches; silty clay loam, silty clay

H3—32 to 60 inches; loam

Minor Components
Ponded Soils

M-W—Miscellaneous Water (sewage Lagoons)

Map Unit Composition

Miscellaneous Water: 100 percent

Component Descriptions

Miscellaneous Water

MLRA: -

Depth to seasonal water saturation: More than 6 feet

Ma—Marlake fine sandy loam, 0 to 1 percent slopes

Map Unit Composition

Marlake: 100 percent

Component Descriptions

Marlake

MLRA: 67 - Central High Plains

Landform: Interdune on sandhills

Parent material: Sandy eolian deposits over alluvium

Slope: 0 to 1 percent

Drainage class: Very poorly drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: Low (About 4.5 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 0 to 0 inches

Runoff class: Low

Land capability (nonirrigated): 8w

Typical Profile:

H1—0 to 6 inches; fine sandy loam

H2—6 to 16 inches; fine sand, loamy fine sand

H3—16 to 60 inches; fine sand, loamy fine sand

Mc—Marlake mucky peat, 0 to 1 percent slopes

Map Unit Composition

Marlake: 100 percent

Component Descriptions

Marlake

MLRA: 67 - Central High Plains

Landform: Interdune on sandhills

Parent material: Sandy eolian deposits over alluvium

Slope: 0 to 1 percent

Drainage class: Very poorly drained

Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: High (About 9.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 0 to 0 inches
Runoff class: Negligible
Land capability (nonirrigated): 8w

Typical Profile:

H1—0 to 16 inches; mucky peat
 H2—16 to 80 inches; loamy fine sand

MtC—Mitchell very fine sandy loam, 3 to 6 percent slopes

Map Unit Composition

Mitchell: 100 percent

Component Descriptions

Mitchell
MLRA: 67 - Central High Plains
Landform: Hillslope on upland
Parent material: Loamy alluvium derived from siltstone
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Limy Upland - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 7 inches; very fine sandy loam
 H2—7 to 60 inches; very fine sandy loam

MtD—Mitchell very fine sandy loam, 6 to 9 percent slopes

Map Unit Composition

Mitchell: 100 percent

Component Descriptions

Mitchell
MLRA: 67 - Central High Plains
Landform: Hillslope on upland
Parent material: Loamy alluvium derived from siltstone
Slope: 6 to 9 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Limy Upland - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 5 inches; very fine sandy loam
 H2—5 to 60 inches; very fine sandy loam

MxF—Mitchell-Epping complex, 9 to 30 percent slopes

Map Unit Composition

Mitchell: 60 percent
 Epping: 40 percent

Component Descriptions

Mitchell
MLRA: 67 - Central High Plains
Landform: Hillslope on upland
Parent material: Loamy alluvium derived from siltstone
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Limy Upland - Veg. Zone 2

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 8 inches; very fine sandy loam

H2—8 to 60 inches; very fine sandy loam

Epping

MLRA: 67 - Central High Plains

Landform: Hillslope on upland

Parent material: Loamy residuum weathered from siltstone

Slope: 9 to 30 percent

Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very low (About 1.8 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Ecological site: Shallow Limy - Veg. Zone 2

Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 5 inches; very fine sandy loam

H2—5 to 8 inches; very fine sandy loam

H3—8 to 11 inches; loam

H4—11 to 60 inches; weathered bedrock

Ru—Rushcreek loam, 0 to 2 percent slopes

Map Unit Composition

Rushcreek: 100 percent

Component Descriptions

Rushcreek

MLRA: 67 - Central High Plains

Landform: Flood plain on valley

Parent material: Loamy alluvium over sandy and gravelly alluvium

Slope: 0 to 2 percent

Drainage class: Moderately well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 9.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Rare

Depth to seasonal water saturation: About 36 to 72 inches

Runoff class: Negligible

Ecological site: Saline Lowland - Veg. Zone 2

Land capability (irrigated): 3s

Land capability (nonirrigated): 4s

Typical Profile:

H1—0 to 11 inches; loam

H2—11 to 34 inches; loam

H3—34 to 56 inches; sandy loam

H4—56 to 60 inches; gravelly coarse sand

SaB—Sarben loamy fine sand, 0 to 3 percent slopes

Map Unit Composition

Sarben: 100 percent

Component Descriptions

Sarben

MLRA: 67 - Central High Plains

Landform: Hillslope on upland

Parent material: Sandy and loamy eolian deposits

Slope: 0 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)

Available water capacity: Moderate (About 8.1 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sandy - Veg. Zone 2

Land capability (irrigated): 3e

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 7 inches; loamy fine sand

H2—7 to 15 inches; fine sandy loam

H3—15 to 60 inches; fine sandy loam

SaC—Sarben loamy fine sand, 3 to 6 percent slopes

Map Unit Composition

Sarben: 100 percent

Component Descriptions

Sarben

MLRA: 67 - Central High Plains*Landform:* Hillslope on upland*Parent material:* Sandy and loamy eolian deposits*Slope:* 3 to 6 percent*Drainage class:* Well drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Moderate (About 8.1 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Very low*Ecological site:* Sandy - Veg. Zone 2*Land capability (irrigated):* 4e*Land capability (nonirrigated):* 4e*Typical Profile:*

H1—0 to 7 inches; loamy fine sand

H2—7 to 15 inches; fine sandy loam

H3—15 to 60 inches; fine sandy loam

SaD—Sarben loamy fine sand, 6 to 9 percent slopes

Map Unit Composition

Sarben: 100 percent

Component Descriptions

Sarben

MLRA: 67 - Central High Plains*Landform:* Hillslope on upland*Parent material:* Sandy and loamy eolian deposits*Slope:* 6 to 9 percent*Drainage class:* Well drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Moderate (About 8.2 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Sandy - Veg. Zone 2*Land capability (irrigated):* 4e*Land capability (nonirrigated):* 6e*Typical Profile:*

H1—0 to 5 inches; loamy fine sand

H2—5 to 15 inches; fine sandy loam

H3—15 to 60 inches; fine sandy loam

SaE—Sarben loamy fine sand, 9 to 20 percent slopes

Map Unit Composition

Sarben: 100 percent

Component Descriptions

Sarben

MLRA: 67 - Central High Plains*Landform:* Hillslope on upland*Parent material:* Sandy and loamy eolian deposits*Slope:* 9 to 20 percent*Drainage class:* Well drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Moderate (About 8.0 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Sandy - Veg. Zone 2*Land capability (nonirrigated):* 6e*Typical Profile:*

H1—0 to 10 inches; loamy fine sand

H2—10 to 15 inches; fine sandy loam

H3—15 to 60 inches; fine sandy loam

Sc—Scoville loamy fine sand, 0 to 2 percent slopes

Map Unit Composition

Scoville: 100 percent

Component Descriptions

Scoville

MLRA: 67 - Central High Plains*Landform:* Stream terrace on valley*Parent material:* Sandy eolian deposits over loamy alluvium*Slope:* 0 to 2 percent*Drainage class:* Somewhat excessively drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* Moderate (About 6.6 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Negligible*Ecological site:* Sandy - Veg. Zone 2*Land capability (irrigated):* 4e*Land capability (nonirrigated):* 4e*Typical Profile:*

H1—0 to 6 inches; loamy fine sand

H2—6 to 42 inches; fine sand, loamy fine sand

H3—42 to 60 inches; very fine sandy loam

Minor Components**Wt At 0-1 Foot****SnC—Sidney loam, 3 to 6 percent slopes**

Map Unit Composition

Sidney: 100 percent

Component Descriptions

Sidney

MLRA: 67 - Central High Plains*Landform:* Hillslope on upland*Parent material:* Calcareous loamy residuum weathered from weakly cemented fine grained sandstone*Slope:* 3 to 6 percent*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* Moderate (About 8.5 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Silty - Veg. Zone 2*Land capability (irrigated):* 3e*Land capability (nonirrigated):* 3e*Typical Profile:*

H1—0 to 11 inches; loam

H2—11 to 29 inches; loam, very fine sandy loam

H3—29 to 48 inches; very fine sandy loam

H4—48 to 60 inches; weathered bedrock

Minor Components**Lodgepole****StD—Sidney-Canyon complex, 6 to 9 percent slopes**

Map Unit Composition

Sidney: 70 percent

Canyon: 30 percent

Component Descriptions

Sidney

MLRA: 67 - Central High Plains*Landform:* Hillslope on upland*Parent material:* Calcareous loamy residuum weathered from weakly cemented fine grained sandstone*Slope:* 6 to 9 percent*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* Moderate (About 7.8 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Medium

Ecological site: Silty - Veg. Zone 2

Land capability (irrigated): 4e

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 9 inches; loam

H2—9 to 30 inches; loam, very fine sandy loam

H3—30 to 44 inches; very fine sandy loam

H4—44 to 60 inches; weathered bedrock

Canyon

MLRA: 67 - Central High Plains

Landform: Upland on hillslope

Parent material: Calcareous loamy residuum weathered from limestone and sandstone

Slope: 6 to 9 percent

Depth to restrictive feature: 6 to 20 inches to bedrock (paralithic)

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very low (About 1.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Shallow Limy - Veg. Zone 2

Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 5 inches; loam

H2—5 to 10 inches; very fine sandy loam

H3—10 to 60 inches; weathered bedrock

SuG—Sulco loam, 30 to 60 percent slopes

Map Unit Composition

Sulco: 100 percent

Component Descriptions

Sulco

MLRA: 67 - Central High Plains

Landform: Hillslope on upland

Parent material: Loess

Slope: 30 to 60 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 10.7 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Thin Loess - Veg. Zone 2

Land capability (nonirrigated): 7e

Typical Profile:

H1—0 to 3 inches; loam

H2—3 to 60 inches; loam

SxC2—Sulco-Mcconaughey complex, 3 to 6 percent slopes, Eroded

Map Unit Composition

Sulco: 60 percent

Mcconaughey: 40 percent

Component Descriptions

Sulco

MLRA: 67 - Central High Plains

Landform: Hillslope on upland

Parent material: Loess

Slope: 3 to 6 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 10.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Limy Upland - Veg. Zone 2

Land capability (irrigated): 3e

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 5 inches; loam

H2—5 to 60 inches; loam

Mcconaughey

MLRA: 67 - Central High Plains

Landform: -- error in exists on --
Parent material: Calcareous loess
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 4e

Typical Profile:
 H1—0 to 7 inches; loam
 H2—7 to 28 inches; loam
 H3—28 to 60 inches; loam

Minor Components **Lodgepole**

SxD2—Sulco-Mcconaughey complex, 6 to 9 percent slopes, Eroded

Map Unit Composition
 Sulco: 60 percent
 Mcconaughey: 40 percent

Component Descriptions
 Sulco
MLRA: 67 - Central High Plains
Landform: Hillslope on upland
Parent material: Loess
Slope: 6 to 9 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Limy Upland - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
 H1—0 to 5 inches; loam
 H2—5 to 60 inches; loam

Mcconaughey
MLRA: 67 - Central High Plains
Landform: Hillslope on upland
Parent material: Calcareous loess
Slope: 6 to 9 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
 H1—0 to 6 inches; loam
 H2—6 to 21 inches; loam
 H3—21 to 60 inches; loam

SxE2—Sulco-Mcconaughey complex, 9 to 20 percent slopes, Eroded

Map Unit Composition
 Sulco: 60 percent
 Mcconaughey: 40 percent

Component Descriptions
 Sulco
MLRA: 67 - Central High Plains
Landform: Hillslope on upland
Parent material: Loess
Slope: 9 to 20 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet

Runoff class: Medium
Ecological site: Limy Upland - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 6 inches; loam
 H2—6 to 60 inches; loam

Mcconaughey

MLRA: 67 - Central High Plains
Landform: Hillslope on upland
Parent material: Calcareous loess
Slope: 9 to 15 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 6 inches; loam
 H2—6 to 24 inches; loam
 H3—24 to 60 inches; loam

Minor Components
Lodgepole

**SxF—Sulco-Mcconaughey complex,
 9 to 30 percent slopes**

Map Unit Composition

Sulco: 75 percent
 Mcconaughey: 25 percent

Component Descriptions

Sulco
MLRA: 67 - Central High Plains
Landform: Hillslope on upland
Parent material: Loess
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.7 inches)

Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet

Runoff class: High
Ecological site: Limy Upland - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 4 inches; loam
 H2—4 to 60 inches; loam

Mcconaughey

MLRA: 67 - Central High Plains
Landform: Hillslope on upland
Parent material: Calcareous loess
Slope: 9 to 15 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 10 inches; loam
 H2—10 to 24 inches; loam
 H3—24 to 60 inches; loam

**TkG—Tassel-Ashollow-Rock
 outcrop complex, 20 to 60 percent
 slopes**

Map Unit Composition

Tassel: 50 percent
 Ashollow: 35 percent
 Minor components: 15 percent

Component Descriptions

Tassel
MLRA: 67 - Central High Plains
Landform: Hillslope on upland
Parent material: Residuum weathered from calcareous sandstone
Slope: 20 to 60 percent
Depth to restrictive feature: 6 to 20 inches to bedrock (paralithic)

Drainage class: Somewhat excessively drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Very low (About 1.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Shallow Limy - Veg. Zone 2
Land capability (nonirrigated): 7s

Typical Profile:

H1—0 to 7 inches; fine sandy loam
 H2—7 to 18 inches; gravelly fine sandy loam
 H3—18 to 60 inches; weathered bedrock

Ashollow

MLRA: 67 - Central High Plains
Landform: Hillslope on upland
Parent material: Loamy residuum weathered from calcareous sandstone
Slope: 20 to 60 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: High (About 10.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Sandy - Veg. Zone 2
Land capability (nonirrigated): 7e

Typical Profile:

H1—0 to 3 inches; very fine sandy loam
 H2—3 to 60 inches; very fine sandy loam

Minor Components

Rock outcrop

Composition: About 15 percent
Slope: 30 to 60 percent
Depth to restrictive feature: 0 inches to bedrock (paralithic)
Ecological site: No Site - Veg. Zone 2

VaD—Valentine fine sand, 3 to 9 percent slopes

Map Unit Composition

Valentine: 100 percent

Component Descriptions

Valentine
MLRA: -
Landform: Dune on sandhills
Parent material: Eolian sands
Slope: 3 to 9 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 4.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sands 17-22" P.z.
Land capability (irrigated): 4e
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 5 inches; fine sand
 H2—5 to 60 inches; fine sand

Minor Components

Wt At 0-1 Foot

VaE—Valentine fine sand, Rolling

Map Unit Composition

Valentine: 100 percent

Component Descriptions

Valentine
MLRA: -
Landform: Dune on sandhills
Parent material: Eolian sands
Slope: 9 to 24 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 4.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sands 17-22" P.z.
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 4 inches; fine sand

H2—4 to 60 inches; fine sand

**Minor Components
Wt At 0-1 Foot**

**VaF—Valentine complex, Rolling
And Hilly**

Map Unit Composition

Valentine: 50 percent
Valentine: 50 percent

Component Descriptions

Valentine

MLRA: -

Landform: Dune on sandhills

Parent material: Eolian sands

Slope: 9 to 24 percent

Drainage class: Excessively drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Low (About 4.7 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sands 17-22" P.z.

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 3 inches; fine sand

H2—3 to 60 inches; fine sand

Valentine

MLRA: -

Landform: Dune on sandhills

Parent material: Eolian sands

Slope: 24 to 60 percent

Drainage class: Excessively drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Low (About 4.7 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Choppy Sands 17-22" P.z.

Land capability (nonirrigated): 7e

Typical Profile:

H1—0 to 3 inches; fine sand

H2—3 to 60 inches; fine sand

**Minor Components
Wt At 0-1 Foot**

**VdB—Valentine loamy fine sand, 0
to 3 percent slopes**

Map Unit Composition

Valentine: 100 percent

Component Descriptions

Valentine

MLRA: -

Landform: Dune on sandhills

Parent material: Eolian sands

Slope: 0 to 3 percent

Drainage class: Excessively drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Low (About 4.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Sandy 17-22" P.z.

Land capability (irrigated): 4e

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 6 inches; loamy fine sand

H2—6 to 60 inches; fine sand

**Minor Components
Wt At 0-1 Foot**

**Vt—Vetal fine sandy loam, 0 to 2
percent slopes**

Map Unit Composition

Vetal: 100 percent

Component Descriptions

Vetal

MLRA: 67 - Central High Plains

Landform: Interdune on sandhills

Parent material: Loamy alluvium over eolian deposits
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 8.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy 17-22" P.z.
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:
 H1—0 to 8 inches; fine sandy loam
 H2—8 to 22 inches; very fine sandy loam
 H3—22 to 60 inches; very fine sandy loam

Minor Components
Wt At 0-1 Foot

W—Water

Map Unit Composition

Water: 100 percent

Component Descriptions

Water
MLRA: -
Depth to seasonal water saturation: More than 6 feet

General Considerations: Water includes streams, lakes, ponds, and estuaries. These areas are covered with water in most years, at least during the period that is warm enough for plants to grow. Many areas are covered throughout the year.

WeB—Wildhorse fine sand, 0 to 3 percent slopes

Map Unit Composition

Wildhorse: 100 percent

Component Descriptions

Wildhorse
MLRA: 67 - Central High Plains
Landform: Interdune on sandhills
Parent material: Sandy alluvium and/or eolian sands
Slope: 0 to 3 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 3.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 18 to 42 inches
Runoff class: Negligible
Ecological site: Saline Subirrigated 14-22" P.z.
Land capability (nonirrigated): 6s

Typical Profile:
 H1—0 to 8 inches; fine sand
 H2—8 to 60 inches; fine sand, sand

Minor Components
Hoffland

WhB—Wildhorse-Hoffland complex, 0 to 3 percent slopes

Map Unit Composition

Wildhorse: 65 percent
 Hoffland: 35 percent

Component Descriptions

Wildhorse
MLRA: 67 - Central High Plains
Landform: Interdune on sandhills
Parent material: Sandy alluvium and/or eolian sands
Slope: 0 to 3 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 3.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 18 to 42 inches
Runoff class: Negligible
Ecological site: Saline Subirrigated 14-22" P.z.
Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 8 inches; fine sand
H2—8 to 60 inches; fine sand

Hoffland

MLRA: 67 - Central High Plains
Landform: Interdune on sandhills
Parent material: Loamy alluvium
Slope: 0 to 3 percent
Drainage class: Poorly drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 6.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 0 to 18 inches
Runoff class: Negligible
Ecological site: Wet Subirrigated
Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 12 inches; fine sandy loam
H2—12 to 60 inches; fine sand

Minor Components**Marlake****WkB—Wildhorse-lpage,
Calcareous complex, 0 to 3
percent slopes**

Map Unit Composition

Wildhorse: 60 percent
lpage: 40 percent

Component Descriptions

Wildhorse

MLRA: 67 - Central High Plains
Landform: Interdune on sandhills

Parent material: Sandy alluvium and/or eolian sands

Slope: 0 to 3 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Low (About 3.1 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 18 to 42 inches

Runoff class: Negligible

Ecological site: Saline Subirrigated 14-22" P.z.

Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 5 inches; fine sand
H2—5 to 60 inches; fine sand

lpage

MLRA: 67 - Central High Plains

Landform: -- error in exists on --

Parent material: Eolian sands over sandy alluvium

Slope: 0 to 3 percent

Drainage class: Moderately well drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Low (About 4.2 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 36 to 60 inches

Runoff class: Negligible

Ecological site: Sandy Lowland 17-22" P.z.

Land capability (irrigated): 4e

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 5 inches; fine sand
H2—5 to 10 inches; fine sand
H3—10 to 60 inches; fine sand

Minor Components**Hoffland**

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive land-forming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes. In the capability system, soils are generally grouped at three levels: capability class, subclass, and unit.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

(Class 1) soils have slight limitations that restrict their use.

(Class 2) soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

(Class 3) soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

(Class 4) soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

(Class 5) soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

(Class 6) soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

(Class 7) soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

(Class 8) soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, 2e. The letter e shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by w, s, or c because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The capability classification of map units in this survey area is given in the section "Detailed Soil Map Units" and in the Land Capability and Component Yields table.

Crop Yield Estimates

The average yields per acre that can be expected of the principal crops under a high level of management are shown in "Land Capability and Component Yields" table. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, animal waste manure, and green manure crops; and harvesting that ensures the smallest possible loss.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in this table, are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service (NRCS) or the Cooperative Extension Service (CES) can provide information about the management and productivity of the soils for those crops.

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued

Garden County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability		Corn		Winter wheat	
	N	I	N	I	N	I
			Bu		Bu	
Ao: ALLIANCE-----	2c	1	---	145.00	42.00	65.00
AoB: ALLIANCE-----	2e	2e	---	140.00	40.00	60.00
Ar: ALMERIA-----	6w	---	---	---	---	---
AsF: ASHOLLOW-----	6e	---	---	---	---	---
TASSEL-----	6s	---	---	---	---	---
Bh: BAYARD-----	3e	2e	---	130.00	38.00	70.00
BhB: BAYARD-----	3e	2e	---	130.00	33.00	65.00
BhC: BAYARD-----	4e	3e	---	125.00	31.00	60.00
BmB: BAYARD-----	3e	2e	---	130.00	34.00	65.00
Bn: BAYARD-----	3c	1	---	130.00	38.00	70.00
BpB: BLANCHE-----	4e	4e	---	95.00	22.00	---
BrF: BLUERIDGE-----	6s	---	---	---	---	---
Bw: BROADWATER-----	6w	---	---	---	---	---
BxD: BUSHER-----	4e	4e	---	100.00	25.00	---
TASSEL-----	6s	---	---	---	---	---
BxE: BUSHER-----	6e	---	---	80.00	20.00	---
TASSEL-----	6s	---	---	---	---	---
Cw: CROWTHER-----	5w	---	---	---	---	---
Cx: CROWTHER-----	5w	---	---	---	---	---
DbB: DALLEY-----	4e	4e	---	110.00	22.00	---
DdC: DANKWORTH-----	6e	4e	---	120.00	---	---
Dw: DUROC-----	2c	1	---	150.00	45.00	70.00
Eh: ELS-----	6e	4w	---	80.00	---	---
EuG: EPPING-----	7s	---	---	---	---	---
ROCK OUTCROP----	8s	---	---	---	---	---
Fu: FLUVAQUENTS-----	8w	---	---	---	---	---
GP: PITS-----	8s	---	---	---	---	---
Gt: GOTHENBURG-----	7w	---	---	---	---	---

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued

Garden County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability		Corn		Winter wheat	
	N	I	N	I	N	I
			Bu		Bu	
Hh: HOFFLAND-----	5w	---	---	---	---	---
Ho: HOFFLAND-----	5w	---	---	---	---	---
INT: AQUOLLS-----	5w	---	---	---	---	---
IsB: IPAGE-----	6e	4e	---	100.00	---	---
Ja: JANKOSH-----	6s	---	---	80.00	15.00	---
JeB: JAYEM-----	4e	3e	---	125.00	33.00	48.00
JeC: JAYEM-----	4e	4e	---	115.00	28.00	45.00
Jg: JAYEM-----	3e	2e	---	130.00	42.00	60.00
JgC: JAYEM-----	4e	3e	---	120.00	32.00	50.00
KeB: KEITH-----	2e	2e	---	140.00	42.00	65.00
KeC: KEITH-----	3e	3e	40.00	135.00	32.00	55.00
Ku: KUMA-----	2c	1	---	150.00	46.00	70.00
La: LEMOYNE-----	6e	4e	---	110.00	30.00	---
Lb: LEWELLEN-----	6s	---	---	---	---	---
Lc: LEWELLEN-----	6s	---	---	---	---	---
MCCULIGAN-----	5w	---	---	---	---	---
Lf: LODGEPOLE-----	3w	4w	75.00	90.00	30.00	---
M-W: MISCELLANEOUS WATER-----	---	---	---	---	---	---
Ma: MARLAKE-----	8w	---	---	---	---	---
Mc: MARLAKE-----	8w	---	---	---	---	---
MtC: MITCHELL-----	3e	3e	---	130.00	32.00	---
MtD: MITCHELL-----	4e	4e	---	125.00	30.00	---
MxF: MITCHELL-----	6e	---	---	---	---	---
EPPING-----	6s	---	---	---	---	---
Ru: RUSHCREEK-----	4s	3s	---	125.00	30.00	---
SaB: SARBEN-----	4e	3e	---	115.00	28.00	---
SaC: SARBEN-----	4e	4e	---	110.00	26.00	---

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued

Garden County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability		Corn		Winter wheat	
	N	I	N	I	N	I
			Bu		Bu	
SaD: SARBEN-----	6e	4e	---	105.00	24.00	---
SaE: SARBEN-----	6e	---	---	80.00	20.00	---
Sc: SCOVILLE-----	4e	4e	---	110.00	22.00	---
SnC: SIDNEY-----	3e	3e	---	125.00	30.00	---
StD: SIDNEY-----	4e	4e	---	100.00	25.00	---
CANYON-----	6s	---	---	---	---	---
SuG: SULCO-----	7e	---	---	---	---	---
SxC2: SULCO-----	4e	3e	---	125.00	30.00	---
MCCONAUGHY-----	4e	3e	---	115.00	28.00	---
SxD2: SULCO-----	4e	4e	---	105.00	26.00	---
MCCONAUGHY-----	4e	4e	---	---	---	---
SxE2: SULCO-----	6e	---	---	---	---	---
MCCONAUGHY-----	6e	---	---	---	---	---
SxF: SULCO-----	6e	---	---	---	---	---
MCCONAUGHY-----	6e	---	---	---	---	---
TkG: TASSEL-----	7s	---	---	---	---	---
ASHOLLOW-----	7e	---	---	---	---	---
VaD: VALENTINE-----	6e	4e	---	105.00	20.00	---
VaE: VALENTINE-----	6e	---	---	85.00	18.00	---
VaF: VALENTINE-----	6e	---	---	---	---	---
VALENTINE-----	7e	---	---	---	---	---
VdB: VALENTINE-----	6e	4e	---	95.00	22.00	---
Vt: VETAL-----	2e	2e	42.00	140.00	39.00	---
W: WATER-----	---	---	---	---	---	---
WeB: WILDHORSE-----	6s	---	---	---	---	---
WhB: WILDHORSE-----	6s	---	---	---	---	---
HOFFLAND-----	5w	---	---	---	---	---
WkB: WILDHORSE-----	6s	---	---	100.00	---	---
IPAGE-----	6e	4e	---	---	---	---

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in the following table. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in the "Acres and Proportionate Extent of Soils" table. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described in other tables in this document."

Map symbol	Mapunit name	Farmland Classification
Ao	Alliance loam, 0 to 1 percent slopes	Prime farmland if irrigated
AoB	Alliance loam, 1 to 3 percent slopes	Prime farmland if irrigated
Bh	Bayard fine sandy loam, 0 to 1 percent slopes	Prime farmland if irrigated
BhB	Bayard fine sandy loam, 1 to 3 percent slopes	Prime farmland if irrigated
BhC	Bayard fine sandy loam, 3 to 6 percent slopes	Prime farmland if irrigated
BmB	Bayard very fine sandy loam, 1 to 3 percent slopes	Prime farmland if irrigated
Bn	Bayard loam, 0 to 1 percent slopes	Prime farmland if irrigated
Dw	Duroc loam, 0 to 1 percent slopes	Prime farmland if irrigated
Jg	Jayem fine sandy loam, 0 to 2 percent slopes	Prime farmland if irrigated
JgC	Jayem fine sandy loam, 2 to 6 percent slopes	Prime farmland if irrigated
KeB	Keith loam, 1 to 3 percent slopes	Prime farmland if irrigated
KeC	Keith loam, 3 to 6 percent slopes	Prime farmland if irrigated
Ku	Kuma loam, 0 to 1 percent slopes	Prime farmland if irrigated
MtC	Mitchell very fine sandy loam, 3 to 6 percent slopes	Prime farmland if irrigated
SnC	Sidney loam, 3 to 6 percent slopes	Prime farmland if irrigated
SxC2	Sulco-mcconaughey complex, 3 to 6 percent slopes, eroded	Prime farmland if irrigated
Vt	Vetal fine sandy loam, 0 to 2 percent slopes	Prime farmland if irrigated

SOIL RATING FOR PLANT GROWTH, modified 1998
Garden County, Nebraska

The "Soil Rating for Plant Growth, modified 1998" (SRPG) is a relative rating of the capacity of a soil to produce a specific plant under a defined management system. The index is determined from yield data on a few benchmark soils and is used to calculate yields, the net returns from crops, land assessment values, and taxes and to perform risk analysis when land management decisions are made. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Map symbol	Soil name	Crop Index
Ao	Alliance Loam, 0 To 1 Percent Slopes-----	60
AoB	Alliance Loam, 1 To 3 Percent Slopes-----	60
Ar	Almeria Fine Sandy Loam, Channeled, 0 To 2 Percent Slopes-----	22
AsF	Ashollow-Tassel Complex, 9 To 30 Percent Slopes-----	26
Bh	Bayard Fine Sandy Loam, 0 To 1 Percent Slopes-----	45
BhB	Bayard Fine Sandy Loam, 1 To 3 Percent Slopes-----	45
BhC	Bayard Fine Sandy Loam, 3 To 6 Percent Slopes-----	43
BmB	Bayard Very Fine Sandy Loam, 1 To 3 Percent Slopes-----	46
Bn	Bayard Loam, 0 To 1 Percent Slopes-----	52
BpB	Blanche Loamy Fine Sand, 0 To 3 Percent Slopes-----	32
BrF	Blueridge Coarse Sand, 6 To 30 Percent Slopes-----	11
Bw	Broadwater Loamy Sand, Channeled, 0 To 2 Percent Slopes-----	16
BxD	Busher-Tassel Complex, 3 To 9 Percent Slopes-----	32
BxE	Busher-Tassel Complex, 9 To 20 Percent Slopes-----	26
Cw	Crowther Loam, 0 To 1 Percent Slopes-----	26
Cx	Crowther Loam, Wet, 0 To 1 Percent Slopes-----	18
DbB	Dailey Loamy Fine Sand, 0 To 3 Percent Slopes-----	20
DdC	Dankworth Loamy Sand, 3 To 6 Percent Slopes-----	20
Dw	Duroc Loam, 0 To 1 Percent Slopes-----	58
Eh	Els Fine Sand, Calcareous, 0 To 2 Percent Slopes-----	18
EuG	Epping-Rock Outcrop Complex, 30 To 60 Percent Slopes-----	0
Fu	Fluvaquents, Sandy, 0 To 1 Percent Slopes-----	4
GP	Gravel Pit-----	15
Gt	Gothenburg Loamy Sand, 0 To 2 Percent Slopes-----	15
Hh	Hoffland Fine Sandy Loam, 0 To 1 Percent Slopes-----	17
Ho	Hoffland Fine Sandy Loam, Wet, 0 To 1 Percent Slopes-----	12
INT	Aquolls-----	12
IsB	Ipague Fine Sand, Calcareous, 0 To 3 Percent Slopes-----	21
Ja	Jankosh Loam, 0 To 2 Percent Slopes-----	28
JeB	Jayem Loamy Fine Sand, 0 To 3 Percent Slopes-----	41
JeC	Jayem Loamy Fine Sand, 3 To 6 Percent Slopes-----	41
Jg	Jayem Fine Sandy Loam, 0 To 2 Percent Slopes-----	46
JgC	Jayem Fine Sandy Loam, 2 To 6 Percent Slopes-----	44
KeB	Keith Loam, 1 To 3 Percent Slopes-----	64
KeC	Keith Loam, 3 To 6 Percent Slopes-----	61
Ku	Kuma Loam, 0 To 1 Percent Slopes-----	60
La	Lemoine Sand, 0 To 2 Percent Slopes-----	25
Lb	Lewellen Loam, 0 To 2 Percent Slopes-----	9
Lc	Lewellen-McCulligan Complex, 0 To 2 Percent Slopes-----	15
Lf	Lodgepole Silt Loam, 0 To 1 Percent Slopes-----	17
M-W	Miscellaneous Water (sewage Lagoons)-----	0
Ma	Marlake Fine Sandy Loam, 0 To 1 Percent Slopes-----	3
Mc	Marlake Mucky Peat, 0 To 1 Percent Slopes-----	3
MtC	Mitchell Very Fine Sandy Loam, 3 To 6 Percent Slopes-----	46
MtD	Mitchell Very Fine Sandy Loam, 6 To 9 Percent Slopes-----	44
MxF	Mitchell-Epping Complex, 9 To 30 Percent Slopes-----	14
Ru	Rushcreek Loam, 0 To 2 Percent Slopes-----	42
SaB	Sarben Loamy Fine Sand, 0 To 3 Percent Slopes-----	48
SaC	Sarben Loamy Fine Sand, 3 To 6 Percent Slopes-----	46
SaD	Sarben Loamy Fine Sand, 6 To 9 Percent Slopes-----	44
SaE	Sarben Loamy Fine Sand, 9 To 20 Percent Slopes-----	36
Sc	Scoville Loamy Fine Sand, 0 To 2 Percent Slopes-----	39
SnC	Sidney Loam, 3 To 6 Percent Slopes-----	47
StD	Sidney-Canyon Complex, 6 To 9 Percent Slopes-----	29
SuG	Sulco Loam, 30 To 60 Percent Slopes-----	2
SxC2	Sulco-McConaughy Complex, 3 To 6 Percent Slopes, Eroded-----	45
SxD2	Sulco-McConaughy Complex, 6 To 9 Percent Slopes, Eroded-----	43
SxE2	Sulco-McConaughy Complex, 9 To 20 Percent Slopes, Eroded-----	38
SxF	Sulco-McConaughy Complex, 9 To 30 Percent Slopes-----	25
TkG	Tassel-Ashollow-Rock Outcrop Complex, 20 To 60 Percent Slopes-----	1
VaD	Valentine Fine Sand, 3 To 9 Percent Slopes-----	22
VaE	Valentine Fine Sand, Rolling-----	16
VaF	Valentine Complex, Rolling And Hilly-----	9
VdB	Valentine Loamy Fine Sand, 0 To 3 Percent Slopes-----	25
Vt	Vetal Fine Sandy Loam, 0 To 2 Percent Slopes-----	51
W	Water-----	0
WeB	Wildhorse Fine Sand, 0 To 3 Percent Slopes-----	5
WhB	Wildhorse-Hoffland Complex, 0 To 3 Percent Slopes-----	9
WkB	Wildhorse-Ipague, Calcareous Complex, 0 To 3 Percent Slopes-----	11

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
Ao:ALLIANCE-----	100	1-	2c	Prime farmland if irrigated	B	Silty - Veg. Zone 2		.28	.28	4	5	56
AoB:ALLIANCE-----	100	2e-	2e	Prime farmland if irrigated	B	Silty - Veg. Zone 2		.28	.28	4	5	56
Ar:ALMERIA-----	100	N/A	6w	Not prime farmland	D	Wet Subirrigated - Veg. Zone 2		.24	.24	5	8	0
AsF:ASHOLLOW----	70	N/A	6e	Not prime farmland	B	Sandy - Veg. Zone 2		.37	.37	5	3	86
AsF:TASSEL-----	30	N/A	6s	Not prime farmland	D	Shallow Limy - Veg. Zone 2		.24	.24	2	3	86
Bh:BAYARD-----	100	2e-	3e	Prime farmland if irrigated	B	Sandy - Veg. Zone 2		.20	.20	5	3	86
BhB:BAYARD-----	100	2e-	3e	Prime farmland if irrigated	B	Sandy - Veg. Zone 2		.20	.20	5	3	86
BhC:BAYARD-----	100	3e-	4e	Prime farmland if irrigated	B	Sandy - Veg. Zone 2		.20	.20	5	3	86
BmB:BAYARD-----	100	2e-	3e	Prime farmland if irrigated	B	Sandy - Veg. Zone 2		.32	.32	5	3	86
Bn:BAYARD-----	100	1-	3c	Prime farmland if irrigated	B	Sandy - Veg. Zone 2		.28	.28	5	5	56
BpB:BLANCHE-----	100	4e-	4e	Not prime farmland	B	Sandy - Veg. Zone 2		.17	.17	3	2	134
BrF:BLUERIDGE---	100	N/A	6s	Not prime farmland	A	Shallow To Gravel - Veg. Zone 2		.10	.10	5	1	160
Bw:BROADWATER---	100	N/A	6w	Not prime farmland	A	Shallow To Gravel - Veg. Zone 2		.17	.17	5	2	134
BxD:BUSHER-----	60	4e-	4e	Not prime farmland	B	Sandy - Veg. Zone 2		.20	.20	4	3	86
BxD:TASSEL-----	40	N/A	6s	Not prime farmland	D	Shallow Limy - Veg. Zone 2		.24	.24	2	3	86
BxE:BUSHER-----	60	N/A	6e	Not prime farmland	B	Sandy - Veg. Zone 2		.20	.20	4	3	86
BxE:TASSEL-----	40	N/A	6s	Not prime farmland	D	Shallow Limy - Veg. Zone 2		.24	.24	2	3	86
Cw:CROWTHER-----	100	N/A	5w	Not prime farmland	D	Wet Subirrigated		.24	.24	4	8	0

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
Cx:CROWTHER-----	100	N/A	5w	Not prime farmland	D	Wet Land		.24	.24	4	8	0
DbB:DAILEY-----	100	4e-	4e	Not prime farmland	A	Sandy 17-22" P.z.		.17	.17	5	2	134
DdC:DANKWORTH---	100	4e-	6e	Not prime farmland	A	Sands - Veg. Zone 2		.17	.17	5	2	134
Dw:DUROC-----	100	1-	2c	Prime farmland if irrigated	B	Silty - Veg. Zone 2		.28	.28	5	5	56
Eh:ELS-----	100	4w-	6e	Not prime farmland	A	Subirrigated		.15	.15	5	1	220
EuG:EPPING-----	75	N/A	7s	Not prime farmland	D	Shallow Limy - Veg. Zone 2		.43	---	2	3	86
EuG:ROCK OUTCROP	25	N/A	8s	Not prime farmland	D	No Site - Veg. Zone 2		---	---	-	8	0
Fu:FLUVAQUENTS--	100	N/A	8w	Not prime farmland	D	Unspecified		.17	.17	5	8	0
GP:PITS-----	100	N/A	8s	Not prime farmland	A	Unspecified		.10	.17	2	8	0
Gt:GOTHENBURG---	100	N/A	7w	Not prime farmland	D	Unspecified		.17	.17	5	8	0
Hh:HOFFLAND-----	100	N/A	5w	Not prime farmland	D	Wet Subirrigated		.20	.20	3	8	0
Ho:HOFFLAND-----	100	N/A	5w	Not prime farmland	D	Wet Land		.20	.20	3	8	0
INT:AQUOLLS-----	100	N/A	5w	Not prime farmland	C	Unspecified		---	---	-	---	0
IsB:IPAGE-----	100	4e-	6e	Not prime farmland	A	Sandy Lowland 17-22" P.z.		.15	.15	5	1	220
Ja:JANKOSH-----	100	N/A	6s	Not prime farmland	C	Saline Subirrigated - Veg. Zone 2		.32	.32	4	4L	86
JeB:JAYEM-----	100	3e-	4e	Not prime farmland	B	Sandy - Veg. Zone 2		.17	.17	5	2	134
JeC:JAYEM-----	100	4e-	4e	Not prime farmland	B	Sandy - Veg. Zone 2		.17	.17	5	2	134
Jg:JAYEM-----	100	2e-	3e	Prime farmland if irrigated	B	Sandy - Veg. Zone 2		.20	.20	5	3	86
JgC:JAYEM-----	100	3e-	4e	Prime farmland if irrigated	B	Sandy - Veg. Zone 2		.20	.20	5	3	86

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
KeB:KEITH-----	100	2e-	2e	Prime farmland if irrigated	B	Silty - Veg. Zone 2		.28	.28	5	5	56
KeC:KEITH-----	100	3e-	3e	Prime farmland if irrigated	B	Silty - Veg. Zone 2		.28	.28	5	5	56
Ku:KUMA-----	100	1-	2c	Prime farmland if irrigated	B	Silty - Veg. Zone 2		.32	.32	5	5	56
La:LEMOYNE-----	100	4e-	6e	Not prime farmland	B	Sandy Lowland 17-22" P.z.		.15	.15	4	1	220
Lb:LEWELLEN-----	100	N/A	6s	Not prime farmland	B	Saline Subirrigated - Veg. Zone 2		.24	.24	3	4L	86
Lc:LEWELLEN-----	55	N/A	6s	Not prime farmland	B	Saline Subirrigated - Veg. Zone 2		.24	.24	3	4L	86
Lc:MCCULIGAN----	45	N/A	5w	Not prime farmland	D	Sandy Lowland 17-22" P.z.		.24	.24	3	4L	86
Lf:LODGEPOLE----	100	4w-	3w	Not prime farmland	D	Clayey Overflow - Veg. Zone 2		.37	.37	5	6	48
M- W:MISCELLANEOUS WATER-----	100	N/A	N/A	Not prime farmland		Unspecified		---	---	-	---	---
Ma:MARLAKE-----	100	N/A	8w	Not prime farmland	D	Unspecified		.20	.20	5	8	0
Mc:MARLAKE-----	100	N/A	8w	Not prime farmland	D	Unspecified		---	---	3	8	0
MtC:MITCHELL----	100	3e-	3e	Prime farmland if irrigated	B	Limy Upland - Veg. Zone 2		.43	.43	5	3	86
MtD:MITCHELL----	100	4e-	4e	Not prime farmland	B	Limy Upland - Veg. Zone 2		.43	.43	5	3	86
MxF:MITCHELL----	60	N/A	6e	Not prime farmland	B	Limy Upland - Veg. Zone 2		.43	.43	5	3	86
MxF:EPPING-----	40	N/A	6s	Not prime farmland	D	Shallow Limy - Veg. Zone 2		.43	---	2	3	86
Ru:RUSHCREEK----	100	3s-	4s	Not prime farmland	B	Saline Lowland - Veg. Zone 2		.28	.28	4	4L	86
SaB:SARBEN-----	100	3e-	4e	Not prime farmland	B	Sandy - Veg. Zone 2		.17	.17	5	2	134
SaC:SARBEN-----	100	4e-	4e	Not prime farmland	B	Sandy - Veg. Zone 2		.17	.17	5	2	134

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
SaD:SARBEN-----	100	4e-	6e	Not prime farmland	B	Sandy - Veg. Zone 2		.17	.17	5	2	134
SaE:SARBEN-----	100	N/A	6e	Not prime farmland	B	Sandy - Veg. Zone 2		.17	.17	5	2	134
Sc:SCOVILLE-----	100	4e-	4e	Not prime farmland	A	Sandy - Veg. Zone 2		.17	.17	5	2	134
SnC:SIDNEY-----	100	3e-	3e	Prime farmland if irrigated	B	Silty - Veg. Zone 2		.28	.28	4	5	56
StD:SIDNEY-----	70	4e-	4e	Not prime farmland	B	Silty - Veg. Zone 2		.28	.28	4	4L	86
StD:CANYON-----	30	N/A	6s	Not prime farmland	D	Shallow Limy - Veg. Zone 2		.32	.32	2	4L	86
SuG:SULCO-----	100	N/A	7e	Not prime farmland	B	Thin Loess - Veg. Zone 2		.37	.37	5	4L	86
SxC2:SULCO-----	60	3e-	4e	Prime farmland if irrigated	B	Limy Upland - Veg. Zone 2		.37	.37	5	4L	86
SxC2:MCCONAUGHY-	40	3e-	4e	Prime farmland if irrigated	B	Silty - Veg. Zone 2		.28	.28	5	5	56
SxD2:SULCO-----	60	4e-	4e	Not prime farmland	B	Limy Upland - Veg. Zone 2		.37	.37	5	4L	86
SxD2:MCCONAUGHY-	40	4e-	4e	Not prime farmland	B	Silty - Veg. Zone 2		.28	.28	5	5	56
SxE2:SULCO-----	60	N/A	6e	Not prime farmland	B	Limy Upland - Veg. Zone 2		.37	.37	5	4L	86
SxE2:MCCONAUGHY-	40	N/A	6e	Not prime farmland	B	Silty - Veg. Zone 2		.28	.28	5	5	56
SxF:SULCO-----	75	N/A	6e	Not prime farmland	B	Limy Upland - Veg. Zone 2		.37	.37	5	4L	86
SxF:MCCONAUGHY--	25	N/A	6e	Not prime farmland	B	Silty - Veg. Zone 2		.28	.28	5	5	56
TkG:TASSEL-----	50	N/A	7s	Not prime farmland	D	Shallow Limy - Veg. Zone 2		.24	.24	2	3	86
TkG:ASHOLLOW----	35	N/A	7e	Not prime farmland	B	Sandy - Veg. Zone 2		.37	.37	5	3	86
VaD:VALENTINE---	100	4e-	6e	Not prime farmland	A	Sands 17-22" P.z.		.15	.15	5	1	250
VaE:VALENTINE---	100	N/A	6e	Not prime farmland	A	Sands 17-22" P.z.		.15	.15	5	1	250

Garden County, Nebraska: Published
 Field Office Thunderbook: Soils Properties for Conservation Planning

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
VaF:VALENTINE---	50	N/A	6e	Not prime farmland	A	Sands 17-22" P.z.		.15	.15	5	1	250
	50	N/A	7e	Not prime farmland	A	Choppy Sands 17-22" P.z.		.15	.15	5	1	250
VdB:VALENTINE---	100	4e-	6e	Not prime farmland	A	Sandy 17-22" P.z.		.17	.17	5	2	134
Vt:VETAL-----	100	2e-	2e	Prime farmland if irrigated	B	Sandy 17-22" P.z.		.20	.20	5	3	86
W:WATER-----	100	N/A	N/A	Not prime farmland		Unspecified		---	---	-	---	0
WeB:WILDHORSE---	100	N/A	6s	Not prime farmland	A	Saline Subirrigated 14-22" P.z.		.15	.15	5	1	220
WhB:WILDHORSE---	65	N/A	6s	Not prime farmland	A	Saline Subirrigated 14-22" P.z.		.15	.15	5	1	220
WhB:HOFFLAND----	35	N/A	5w	Not prime farmland	D	Wet Subirrigated		.20	.20	3	8	0
WkB:WILDHORSE---	60	N/A	6s	Not prime farmland	A	Saline Subirrigated 14-22" P.z.		.15	.15	5	1	220
WkB:IPAGE-----	40	4e-	6e	Not prime farmland	A	Sandy Lowland 17-22" P.z.		.15	.15	5	1	220

RANGELAND PRODUCTIVITY
Garden County, Nebraska

Use and Explanation of Rangeland, Grazed Forest Land, Native Pastureland Interpretations

Information in this subsection can be used to plan the use and management of soils for rangeland, grazed forest land, and native pasture. Different kinds of soils vary in their capacity to produce native grasses and other plants suitable for grazing. Information in this subsection provides groupings of similar soils and estimates of potential forage production, which can be used to determine livestock stocking rates.

Rangeland. Range is land on which the native vegetation (climax or natural potential plant community) is predominantly grasses, grasslike plants, forbs, and shrubs suitable for grazing and browsing. Range includes natural grasslands, savannas, many wetlands, some deserts, tundra, and certain shrub and forb communities. Rangeland receives no regular or frequent cultural treatment. The composition and production of the plant community are determined by soil, climate, topography, overstory canopy, and grazing management.

Grazed Forest Land. Includes land on which the understory includes, as an integral part of the forest plant community, plants that can be grazed without significantly impairing other forest values.

Native Pasture. Includes land on which the native vegetation (climax or natural potential plant community) is forest but which is used and managed primarily for production of native plants for forage. Native pasture includes cut-over forest land and forest land cleared and now managed for native or naturalized forage plants.

Rangeland

In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Effective management based on the relationship between the soils and vegetation and water.

The Rangeland, Grazed Forest land, Native Pastureland Interpretations shows, for each soil that supports rangeland vegetation, the ecological site and the potential annual production of vegetation in favorable, normal, unfavorable years. An explanation of the column headings in this table follows.

An ecological site is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of a site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service.

Total dry-weight production is the amount of vegetation that can be expected to grow annually on well managed rangeland that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, average, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Range management requires a knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the potential natural plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in chapter 4 of the National Range and Pasture Handbook, which is available in local offices of the Natural Resources Conservation Service. The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

RANGELAND PRODUCTIVITY--Continued
Garden County, Nebraska

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
Ao:				
Alliance-----	Silty - Veg. Zone 2	3,300	2,500	1,700
AoB:				
Alliance-----	Silty - Veg. Zone 2	3,300	2,500	1,700
Ar:				
Almeria-----	Wet Subirrigated - Veg. Zone 2	5,300	4,700	4,200
AsF:				
Ashollow-----	Sandy - Veg. Zone 2	2,300	1,600	1,200
Tassel-----	Shallow Limy - Veg. Zone 2	1,200	1,100	900
Bh:				
Bayard-----	Sandy - Veg. Zone 2	2,300	1,600	1,100
BhB:				
Bayard-----	Sandy - Veg. Zone 2	2,300	1,600	1,100
BhC:				
Bayard-----	Sandy - Veg. Zone 2	2,300	1,600	1,100
BmB:				
Bayard-----	Sandy - Veg. Zone 2	2,300	1,600	1,100
Bn:				
Bayard-----	Sandy - Veg. Zone 2	2,300	1,600	1,100
BpB:				
Blanche-----	Sandy - Veg. Zone 2	2,600	2,300	1,900
BrF:				
Blueridge-----	Shallow To Gravel - Veg. Zone 2	1,300	900	600
Bw:				
Broadwater-----	Shallow To Gravel - Veg. Zone 2	1,250	900	600
BxD:				
Busher-----	Sandy - Veg. Zone 2	3,000	2,300	1,700
Tassel-----	Shallow Limy - Veg. Zone 2	1,200	1,100	900
BxE:				
Busher-----	Sandy - Veg. Zone 2	3,000	2,300	1,700
Tassel-----	Shallow Limy - Veg. Zone 2	1,200	1,100	900
Cw:				
Crowth-----	Wet Subirrigated	5,300	4,800	4,300
Cx:				
Crowth-----	Wet Land	5,500	5,000	4,500
DbB:				
Dailey-----	Sandy 17-22" P.z.	3,000	2,300	1,700
DdC:				
Dankworth-----	Sands - Veg. Zone 2	2,100	1,600	1,100
Dw:				
Duroc-----	Silty - Veg. Zone 2	3,300	2,500	1,700
Eh:				
Els-----	Subirrigated	4,800	4,600	4,300
EuG:				
Epping-----	Shallow Limy - Veg. Zone 2	1,500	1,100	700
Rock Outcrop-----	No Site - Veg. Zone 2	0	0	0
Fu:				
Fluvaquents-----	---	---	---	---
GP:				
Pits-----	---	---	---	---
Gt:				
Gothenburg-----	---	---	---	---
Hh:				
Hoffland-----	Wet Subirrigated	5,300	4,800	4,300
Ho:				
Hoffland-----	Wet Land	5,500	5,000	4,500
INT:				
Aquolls-----	---	---	---	---
IsB:				
Ipage-----	Sandy Lowland 17-22" P.z.	3,500	3,200	3,000
Ja:				
Jankosh-----	Saline Subirrigated - Veg. Zone 2	2,900	2,600	2,300
JeB:				
Jayem-----	Sandy - Veg. Zone 2	3,000	2,300	1,600
JeC:				
Jayem-----	Sandy - Veg. Zone 2	3,000	2,300	1,600
Jg:				
Jayem-----	Sandy - Veg. Zone 2	3,000	2,300	1,600
JgC:				
Jayem-----	Sandy - Veg. Zone 2	3,000	2,300	1,600
KeB:				
Keith-----	Silty - Veg. Zone 2	3,300	2,500	1,700
KeC:				
Keith-----	Silty - Veg. Zone 2	3,300	2,500	1,700
Ku:				
Kuma-----	Silty - Veg. Zone 2	2,500	1,500	1,000
La:				
Lemoyne-----	Sandy Lowland 17-22" P.z.	3,000	2,300	1,700
Lb:				
Lewellen-----	Saline Subirrigated - Veg. Zone 2	3,300	2,600	2,000
Lc:				

RANGELAND PRODUCTIVITY--Continued
Garden County, Nebraska

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
Lewellen-----	Saline Subirrigated - Veg. Zone 2	3,300	2,600	2,000
Mcculigan-----	Sandy Lowland 17-22" P.z.	4,700	4,200	3,700
Lf: Lodgepole-----	Clayey Overflow - Veg. Zone 2	1,200	1,000	700
M-W: Miscellaneous Water-----	---	---	---	---
Ma: Marlake-----	---	---	---	---
Mc: Marlake-----	---	---	---	---
MtC: Mitchell-----	Limy Upland - Veg. Zone 2	2,000	1,300	700
MtD: Mitchell-----	Limy Upland - Veg. Zone 2	2,000	1,300	700
MxF: Mitchell-----	Limy Upland - Veg. Zone 2	2,000	1,300	700
Epping-----	Shallow Limy - Veg. Zone 2	1,500	1,100	700
Ru: Rushcreek-----	Saline Lowland - Veg. Zone 2	2,300	1,500	700
SaB: Sarben-----	Sandy - Veg. Zone 2	3,000	2,600	2,200
SaC: Sarben-----	Sandy - Veg. Zone 2	3,000	2,600	2,200
SaD: Sarben-----	Sandy - Veg. Zone 2	3,000	2,600	2,200
SaE: Sarben-----	Sandy - Veg. Zone 2	3,000	2,600	2,200
Sc: Scoville-----	Sandy - Veg. Zone 2	2,300	1,600	1,100
SnC: Sidney-----	Silty - Veg. Zone 2	2,200	1,500	1,000
StD: Sidney-----	Silty - Veg. Zone 2	2,200	1,500	1,000
Canyon-----	Shallow Limy - Veg. Zone 2	1,500	1,100	700
SuG: Sulco-----	Thin Loess - Veg. Zone 2	2,300	1,600	1,000
SxC2: Sulco-----	Limy Upland - Veg. Zone 2	2,800	2,000	1,500
Mcconaughy-----	Silty - Veg. Zone 2	3,250	2,500	1,700
SxD2: Sulco-----	Limy Upland - Veg. Zone 2	2,800	2,000	1,500
Mcconaughy-----	Silty - Veg. Zone 2	3,250	2,500	1,700
SxE2: Sulco-----	Limy Upland - Veg. Zone 2	2,800	2,000	1,500
Mcconaughy-----	Silty - Veg. Zone 2	3,250	2,500	1,700
SxF: Sulco-----	Limy Upland - Veg. Zone 2	2,800	2,000	1,500
Mcconaughy-----	Silty - Veg. Zone 2	3,250	2,500	1,700
TkG: Tassel-----	Shallow Limy - Veg. Zone 2	1,200	1,100	900
Ashollow-----	Sandy - Veg. Zone 2	2,300	1,600	1,200
VaD: Valentine-----	Sands 17-22" P.z.	3,000	2,600	2,000
VaE: Valentine-----	Sands 17-22" P.z.	3,000	2,600	2,000
VaF: Valentine-----	Sands 17-22" P.z.	3,000	2,600	2,000
Valentine-----	Choppy Sands 17-22" P.z.	2,800	2,400	1,800
VdB: Valentine-----	Sandy 17-22" P.z.	2,600	2,300	1,900
Vt: Vetal-----	Sandy 17-22" P.z.	3,000	2,300	1,700
W: Water-----	---	---	---	---
WeB: Wildhorse-----	Saline Subirrigated 14-22" P.z.	3,200	2,800	2,400
WhB: Wildhorse-----	Saline Subirrigated 14-22" P.z.	3,200	2,800	2,400
Hoffland-----	Wet Subirrigated	5,300	4,800	4,300
WkB: Wildhorse-----	Saline Subirrigated 14-22" P.z.	3,200	2,800	2,400
Ipage-----	Sandy Lowland 17-22" P.z.	3,500	3,200	3,000

BUILDING SITE DEVELOPMENT
Garden County, Nebraska

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. These tables show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

BUILDING SITE DEVELOPMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ao: Alliance-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
AoB: Alliance-----	100	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50
Ar: Almeria-----	100	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
AsF: Ashollow-----	70	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
Tassel-----	30	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 1.00
Bh: Bayard-----	100	Not limited		Not limited		Not limited	
BhB: Bayard-----	100	Not limited		Not limited		Not limited	
BhC: Bayard-----	100	Not limited		Not limited		Somewhat limited Slope	0.12
BmB: Bayard-----	100	Not limited		Not limited		Not limited	
Bn: Bayard-----	100	Not limited		Not limited		Not limited	
BpB: Blanche-----	100	Not limited		Somewhat limited Depth to soft bedrock	0.42	Not limited	
BrF: Blueridge-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Bw: Broadwater-----	100	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
BxD: Busher-----	60	Not limited		Not limited		Somewhat limited Slope	0.48
Tassel-----	40	Somewhat limited Depth to soft bedrock	1.00	Very limited Depth to soft bedrock	1.00	Somewhat limited Depth to soft bedrock Slope	1.00 0.48
BxE: Busher-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Tassel-----	40	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 1.00
Cw: Crowther-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Cx: Crowther-----	100	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
DbB: Dailey-----	100	Not limited		Not limited		Not limited	
DdC: Dankworth-----	100	Not limited		Not limited		Somewhat limited Slope	0.12
Dw: Duroc-----	100	Not limited		Somewhat limited Shrink-swell	0.50	Not limited	
Eh: Els-----	100	Somewhat limited Depth to saturated zone	0.07	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.07

BUILDING SITE DEVELOPMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
EuG: Epping-----	75	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 1.00
Rock Outcrop-----	25	Not rated		Not rated		Not rated	
Fu: Fluvaquents-----	100	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
GP: Pits-----	100	Not rated		Not rated		Not rated	
Gt: Gothenburg-----	100	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Hh: Hoffland-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Ho: Hoffland-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
INT: Aquolls-----	100	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
IsB: Ipage-----	100	Not limited		Somewhat limited Depth to saturated zone	0.61	Not limited	
Ja: Jankosh-----	100	Somewhat limited Depth to saturated zone	0.07	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.07
JeB: Jayem-----	100	Not limited		Not limited		Not limited	
JeC: Jayem-----	100	Not limited		Not limited		Somewhat limited Slope	0.12
Jg: Jayem-----	100	Not limited		Not limited		Not limited	
JgC: Jayem-----	100	Not limited		Not limited		Somewhat limited Slope	0.00
KeB: Keith-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
KeC: Keith-----	100	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell Slope	0.50 0.12
Ku: Kuma-----	100	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
La: Lemoyne-----	100	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 0.50 0.35	Very limited Flooding Shrink-swell	1.00 0.50
Lb: Lewellen-----	100	Very limited Flooding Depth to saturated zone	1.00 0.07	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.07

BUILDING SITE DEVELOPMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Lc: Lewellen-----	55	Very limited Flooding Depth to saturated zone	1.00 0.07	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.07
Mcculigan-----	45	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Lf: Lodgepole-----	100	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 1.00
M-W: Miscellaneous Water-	100	Not rated		Not rated		Not rated	
Ma: Marlake-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Mc: Marlake-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
MtC: Mitchell-----	100	Not limited		Not limited		Somewhat limited Slope	0.12
MtD: Mitchell-----	100	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Very limited Slope	1.00
MxF: Mitchell-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Epping-----	40	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 1.00
Ru: Rushcreek-----	100	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.35	Very limited Flooding	1.00
SaB: Sarben-----	100	Not limited		Not limited		Not limited	
SaC: Sarben-----	100	Not limited		Not limited		Somewhat limited Slope	0.12
SaD: Sarben-----	100	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Very limited Slope	1.00
SaE: Sarben-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Sc: Scoville-----	100	Not limited		Not limited		Not limited	
SnC: Sidney-----	100	Not limited		Not limited		Somewhat limited Slope	0.12
StD: Sidney-----	70	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Very limited Slope	1.00
Canyon-----	30	Somewhat limited Depth to soft bedrock Slope	1.00 0.00	Very limited Depth to soft bedrock Slope	1.00 0.00	Very limited Depth to soft bedrock Slope	1.00 1.00
SuG: Sulco-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
SxC2: Sulco-----	60	Not limited		Not limited		Somewhat limited Slope	0.12
Mccoonaughy-----	40	Not limited		Not limited		Somewhat limited Slope	0.12

BUILDING SITE DEVELOPMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
SxD2: Sulco-----	60	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Very limited Slope	1.00
Mcconaughey-----	40	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Very limited Slope	1.00
SxE2: Sulco-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Mcconaughey-----	40	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
SxF: Sulco-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Mcconaughey-----	25	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
TkG: Tassel-----	50	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 1.00
Ashollow-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
VaD: Valentine-----	100	Not limited		Not limited		Somewhat limited Slope	0.48
VaE: Valentine-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
VaF: Valentine-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Valentine-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
VdB: Valentine-----	100	Not limited		Not limited		Not limited	
Vt: Vetal-----	100	Not limited		Not limited		Not limited	
W: Water-----	100	Not rated		Not rated		Not rated	
WeB: Wildhorse-----	100	Not limited		Very limited Depth to saturated zone	1.00	Not limited	
WhB: Wildhorse-----	65	Not limited		Very limited Depth to saturated zone	1.00	Not limited	
Hoffland-----	35	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
WkB: Wildhorse-----	60	Not limited		Very limited Depth to saturated zone	1.00	Not limited	
Ipage-----	40	Not limited		Somewhat limited Depth to saturated zone	0.61	Not limited	

BUILDING SITE DEVELOPMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ao: Alliance-----	100	Somewhat limited Shrink-swell Frost action	0.50 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
AoB: Alliance-----	100	Somewhat limited Shrink-swell Frost action	0.50 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Ar: Almeria-----	100	Very limited Flooding	1.00	Very limited Depth to saturated zone	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Flooding	0.80	Droughty	0.02
AsF: Ashollow-----	70	Somewhat limited Slope	0.84	Somewhat limited Slope Cutbanks cave	0.84 0.10	Somewhat limited Slope	0.84
Tassel-----	30	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Depth to bedrock Droughty Slope	1.00 1.00 1.00
Bh: Bayard-----	100	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
BhB: Bayard-----	100	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
BhC: Bayard-----	100	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
BmB: Bayard-----	100	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Bn: Bayard-----	100	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
BpB: Blanche-----	100	Not limited		Somewhat limited Depth to soft bedrock Cutbanks cave	0.42 0.10	Somewhat limited Depth to bedrock	0.42
BrF: Blueridge-----	100	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Too sandy Droughty Slope	1.00 1.00 1.00
Bw: Broadwater-----	100	Very limited Flooding	1.00	Very limited Cutbanks cave Flooding	1.00 0.80	Very limited Flooding Droughty	1.00 0.97
BxD: Busher-----	60	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Tassel-----	40	Somewhat limited Depth to soft bedrock	1.00	Very limited Depth to soft bedrock Cutbanks cave	1.00 0.10	Very limited Depth to bedrock Droughty	1.00 1.00
BxE: Busher-----	60	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Tassel-----	40	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Depth to bedrock Droughty Slope	1.00 1.00 1.00
Cw: Crowther-----	100	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00

BUILDING SITE DEVELOPMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Cx: Crowther-----	100	Very limited Depth to saturated zone Shrink-swell Frost action	1.00 0.50 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
DbB: Dailey-----	100	Not limited		Very limited Cutbanks cave Depth to dense layer	1.00 0.50	Somewhat limited Droughty	0.54
DdC: Dankworth-----	100	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.94
Dw: Duroc-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Eh: Els-----	100	Somewhat limited Frost action Depth to saturated zone	0.50 0.03	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Somewhat limited Droughty Depth to saturated zone	0.81 0.03
EuG: Epping-----	75	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to soft bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Depth to bedrock Slope Droughty Not rated	1.00 1.00 0.91
Rock Outcrop-----	25	Not rated		Not rated		Not rated	
Fu: Fluvaquents-----	100	Very limited Depth to saturated zone Flooding Frost action	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.80	Very limited Flooding Depth to saturated zone Too sandy Droughty	1.00 1.00 0.50 0.00
GP: Pits-----	100	Not rated		Not rated		Not rated	
Gt: Gothenburg-----	100	Very limited Flooding Depth to saturated zone Frost action	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.80	Very limited Flooding Depth to saturated zone Droughty	1.00 1.00 0.70
Hh: Hoffland-----	100	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
Ho: Hoffland-----	100	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
INT: Aquolls-----	100	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding Cutbanks cave	1.00 1.00 0.10	Very limited Depth to saturated zone Ponding	1.00 1.00
IsB: Ipage-----	100	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 0.61	Somewhat limited Droughty	0.65

BUILDING SITE DEVELOPMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ja: Jankosh-----	100	Somewhat limited Frost action Depth to saturated zone	0.50 0.03	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Very limited Sodium content Salinity Depth to saturated zone	1.00 1.00 0.03
JeB: Jayem-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
JeC: Jayem-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Jg: Jayem-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
JgC: Jayem-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
KeB: Keith-----	100	Somewhat limited Shrink-swell Frost action	0.50 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
KeC: Keith-----	100	Somewhat limited Shrink-swell Frost action	0.50 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Ku: Kuma-----	100	Somewhat limited Shrink-swell Frost action	0.50 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
La: Lemoyne-----	100	Somewhat limited Shrink-swell Flooding	0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.35	Somewhat limited Too sandy	0.50
Lb: Lewellen-----	100	Somewhat limited Frost action Flooding Depth to saturated zone	0.50 0.40 0.03	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Very limited Sodium content Salinity Depth to saturated zone	1.00 1.00 0.03
Lc: Lewellen-----	55	Somewhat limited Frost action Flooding Depth to saturated zone	0.50 0.40 0.03	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Very limited Sodium content Salinity Depth to saturated zone	1.00 1.00 0.03
Mcculigan-----	45	Very limited Flooding Depth to saturated zone Frost action	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Flooding Droughty	1.00 0.60 0.15
Lf: Lodgepole-----	100	Very limited Depth to saturated zone Frost action Shrink-swell	1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Too clayey	1.00 0.10 0.03	Very limited Depth to saturated zone	1.00
M-W: Miscellaneous Water-	100	Not rated		Not rated		Not rated	
Ma: Marlake-----	100	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone Droughty	1.00 0.21
Mc: Marlake-----	100	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Content of organic matter Depth to saturated zone	1.00 1.00

BUILDING SITE DEVELOPMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MtC: Mitchell-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
MtD: Mitchell-----	100	Somewhat limited Slope	0.00	Somewhat limited Cutbanks cave Slope	0.10 0.00	Somewhat limited Slope	0.00
MxF: Mitchell-----	60	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Epping-----	40	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Depth to bedrock Droughty Slope	1.00 1.00 1.00
Ru: Rushcreek-----	100	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.35	Not limited	
SaB: Sarben-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
SaC: Sarben-----	100	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
SaD: Sarben-----	100	Somewhat limited Slope	0.00	Somewhat limited Cutbanks cave Slope	0.10 0.00	Somewhat limited Slope	0.00
SaE: Sarben-----	100	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Sc: Scoville-----	100	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.05
SnC: Sidney-----	100	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
StD: Sidney-----	70	Somewhat limited Frost action Slope	0.50 0.00	Somewhat limited Cutbanks cave Slope	0.10 0.00	Somewhat limited Slope	0.00
Canyon-----	30	Somewhat limited Depth to soft bedrock Slope	1.00 0.00	Very limited Depth to soft bedrock Cutbanks cave Slope	1.00 0.10 0.00	Very limited Depth to bedrock Droughty Slope	1.00 1.00 0.00
SuG: Sulco-----	100	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
SxC2: Sulco-----	60	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
Mconnaughy-----	40	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
SxD2: Sulco-----	60	Somewhat limited Slope	0.00	Somewhat limited Cutbanks cave Slope	0.10 0.00	Somewhat limited Slope	0.00
Mconnaughy-----	40	Somewhat limited Frost action Slope	0.50 0.00	Somewhat limited Cutbanks cave Slope	0.10 0.00	Somewhat limited Slope	0.00
SxE2: Sulco-----	60	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Mconnaughy-----	40	Somewhat limited Slope Frost action	0.63 0.50	Somewhat limited Slope Cutbanks cave	0.63 0.10	Somewhat limited Slope	0.63

BUILDING SITE DEVELOPMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
SxF: Sulco-----	75	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Mccoaughy-----	25	Somewhat limited Slope Frost action	0.63 0.50	Somewhat limited Slope Cutbanks cave	0.63 0.10	Somewhat limited Slope	0.63
TkG: Tassel-----	50	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to soft bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Depth to bedrock Slope Droughty	1.00 1.00 1.00
Ashollow-----	35	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
VaD: Valentine-----	100	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.34
VaE: Valentine-----	100	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.34
VaF: Valentine-----	50	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.34
Valentine-----	50	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty	1.00 0.34
VdB: Valentine-----	100	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.25
Vt: Vetal-----	100	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
W: Water-----	100	Not rated		Not rated		Not rated	
WeB: Wildhorse-----	100	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Very limited Sodium content Droughty Salinity	1.00 0.99 0.00
WhB: Wildhorse-----	65	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Very limited Sodium content Droughty Salinity	1.00 0.99 0.00
Hoffland-----	35	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
WkB: Wildhorse-----	60	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Very limited Sodium content Droughty Salinity	1.00 0.99 0.00
Ipage-----	40	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 0.61	Somewhat limited Droughty	0.65

CONSTRUCTION MATERIALS
Garden County, Nebraska

Construction Materials

These tables give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

The soils are rated good, fair, or poor as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

The soils are rated as a probable or improbable source of sand and gravel. A rating of probable means that the source material is likely to be in or below the soil. The numerical ratings in these columns indicate the degree of probability. The number 0.00 indicates that the soil is an improbable source. A number between 0.00 and 1.00 indicates the degree to which the soil is a probable source of sand or gravel.

Sand and gravel are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the first table, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the lowest layer of the soil contains sand or gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Ao: Alliance-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
AoB: Alliance-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.05
Ar: Almeria-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.09 0.10
AsF: Ashollow-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.07
Tassel-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Bh: Bayard-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.07
BhB: Bayard-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.07
BhC: Bayard-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.07
BmB: Bayard-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.07
Bn: Bayard-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.07
BpB: Blanche-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.09
BrF: Blueridge-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.91 0.91
Bw: Broadwater-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.45 0.97
BxD: Busher-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.08
Tassel-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
BxE: Busher-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.08

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Tassel-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Cw: Crowther-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.17
Cx: Crowther-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.99
DbB: Dailey-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.46
DdC: Dankworth-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.49
Dw: Duroc-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Eh: Els-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.99 0.99
EuG: Epping-----	75	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Rock Outcrop-----	25	Not rated		Not rated	
Fu: Fluvaquents-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good	
GP: Pits-----	100	Not rated		Not rated	
Gt: Gothenburg-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Bottom layer	0.80
Hh: Hoffland-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.17 0.99
HO: Hoffland-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.17 0.99
INT: Aquolls-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
IsB: Ipage-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Bottom layer	0.99

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Ja: Jankosh-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.05 0.97
JeB: Jayem-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.07
JeC: Jayem-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.46
Jg: Jayem-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.07
JgC: Jayem-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.08
KeB: Keith-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.05
KeC: Keith-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Ku: Kuma-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
La: Lemoyne-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.93
Lb: Lewellen-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.69 0.97
Lc: Lewellen-----	55	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.66 0.97
Mcculigan-----	45	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.97
Lf: Lodgepole-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
M-W: Miscellaneous Water-	100	Not rated		Not rated	
Ma: Marlake-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.11 0.22
Mc: Marlake-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.46

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
MtC: Mitchell-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.06 0.06
MtD: Mitchell-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.06 0.06
MxF: Mitchell-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.06 0.06
Epping-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Ru: Rushcreek-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.97
SaB: Sarben-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.09 0.09
SaC: Sarben-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.09 0.09
SaD: Sarben-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.09 0.09
SaE: Sarben-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.09 0.62
Sc: Scoville-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.89
SnC: Sidney-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.07
StD: Sidney-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Canyon-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
SuG: Sulco-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
SxC2: Sulco-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Mcconaughey-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
SxD2: Sulco-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Mcconaughey-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
SxE2: Sulco-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Mcconaughey-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
SxF: Sulco-----	75	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Mcconaughey-----	25	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
TkG: Tassel-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Ashollow-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.07
VaD: Valentine-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Bottom layer	0.99
VaE: Valentine-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Bottom layer	0.99
VaF: Valentine-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Good Bottom layer	0.99
Valentine-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Good Bottom layer	0.99
VdB: Valentine-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.65 0.99
Vt: Vetal-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.06 0.07
W: Water-----	100	Not rated		Not rated	
WeB: Wildhorse-----	100	Poor Bottom layer Thickest layer	0.00 0.00	Good Bottom layer	0.99
WhB: Wildhorse-----	65	Poor Bottom layer Thickest layer	0.00 0.00	Good Bottom layer	0.99

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Hoffland-----	35	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.09
		Thickest layer	0.00	Bottom layer	0.99
WkB: Wildhorse-----	60	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.99
		Thickest layer	0.00		
Ipage-----	40	Poor		Good	
		Bottom layer	0.00		
		Thickest layer	0.00		

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ao: Alliance-----	100	Fair Low content of organic matter Water erosion	0.88 0.90	Fair Depth to bedrock	0.58	Good	
AoB: Alliance-----	100	Fair Low content of organic matter Water erosion	0.88 0.90	Fair Depth to bedrock	0.58	Good	
Ar: Almeria-----	100	Fair Low content of organic matter Droughty	0.12 0.98	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
AsF: Ashollow-----	70	Fair Low content of organic matter Water erosion	0.88 0.90	Good		Fair Slope Rock fragments	0.16 0.97
Tassel-----	30	Poor Droughty Depth to bedrock Low content of organic matter	0.00 0.00 0.88	Poor Depth to bedrock Slope	0.00 0.50	Poor Depth to bedrock Slope	0.00 0.00
Bh: Bayard-----	100	Fair Low content of organic matter	0.88	Good		Good	
BhB: Bayard-----	100	Fair Low content of organic matter	0.88	Good		Good	
BhC: Bayard-----	100	Fair Low content of organic matter	0.88	Good		Good	
BmB: Bayard-----	100	Fair Low content of organic matter	0.88	Good		Good	
Bn: Bayard-----	100	Fair Low content of organic matter	0.88	Good		Good	
BpB: Blanche-----	100	Poor Wind erosion Droughty Depth to bedrock Low content of organic matter	0.00 0.52 0.58 0.88	Poor Depth to bedrock	0.00	Fair Depth to bedrock	0.58
BrF: Blueridge-----	100	Poor Too sandy Wind erosion Droughty Low content of organic matter	0.00 0.00 0.00 0.12	Fair Slope	0.82	Poor Hard to reclaim Too sandy Slope Rock fragments Hard to reclaim	0.00 0.00 0.00 0.03 0.98
Bw: Broadwater-----	100	Poor Too sandy Wind erosion Droughty Low content of organic matter	0.00 0.00 0.00 0.12	Good		Poor Hard to reclaim Too sandy Rock fragments Hard to reclaim	0.00 0.00 0.03 0.98

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BxD: Busher-----	60	Fair Low content of organic matter	0.88	Fair Depth to bedrock	0.58	Good	
Tassel-----	40	Poor Droughty Depth to bedrock Low content of organic matter	0.00 0.00 0.88	Poor Depth to bedrock	0.00	Poor Depth to bedrock	0.00
BxE: Busher-----	60	Fair Low content of organic matter	0.88	Fair Depth to bedrock	0.58	Poor Slope	0.00
Tassel-----	40	Poor Droughty Depth to bedrock Low content of organic matter	0.00 0.00 0.88	Poor Depth to bedrock	0.00	Poor Depth to bedrock Slope	0.00 0.00
Cw: Crowther-----	100	Fair Carbonate content Low content of organic matter	0.46 0.88	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Carbonate content	0.00 0.46
Cx: Crowther-----	100	Fair Carbonate content Low content of organic matter	0.46 0.88	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Carbonate content	0.00 0.46
DbB: Dailey-----	100	Poor Too sandy Wind erosion Droughty Low content of organic matter	0.00 0.00 0.33 0.88	Good		Poor Hard to reclaim Too sandy	0.00 0.00
DdC: Dankworth-----	100	Poor Too sandy Wind erosion Droughty Low content of organic matter	0.00 0.00 0.04 0.12	Good		Poor Hard to reclaim Too sandy Rock fragments	0.00 0.00 0.88
Dw: Duroc-----	100	Fair Low content of organic matter Water erosion	0.88 0.90	Fair Shrink-swell	0.99	Good	
Eh: Els-----	100	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.17	Fair Depth to saturated zone	0.76	Poor Too sandy Depth to saturated zone	0.00 0.76
EuG: Epping-----	75	Poor Depth to bedrock Droughty Low content of organic matter Water erosion	0.00 0.00 0.88 0.90	Poor Depth to bedrock Slope	0.00 0.00	Poor Slope Depth to bedrock	0.00 0.00
Rock Outcrop-----	25	Not rated		Not rated		Not rated	

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Fu: Fluvaquents-----	100	Poor Too sandy	0.00	Poor Depth to saturated zone	0.00	Poor Too sandy Depth to saturated zone	0.00 0.00
GP: Pits-----	100	Not rated		Not rated		Not rated	
Gt: Gothenburg-----	100	Poor Too sandy Low content of organic matter Droughty	0.00 0.12 0.24	Poor Depth to saturated zone	0.00	Poor Hard to reclaim Too sandy Depth to saturated zone Rock fragments	0.00 0.00 0.00 0.97
Hh: Hoffland-----	100	Poor Too sandy Low content of organic matter Carbonate content	0.00 0.12 0.46	Poor Depth to saturated zone	0.00	Poor Too sandy Depth to saturated zone	0.00 0.00
Ho: Hoffland-----	100	Fair Too sandy Carbonate content Low content of organic matter	0.41 0.46 0.88	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Too sandy	0.00 0.41
INT: Aquolls-----	100	Poor Low content of organic matter	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
IsB: Ipage-----	100	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.38	Good		Poor Too sandy	0.00
Ja: Jankosh-----	100	Poor Sodium content Too alkaline Low content of organic matter Salinity Water erosion	0.00 0.00 0.12 0.88 0.90	Fair Depth to saturated zone	0.76	Poor Sodium content Salinity Hard to reclaim Depth to saturated zone Hard to reclaim	0.00 0.00 0.50 0.76 0.80
JeB: Jayem-----	100	Poor Wind erosion Low content of organic matter	0.00 0.18	Good		Good	
JeC: Jayem-----	100	Poor Wind erosion Low content of organic matter	0.00 0.18	Good		Good	
Jg: Jayem-----	100	Fair Low content of organic matter	0.18	Good		Good	

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
JgC: Jayem-----	100	Fair Low content of organic matter	0.18	Good		Good	
KeB: Keith-----	100	Fair Low content of organic matter Water erosion	0.88 0.90	Fair Shrink-swell	0.98	Good	
KeC: Keith-----	100	Fair Low content of organic matter Water erosion	0.12 0.90	Good		Good	
Ku: Kuma-----	100	Fair Water erosion	0.99	Fair Shrink-swell	0.99	Good	
La: Lemoyne-----	100	Poor Wind erosion Carbonate content Low content of organic matter Water erosion	0.00 0.46 0.88 0.99	Fair Shrink-swell	0.97	Good	
Lb: Lewellen-----	100	Poor Too sandy Sodium content Low content of organic matter Droughty Salinity Carbonate content Water erosion	0.00 0.00 0.12 0.66 0.97 0.97 0.99	Fair Depth to saturated zone	0.76	Poor Too sandy Sodium content Salinity Hard to reclaim Depth to saturated zone Hard to reclaim	0.00 0.00 0.46 0.76 0.98
LC: Lewellen-----	55	Poor Too sandy Sodium content Low content of organic matter Droughty Salinity Carbonate content Water erosion	0.00 0.00 0.12 0.79 0.97 0.97 0.99	Fair Depth to saturated zone	0.76	Poor Too sandy Sodium content Salinity Hard to reclaim Depth to saturated zone Hard to reclaim	0.00 0.00 0.54 0.76 0.98
Mcculigan-----	45	Poor Too sandy Low content of organic matter Sodium content Droughty Water erosion	0.00 0.12 0.22 0.27 0.99	Poor Depth to saturated zone	0.00	Poor Hard to reclaim Too sandy Depth to saturated zone Rock fragments Hard to reclaim	0.00 0.00 0.00 0.03 0.98
Lf: Lodgepole-----	100	Poor Too clayey Low content of organic matter Water erosion	0.00 0.88 0.90	Poor Depth to saturated zone Shrink-swell	0.00 0.92	Poor Depth to saturated zone Too Clayey	0.00 0.00
M-W: Miscellaneous Water-	100	Not rated		Not rated		Not rated	

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ma: Marlake-----	100	Fair Low content of organic matter Too sandy Droughty	0.12 0.22 0.58	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Too sandy	0.00 0.22
Mc: Marlake-----	100	Poor Too sandy Low content of organic matter	0.00 0.12	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Too sandy	0.00 0.00
MtC: Mitchell-----	100	Fair Low content of organic matter Water erosion	0.88 0.90	Good		Good	
MtD: Mitchell-----	100	Fair Low content of organic matter Water erosion	0.88 0.90	Good		Good	
MxF: Mitchell-----	60	Fair Low content of organic matter Water erosion	0.88 0.90	Fair Slope	0.08	Poor Slope	0.00
Epping-----	40	Poor Droughty Depth to bedrock Water erosion	0.00 0.00 0.90	Poor Depth to bedrock Slope	0.00 0.50	Poor Depth to bedrock Slope	0.00 0.00
Ru: Rushcreek-----	100	Fair Sodium content Low content of organic matter Water erosion	0.10 0.88 0.99	Good		Fair Sodium content	0.10
SaB: Sarben-----	100	Poor Wind erosion Low content of organic matter	0.00 0.12	Good		Good	
SaC: Sarben-----	100	Poor Wind erosion Low content of organic matter	0.00 0.12	Good		Good	
SaD: Sarben-----	100	Poor Wind erosion Low content of organic matter	0.00 0.12	Good		Good	
SaE: Sarben-----	100	Poor Wind erosion Low content of organic matter	0.00 0.12	Good		Poor Slope	0.00
Sc: Scoville-----	100	Poor Too sandy Wind erosion Low content of organic matter	0.00 0.00 0.12	Good		Poor Too sandy	0.00
SnC: Sidney-----	100	Fair Low content of organic matter Water erosion	0.88 0.99	Fair Depth to bedrock	0.58	Good	

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
StD: Sidney-----	70	Fair Low content of organic matter Water erosion	0.88 0.99	Fair Depth to bedrock	0.58	Good	
Canyon-----	30	Poor Droughty Depth to bedrock	0.00 0.00	Poor Depth to bedrock	0.00	Poor Depth to bedrock Rock fragments	0.00 0.97
SuG: Sulco-----	100	Fair Low content of organic matter Water erosion Sodium content	0.88 0.90 0.97	Poor Slope	0.00	Poor Slope Sodium content	0.00 0.98
SxC2: Sulco-----	60	Fair Low content of organic matter Water erosion Sodium content	0.88 0.90 0.97	Good		Fair Sodium content	0.98
Mcconaughey-----	40	Fair Low content of organic matter Water erosion	0.12 0.90	Good		Good	
SxD2: Sulco-----	60	Fair Low content of organic matter Water erosion Sodium content	0.88 0.90 0.97	Good		Fair Sodium content	0.98
Mcconaughey-----	40	Fair Low content of organic matter Water erosion	0.12 0.90	Good		Good	
SxE2: Sulco-----	60	Fair Low content of organic matter Water erosion Sodium content	0.88 0.90 0.97	Good		Poor Slope Sodium content	0.00 0.98
Mcconaughey-----	40	Fair Low content of organic matter Water erosion	0.12 0.90	Good		Fair Slope	0.37
SxF: Sulco-----	75	Fair Low content of organic matter Water erosion Sodium content	0.88 0.90 0.97	Fair Slope	0.08	Poor Slope Sodium content	0.00 0.98
Mcconaughey-----	25	Fair Low content of organic matter Water erosion	0.12 0.90	Good		Fair Slope	0.37
TkG: Tassel-----	50	Poor Droughty Depth to bedrock Low content of organic matter	0.00 0.00 0.88	Poor Depth to bedrock Slope	0.00 0.00	Poor Slope Depth to bedrock	0.00 0.00
Ashollow-----	35	Fair Low content of organic matter Water erosion	0.88 0.90	Poor Slope	0.00	Poor Slope Rock fragments	0.00 0.97

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
VaD: Valentine-----	100	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.71	Good		Poor Too sandy	0.00
VaE: Valentine-----	100	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.71	Fair Slope	0.92	Poor Too sandy Slope	0.00 0.00
VaF: Valentine-----	50	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.71	Fair Slope	0.92	Poor Too sandy Slope	0.00 0.00
Valentine-----	50	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.71	Poor Slope	0.00	Poor Slope Too sandy	0.00 0.00
VdB: Valentine-----	100	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.77	Good		Poor Too sandy	0.00
Vt: Vetal-----	100	Good		Good		Good	
W: Water-----	100	Not rated		Not rated		Not rated	
WeB: Wildhorse-----	100	Poor Too sandy Wind erosion Sodium content Too alkaline Droughty Low content of organic matter	0.00 0.00 0.00 0.00 0.01 0.12	Fair Depth to saturated zone	0.91	Poor Hard to reclaim Too sandy Sodium content Depth to saturated zone	0.00 0.00 0.00 0.91
WhB: Wildhorse-----	65	Poor Too sandy Wind erosion Sodium content Too alkaline Droughty Low content of organic matter	0.00 0.00 0.00 0.00 0.01 0.12	Fair Depth to saturated zone	0.91	Poor Hard to reclaim Too sandy Sodium content Depth to saturated zone	0.00 0.00 0.00 0.91
Hoffland-----	35	Poor Too sandy Low content of organic matter Carbonate content	0.00 0.12 0.46	Poor Depth to saturated zone	0.00	Poor Too sandy Depth to saturated zone	0.00 0.00

CONSTRUCTION MATERIALS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WkB: Wildhorse-----	60	Poor Too sandy 0.00 Wind erosion 0.00 Sodium content 0.00 Too alkaline 0.00 Droughty 0.00 Low content of organic matter 0.12	0.00	Fair Depth to saturated zone	0.91	Poor Hard to reclaim 0.00 Too sandy 0.00 Sodium content 0.00 Depth to saturated zone 0.91	0.00
Ipage-----	40	Poor Too sandy 0.00 Wind erosion 0.00 Low content of organic matter 0.12 Droughty 0.38	0.00	Good		Poor Too sandy 0.00	0.00

RECREATIONAL INTERPRETATIONS
Garden County, Nebraska

Recreation

The soils of the survey area are rated in the following tables according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in this table can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

RECREATIONAL INTERPRETATIONS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ao: Alliance-----	100	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50
AoB: Alliance-----	100	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Dusty Slope	0.50 0.00
Ar: Almeria-----	100	Very limited Flooding	1.00	Very limited Depth to saturated zone	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00	Flooding	0.40	Depth to saturated zone	1.00
AsF: Ashollow-----	70	Somewhat limited Slope Dusty	0.84 0.50	Somewhat limited Slope Dusty	0.84 0.50	Very limited Slope Dusty Gravel content	1.00 0.50 0.06
Tassel-----	30	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00
Bh: Bayard-----	100	Not limited		Not limited		Not limited	
BhB: Bayard-----	100	Not limited		Not limited		Somewhat limited Slope	0.00
BhC: Bayard-----	100	Not limited		Not limited		Somewhat limited Slope	0.87
BmB: Bayard-----	100	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Dusty Slope	0.50 0.00
Bn: Bayard-----	100	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50
BpB: Blanche-----	100	Somewhat limited Too sandy	0.89	Somewhat limited Too sandy	0.89	Somewhat limited Too sandy	0.89
BrF: Blueridge-----	100	Very limited Too sandy Slope	1.00 1.00	Very limited Too sandy Slope	1.00 1.00	Very limited Too sandy Slope Gravel content	1.00 1.00 0.22
Bw: Broadwater-----	100	Very limited Flooding Too sandy	1.00 0.84	Somewhat limited Too sandy Flooding	0.84 0.40	Very limited Flooding Too sandy	1.00 0.84
BxD: Busher-----	60	Not limited		Not limited		Very limited Slope	1.00
Tassel-----	40	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock Slope	1.00 1.00
BxE: Busher-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Tassel-----	40	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00
Cw: Crowther-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Cx: Crowther-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
DbB: Dailey-----	100	Somewhat limited Too sandy	0.85	Somewhat limited Too sandy	0.85	Somewhat limited Too sandy	0.85
DdC: Dankworth-----	100	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Somewhat limited Slope Too sandy	0.87 0.87
Dw: Duroc-----	100	Not limited		Not limited		Not limited	
Eh: Els-----	100	Very limited Too sandy Depth to saturated zone	1.00 0.07	Very limited Too sandy Depth to saturated zone	1.00 0.03	Very limited Too sandy Depth to saturated zone	1.00 0.07

RECREATIONAL INTERPRETATIONS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
EuG: Epping-----	75	Very limited Slope Depth to bedrock Dusty	1.00 1.00 0.50	Very limited Slope Depth to bedrock Dusty	1.00 1.00 0.50	Very limited Slope Depth to bedrock Dusty	1.00 1.00 0.50
Rock Outcrop-----	25	Not rated		Not rated		Not rated	
Fu: Fluvaquents-----	100	Very limited Depth to saturated zone Flooding Too sandy	1.00 1.00 1.00	Very limited Too sandy Depth to saturated zone Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Too sandy Flooding	1.00 1.00 1.00
GP: Pits-----	100	Not rated		Not rated		Not rated	
Gt: Gothenburg-----	100	Very limited Flooding Depth to saturated zone Too sandy	1.00 1.00 0.76	Very limited Depth to saturated zone Too sandy Flooding	1.00 0.76 0.40	Very limited Flooding Depth to saturated zone Too sandy	1.00 1.00 0.76
Hh: Hoffland-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Ho: Hoffland-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
INT: Aquolls-----	100	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00
IsB: Ipage-----	100	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy	1.00
Ja: Jankosh-----	100	Very limited Sodium content Salinity Depth to saturated zone	1.00 1.00 0.07	Very limited Sodium content Salinity Depth to saturated zone	1.00 1.00 0.03	Very limited Sodium content Salinity Depth to saturated zone	1.00 1.00 0.07
JeB: Jayem-----	100	Somewhat limited Too sandy	0.85	Somewhat limited Too sandy	0.85	Somewhat limited Too sandy	0.85
JeC: Jayem-----	100	Somewhat limited Too sandy	0.85	Somewhat limited Too sandy	0.85	Somewhat limited Slope Too sandy	0.87 0.85
Jg: Jayem-----	100	Not limited		Not limited		Not limited	
JgC: Jayem-----	100	Not limited		Not limited		Somewhat limited Slope	0.50
KeB: Keith-----	100	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Dusty Slope	0.50 0.00
KeC: Keith-----	100	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Slope Dusty	0.87 0.50
Ku: Kuma-----	100	Not limited		Not limited		Not limited	
La: Lemoyme-----	100	Very limited Flooding Too sandy	1.00 1.00	Very limited Too sandy	1.00	Very limited Too sandy	1.00
Lb: Lewellen-----	100	Very limited Sodium content Flooding	1.00 1.00	Very limited Sodium content Salinity	1.00 1.00	Very limited Sodium content Salinity	1.00 1.00

RECREATIONAL INTERPRETATIONS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LC: Lewellen-----	55	Salinity	1.00	Depth to saturated zone	0.03	Depth to saturated zone	0.07
		Depth to saturated zone	0.07				
		Very limited Sodium content	1.00	Very limited Sodium content	1.00	Very limited Sodium content	1.00
		Flooding	1.00	Salinity	1.00	Salinity	1.00
Mcculigan-----	45	Salinity	1.00	Depth to saturated zone	0.03	Depth to saturated zone	0.07
		Depth to saturated zone	0.07				
		Very limited Flooding	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Lf: Lodgepole-----	100	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
M-W: Miscellaneous Water-	100	Not rated		Not rated		Not rated	
Ma: Marlake-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Mc: Marlake-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
MtC: Mitchell-----	100	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
		Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Slope Dusty	0.87 0.50
MtD: Mitchell-----	100	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Very limited Slope	1.00
		Slope	0.00	Slope	0.00	Dusty	0.50
MxF: Mitchell-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
Epping-----	40	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock	1.00	Very limited Slope	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
		Restricted permeability	0.39	Restricted permeability	0.39	Restricted permeability	0.39
Ru: Rushcreek-----	100	Very limited Flooding	1.00	Not limited		Not limited	
SaB: Sarben-----	100	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94
SaC: Sarben-----	100	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy Slope	0.94 0.87
SaD: Sarben-----	100	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94	Very limited Slope	1.00
		Slope	0.00	Slope	0.00	Too sandy	0.94
SaE: Sarben-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Sc: Scoville-----	100	Too sandy	0.94	Too sandy	0.94	Too sandy	0.94
		Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37	Somewhat limited Too sandy	0.37
SnC: Sidney-----	100	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Slope Dusty	0.87 0.50
StD: Sidney-----	70	Somewhat limited		Somewhat limited		Very limited	

RECREATIONAL INTERPRETATIONS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Canyon-----	30	Dusty	0.50	Dusty	0.50	Slope	1.00
		Slope	0.00	Slope	0.00	Dusty	0.50
		Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50	Slope	1.00
		Slope	0.00	Slope	0.00	Dusty	0.50
						Gravel content	0.04
SuG: Sulco-----	100	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
SxC2: Sulco-----	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Slope	0.87
Mcconaughey-----	40	Somewhat limited		Somewhat limited		Dusty	0.50
		Dusty	0.50	Dusty	0.50	Somewhat limited	
SxD2: Sulco-----	60	Somewhat limited		Somewhat limited		Slope	0.87
		Dusty	0.50	Dusty	0.50	Dusty	0.50
		Slope	0.00	Slope	0.00	Very limited	
Mcconaughey-----	40	Somewhat limited		Somewhat limited		Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
		Slope	0.00	Slope	0.00	Very limited	
SxE2: Sulco-----	60	Very limited		Very limited		Slope	1.00
		Slope	1.00	Slope	1.00	Dusty	0.50
		Dusty	0.50	Dusty	0.50	Very limited	
Mcconaughey-----	40	Somewhat limited		Somewhat limited		Slope	1.00
		Slope	0.63	Slope	0.63	Dusty	0.50
		Dusty	0.50	Dusty	0.50	Very limited	
SxF: Sulco-----	75	Very limited		Very limited		Slope	1.00
		Slope	1.00	Slope	1.00	Dusty	0.50
		Dusty	0.50	Dusty	0.50	Very limited	
Mcconaughey-----	25	Somewhat limited		Somewhat limited		Slope	1.00
		Slope	0.63	Slope	0.63	Dusty	0.50
		Dusty	0.50	Dusty	0.50	Very limited	
TkG: Tassel-----	50	Very limited		Very limited		Slope	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Very limited	
Ashollow-----	35	Very limited		Very limited		Slope	1.00
		Slope	1.00	Slope	1.00	Dusty	0.50
		Dusty	0.50	Dusty	0.50	Gravel content	0.06
VaD: Valentine-----	100	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
						Slope	1.00
VaE: Valentine-----	100	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Too sandy	1.00
VaF: Valentine-----	50	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Too sandy	1.00
Valentine-----	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
VdB: Valentine-----	100	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
Vt: Vetal-----	100	Not limited		Not limited		Not limited	
W: Water-----	100	Not rated		Not rated		Not rated	
WeB: Wildhorse-----	100	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
		Sodium content	1.00	Sodium content	1.00	Sodium content	1.00
		Salinity	0.00	Salinity	0.00	Salinity	0.00
WhB: Wildhorse-----	65	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
		Sodium content	1.00	Sodium content	1.00	Sodium content	1.00
		Salinity	0.00	Salinity	0.00	Salinity	0.00
Hoffland-----	35	Very limited		Very limited		Very limited	

RECREATIONAL INTERPRETATIONS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
WkB: Wildhorse-----	60	Very limited Too sandy Sodium content Salinity	1.00 1.00 1.00 0.00	Very limited Too sandy Sodium content Salinity	1.00 1.00 1.00 0.00	Very limited Too sandy Sodium content Salinity	1.00 1.00 1.00 0.00
Ipage-----	40	Very limited Too sandy	1.00 1.00	Very limited Too sandy	1.00 1.00	Very limited Too sandy	1.00 1.00

RECREATIONAL INTERPRETATIONS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Ao: Alliance-----	100	Somewhat limited Dusty	0.50	Not limited	
AoB: Alliance-----	100	Somewhat limited Dusty	0.50	Not limited	
Ar: Almeria-----	100	Very limited Depth to saturated zone	1.00	Very limited Flooding	1.00
		Flooding	0.40	Depth to saturated zone	1.00
				Droughty	0.02
AsF: Ashollow-----	70	Somewhat limited Dusty	0.50	Somewhat limited Slope	0.84
Tassel-----	30	Somewhat limited Slope	0.50	Very limited Depth to bedrock	1.00
				Droughty	1.00
				Slope	1.00
Bh: Bayard-----	100	Not limited		Not limited	
BhB: Bayard-----	100	Not limited		Not limited	
BhC: Bayard-----	100	Not limited		Not limited	
BmB: Bayard-----	100	Somewhat limited Dusty	0.50	Not limited	
Bn: Bayard-----	100	Somewhat limited Dusty	0.50	Not limited	
BpB: Blanche-----	100	Somewhat limited Too sandy	0.89	Somewhat limited Depth to bedrock	0.42
BrF: Blueridge-----	100	Very limited Too sandy	1.00	Very limited Too sandy	1.00
		Slope	0.18	Droughty	1.00
				Slope	1.00
Bw: Broadwater-----	100	Somewhat limited Too sandy	0.84	Very limited Flooding	1.00
		Flooding	0.40	Droughty	0.97
BxD: Busher-----	60	Not limited		Not limited	
Tassel-----	40	Not limited		Very limited Depth to bedrock	1.00
				Droughty	1.00
BxE: Busher-----	60	Somewhat limited Slope	0.00	Very limited Slope	1.00
Tassel-----	40	Somewhat limited Slope	0.00	Very limited Depth to bedrock	1.00
				Droughty	1.00
				Slope	1.00
Cw: Crowther-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Cx: Crowther-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
DbB: Dailey-----	100	Somewhat limited Too sandy	0.85	Somewhat limited Droughty	0.54
DdC: Dankworth-----	100	Somewhat limited Too sandy	0.87	Somewhat limited Droughty	0.94
Dw: Duroc-----	100	Not limited		Not limited	
Eh: Els-----	100	Very limited Too sandy	1.00	Somewhat limited Droughty	0.81
				Depth to saturated zone	0.03
EuG: Epping-----	75	Very limited Slope	1.00	Very limited Depth to bedrock	1.00
		Dusty	0.50	Slope	1.00

RECREATIONAL INTERPRETATIONS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Rock Outcrop-----	25	Not rated		Droughty Not rated	0.91
Fu: Fluvaquents-----	100	Very limited Depth to saturated zone Too sandy	1.00 1.00	Very limited Flooding	1.00
		Flooding	0.40	Depth to saturated zone Too sandy Droughty	1.00 0.50 0.00
GP: Pits-----	100	Not rated		Not rated	
Gt: Gothenburg-----	100	Very limited Depth to saturated zone Too sandy	1.00 0.76	Very limited Flooding	1.00
		Flooding	0.40	Depth to saturated zone Droughty	1.00 0.70
Hh: Hoffland-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Ho: Hoffland-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
INT: Aquolls-----	100	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
IsB: Ipage-----	100	Very limited Too sandy	1.00	Somewhat limited Droughty	0.65
Ja: Jankosh-----	100	Not limited		Very limited Sodium content Salinity Depth to saturated zone	1.00 1.00 0.03
JeB: Jayem-----	100	Somewhat limited Too sandy	0.85	Not limited	
JeC: Jayem-----	100	Somewhat limited Too sandy	0.85	Not limited	
Jg: Jayem-----	100	Not limited		Not limited	
JgC: Jayem-----	100	Not limited		Not limited	
KeB: Keith-----	100	Somewhat limited Dusty	0.50	Not limited	
KeC: Keith-----	100	Somewhat limited Dusty	0.50	Not limited	
Ku: Kuma-----	100	Not limited		Not limited	
La: Lemoyne-----	100	Very limited Too sandy	1.00	Somewhat limited Too sandy	0.50
Lb: Lewellen-----	100	Not limited		Very limited Sodium content Salinity Depth to saturated zone	1.00 1.00 0.03
LC: Lewellen-----	55	Not limited		Very limited Sodium content Salinity Depth to saturated zone	1.00 1.00 0.03

RECREATIONAL INTERPRETATIONS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Mcculigan-----	45	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding Droughty	1.00 0.60 0.15
Lf: Lodgepole-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
M-W: Miscellaneous Water-	100	Not rated		Not rated	
Ma: Marlake-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Droughty	1.00 0.21
Mc: Marlake-----	100	Very limited Depth to saturated zone Content of organic matter	1.00 1.00	Very limited Content of organic matter Depth to saturated zone	1.00 1.00
MtC: Mitchell-----	100	Somewhat limited Dusty	0.50	Not limited	
MtD: Mitchell-----	100	Somewhat limited Dusty	0.50	Somewhat limited Slope	0.00
MxF: Mitchell-----	60	Somewhat limited Slope Dusty	0.92 0.50	Very limited Slope	1.00
Epping-----	40	Somewhat limited Dusty Slope	0.50 0.50	Very limited Depth to bedrock Droughty Slope	1.00 1.00 1.00
Ru: Rushcreek-----	100	Not limited		Not limited	
SaB: Sarben-----	100	Somewhat limited Too sandy	0.94	Not limited	
SaC: Sarben-----	100	Somewhat limited Too sandy	0.94	Not limited	
SaD: Sarben-----	100	Somewhat limited Too sandy	0.94	Somewhat limited Slope	0.00
SaE: Sarben-----	100	Somewhat limited Too sandy Slope	0.94 0.00	Very limited Slope	1.00
Sc: Scoville-----	100	Somewhat limited Too sandy	0.37	Somewhat limited Droughty	0.05
SnC: Sidney-----	100	Somewhat limited Dusty	0.50	Not limited	
StD: Sidney-----	70	Somewhat limited Dusty	0.50	Somewhat limited Slope	0.00
Canyon-----	30	Somewhat limited Dusty	0.50	Very limited Depth to bedrock Droughty Slope	1.00 1.00 0.00
SuG: Sulco-----	100	Very limited Slope Dusty	1.00 0.50	Very limited Slope	1.00
SxC2: Sulco-----	60	Somewhat limited Dusty	0.50	Not limited	
Mcconaughy-----	40	Somewhat limited Dusty	0.50	Not limited	
SxD2: Sulco-----	60	Somewhat limited Dusty	0.50	Somewhat limited Slope	0.00
Mcconaughy-----	40	Somewhat limited Dusty	0.50	Somewhat limited Slope	0.00

RECREATIONAL INTERPRETATIONS--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
SxE2: Sulco-----	60	Somewhat limited Dusty Slope	0.50 0.00	Very limited Slope	1.00
Mconaughey-----	40	Somewhat limited Dusty	0.50	Somewhat limited Slope	0.63
SxF: Sulco-----	75	Somewhat limited Slope Dusty	0.92 0.50	Very limited Slope	1.00
Mconaughey-----	25	Somewhat limited Dusty	0.50	Somewhat limited Slope	0.63
TkG: Tassel-----	50	Very limited Slope	1.00	Very limited Depth to bedrock Slope Droughty	1.00 1.00 1.00
Ashollow-----	35	Very limited Slope Dusty	1.00 0.50	Very limited Slope	1.00
VaD: Valentine-----	100	Very limited Too sandy	1.00	Somewhat limited Droughty	0.34
VaE: Valentine-----	100	Very limited Too sandy Slope	1.00 0.08	Very limited Slope Droughty	1.00 0.34
VaF: Valentine-----	50	Very limited Too sandy Slope	1.00 0.08	Very limited Slope Droughty	1.00 0.34
Valentine-----	50	Very limited Too sandy Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.34
VdB: Valentine-----	100	Somewhat limited Too sandy	0.95	Somewhat limited Droughty	0.25
Vt: Vetal-----	100	Not limited		Not limited	
W: Water-----	100	Not rated		Not rated	
WeB: Wildhorse-----	100	Very limited Too sandy	1.00	Very limited Sodium content Droughty Salinity	1.00 0.99 0.00
WhB: Wildhorse-----	65	Very limited Too sandy	1.00	Very limited Sodium content Droughty Salinity	1.00 0.99 0.00
Hoffland-----	35	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
WkB: Wildhorse-----	60	Very limited Too sandy	1.00	Very limited Sodium content Droughty Salinity	1.00 0.99 0.00
Ipage-----	40	Very limited Too sandy	1.00	Somewhat limited Droughty	0.65

WILDLIFE INTERPRETATIONS
Garden County, Nebraska

Use and Explanation of Wildlife Interpretations

Soils directly affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the development of water impoundments. The kind and abundance of wildlife that populate an area depend largely on the amount and distribution of food, cover, water, and living space. If any one of these elements is missing, inadequate, or inaccessible, wildlife will be scarce or will not inhabit the area. If the soils have the potential, wildlife habitat can be created or improved by planting appropriate vegetation, properly managing the existing plant cover, and fostering the natural establishment of desirable plants.

In the Wildlife Interpretations table, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

Suitability Ratings

The potential of the soil is rated good, fair, poor, or very poor.

Good - means that the element of wildlife habitat or the kind of habitat is easily created, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected if the soil is used for the designated purpose.

Fair - means that the element of wildlife habitat or kind of habitat can be created, improved, or maintained in most places. Moderately intensive management is required for satisfactory results.

Poor - means that limitations are severe for the designated element or kind of wildlife habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and requires intensive effort.

Very Poor - means that limitations are very severe for the designated element or kind of wildlife habitat. Habitat is difficult to create, improve, or maintain in most places, and management is difficult and requires intensive effort.

Description of Wildlife Habitat Elements

Openland habitat consists of croplands, pastures, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The kind of wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, killdeer, cottontail rabbit, red fox, and coyote.

Woodland habitat consists of hardwood or conifers, or a mixture of these and associated grasses, legumes and wild herbaceous plants. Examples of wildlife attracted to this habitat are wild turkey, thrushes, woodpeckers, owl, tree squirrels, raccoon, and deer.

Wetland habitat consists of water-tolerant plants in open, marshy or swampy, shallow water areas. Examples of wildlife attracted to this habitat are ducks, geese, herons, bitterns, rails, kingfishers, shorebirds, muskrat, mink, and beaver.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, lovegrass, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated good are Russian-olive, autumn-olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and soil moisture. Examples of shrubs are fragrant sumac, chokecherry, American plum, sand plum, and garden currant.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, saltgrass, cordgrass, rushes, sedges, and cattails.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, red fox and coyote.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, thrushes, woodpeckers, squirrels, gray fox, raccoon, and deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Habitat for rangeland wildlife consists of areas of shrubs and wild herbaceous plants. Wildlife attracted to rangeland include antelope, deer, cottontail rabbit, prairie chicken, meadowlark, quail, and pheasant.

WILDLIFE INTERPRETATIONS
Garden County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
Ao: ALLIANCE-----	Good	Good	Good	Good	Good	Good	Very poor	Poor	Good	Good	Poor	Good
AoB: ALLIANCE-----	Good	Good	Good	Good	Good	Good	Very poor	Poor	Good	Good	Poor	Good
Ar: ALMERIA-----	Poor	Fair	Fair	Poor	Poor	Fair	Good	Good	Poor	Poor	Good	Fair
AsF: ASHOLLOW-----	Poor	Fair	Good	Good	Good	Fair	Very poor	Very poor	Fair	Good	Very poor	Fair
TASSEL-----	Poor	Poor	Poor	Fair	Fair	Poor	Very poor	Very poor	Poor	Fair	Very poor	Poor
Bh: BAYARD-----	Fair	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Fair	Very poor	Fair
BhB: BAYARD-----	Fair	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Fair	Very poor	Fair
BhC: BAYARD-----	Fair	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Fair	Very poor	Fair
BmB: BAYARD-----	Fair	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Fair	Very poor	Fair
Bn: BAYARD-----	Fair	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Fair	Very poor	Fair
BpB: BLANCHE-----	Fair	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
BrF: BLUERIDGE-----	Poor	Poor	Poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
Ew: BROADWATER-----	Poor	Fair	Fair	---	---	Fair	Poor	Very poor	Fair	---	Very poor	Fair
BxD: BUSHER-----	Fair	Good	Good	Fair	Poor	Good	Very poor	Very poor	Good	Fair	Very poor	Good
TASSEL-----	Poor	Poor	Poor	Fair	Fair	Poor	Very poor	Very poor	Poor	Fair	Very poor	Poor
BxE: BUSHER-----	Poor	Fair	Fair	Poor	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
TASSEL-----	Poor	Poor	Poor	Fair	Fair	Poor	Very poor	Very poor	Poor	Fair	Very poor	Poor
Cw: CROWTHER-----	Very poor	Poor	Fair	Poor	Poor	Fair	Good	Good	Poor	Poor	Good	Fair
Cx: CROWTHER-----	Very poor	Poor	Fair	Poor	Poor	Fair	Good	Good	Poor	Poor	Good	Fair
DbB: DAILEY-----	Poor	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
DdC: DANKWORTH-----	Poor	Fair	Fair	Poor	Poor	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
Dw: DUROC-----	Good	Good	Fair	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair

WILDLIFE INTERPRETATIONS--Continued
Garden County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
Eh: ELS-----	Poor	Poor	Fair	Fair	Fair	Fair	Poor	Poor	Poor	Fair	Poor	Fair
EuG: EPPING-----	Very poor	Very poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
ROCK OUTCROP----	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
Fu: FLUVAQUENTS-----	Very poor	Very poor	Poor	Very poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Good	Very poor
GP: PITS-----	Very poor	Very poor	Poor	Poor	Poor	Poor	Very poor	Fair	Very poor	Very poor	Poor	Poor
Gt: GOTHENBURG-----	Very poor	Very poor	Fair	Poor	Fair	Fair	Fair	Good	Poor	Poor	Fair	Fair
Hh: HOFFLAND-----	Very poor	Poor	Fair	Poor	Poor	Fair	Good	Good	Poor	Poor	Good	Fair
Ho: HOFFLAND-----	Very poor	Poor	Fair	Poor	Poor	Fair	Good	Good	Poor	Poor	Good	Fair
INT: AQUOLLS-----	---	---	---	---	---	---	---	---	---	---	---	---
IsB: IPAGE-----	Poor	Good	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
Ja: JANKOSH-----	Poor	Poor	Very poor	Very poor	Very poor	Very poor	Very poor	Fair	Poor	Very poor	Poor	Very poor
JeB: JAYEM-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
JeC: JAYEM-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
Jg: JAYEM-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
JgC: JAYEM-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
KeB: KEITH-----	Good	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
KeC: KEITH-----	Fair	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
Ku: KUMA-----	Good	Good	Fair	---	---	Poor	Poor	Very poor	Fair	---	Very poor	Poor
La: LEMOYNE-----	Poor	Poor	Good	Good	Good	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Lb: LEWELLEN-----	Poor	Poor	Fair	Fair	Fair	Fair	Fair	Fair	Poor	Fair	Fair	Fair
Lc: LEWELLEN-----	Poor	Poor	Fair	Fair	Fair	Fair	Fair	Fair	Poor	Fair	Fair	Fair
MCCULIGAN-----	Very poor	Good	Fair	Very poor	Very poor	Very poor	Good	Good	Poor	Very poor	Good	Poor
Lf: LODGEPOLE-----	Poor	Fair	Fair	Poor	Poor	Poor	Good	Good	Fair	Poor	Good	Poor

WILDLIFE INTERPRETATIONS--Continued
Garden County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
M-W: MISCELLANEOUS WATER-----	---	---	---	---	---	---	---	---	---	---	---	---
Ma: MARLAKE-----	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Good	Very poor
Mc: MARLAKE-----	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Good	Very poor
MtC: MITCHELL-----	Fair	Good	Fair	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor	Fair
MtD: MITCHELL-----	Fair	Good	Fair	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor	Fair
MxF: MITCHELL-----	Poor	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Fair
EPPING-----	Poor	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Ru: RUSHCREEK-----	Fair	Good	Good	Fair	Fair	Fair	Poor	Poor	Good	Good	Very poor	Good
SaB: SARBEN-----	Fair	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
SaC: SARBEN-----	Fair	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
SaD: SARBEN-----	Fair	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
SaE: SARBEN-----	Poor	Fair	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Fair	Very poor	Fair
Sc: SCOVILLE-----	Fair	Good	Fair	Fair	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor	Very poor
SnC: SIDNEY-----	Fair	Good	Good	Fair	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
StD: SIDNEY-----	Fair	Good	Good	Fair	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
CANYON-----	Poor	Poor	Fair	Poor	Poor	Poor	Very poor	Very poor	Poor	Fair	Very poor	Fair
SuG: SULCO-----	Very poor	Very poor	Fair	Poor	Poor	Fair	Very poor	Very poor	Poor	Poor	Very poor	Fair
SxC2: SULCO-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
MCCONAUGHY-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
SxD2: SULCO-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
MCCONAUGHY-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
SxE2: SULCO-----	Poor	Fair	Fair	Good	Good	Fair	Very poor	Very poor	Fair	Good	Very poor	Fair

WILDLIFE INTERPRETATIONS--Continued
Garden County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
MCCONAUGHY-----	Poor	Fair	Fair	Good	Good	Fair	Very poor	Very poor	Fair	Good	Very poor	Fair
SxF: SULCO-----	Poor	Fair	Fair	Good	Good	Fair	Very poor	Very poor	Fair	Good	Very poor	Fair
MCCONAUGHY-----	Poor	Fair	Fair	Good	Good	Fair	Very poor	Very poor	Fair	Good	Very poor	Fair
TkG: TASSEL-----	Very poor	Very poor	Poor	Fair	Fair	Poor	Very poor	Very poor	Very poor	Fair	Very poor	Poor
ASHOLLOW-----	Very poor	Very poor	Good	Good	Good	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
VaD: VALENTINE-----	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
VaE: VALENTINE-----	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
VaF: VALENTINE-----	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
VALENTINE-----	Very poor	Very poor	Fair	Poor	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor	Fair
VdB: VALENTINE-----	Fair	Good	Fair	Poor	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor	Fair
Vt: VETAL-----	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
W: WATER-----	---	---	---	---	---	---	---	---	---	---	---	---
WeB: WILDHORSE-----	Poor	Poor	Fair	Very poor	Very poor	Poor	Fair	Fair	Poor	Poor	Fair	Poor
WhB: WILDHORSE-----	Poor	Poor	Fair	Very poor	Very poor	Poor	Fair	Fair	Poor	Poor	Fair	Poor
HOFFLAND-----	Very poor	Poor	Fair	Poor	Poor	Fair	Good	Good	Poor	Poor	Good	Fair
WkB: WILDHORSE-----	Poor	Poor	Fair	Very poor	Very poor	Poor	Fair	Fair	Poor	Poor	Fair	Poor
IPAGE-----	Poor	Good	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair

YIELDS PER ACRE OF PASTURE AND HAYLAND
Garden County, Nebraska

Use and Explanation of Pastureland and Hayland Interpretations

This subsection provides information concerning the suitability of soils for the production of pasture and hayland. This subsection may contain pasture and hayland suitability groupings, land capability and yield estimates, yield estimates for individual grasses or legumes, or other information pertaining to the production of forage.

Pasture and Hayland Suitability Groupings

Soils are placed in pasture and hayland groups according to their suitability for the production of forage. The soils in each group are enough alike to be suited to the same grasses or legumes, to have similar limitations and hazards, to require similar management, and to have similar productivity and other responses to management. Thus, the pasture and hayland suitability group is a convenient way of grouping the soils for their management. If used, these groupings are identified and described in other reports in the subsection.

Yield Estimates

The average yields per acre that can be expected of the principal pasture or hayland crops, under a high level of management, are presented in this subsection. In any given year, yields may be higher or lower than those indicated in the tables because of variations in rainfall or other climatic factors. The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations are also considered.

Under good management, proper grazing is essential for the production of high quality forage, stand survival, and erosion control. Proper grazing helps plants maintain sufficient and generally vigorous top growth during the growing season. Brush control is essential in many areas, and weed control generally is needed. Rotation grazing and renovation are also important management practices.

The Pasture and Hayland table show yield estimates in tons per acre and animal unit months for pasture and hayland groups. An animal unit month is the amount of forage required by one animal unit (AU) for 30 days. On animal unit (AU) is one (1000 pound) mature cow and a calf up to weaning age (usually six months of age) or their equivalent. The Natural Resources Conservation Service uses 900 pounds of air dry forage as the amount needed to meet this requirement. To maintain a healthy and vigorous plant community, the degree of use should never be greater than 50 percent. Therefore only 25 percent of the total biomass grown is considered consumed by the grazing animal. Animal Unit Months can be converted to air dry pounds per acre production by multiplying the AUM by 30 days, then by 30 pounds per day, and then by four. This figure is the amount of total forage production.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil in the Nontechnical Description section. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
Ao: Alliance-----	2c	1	---	5.80
AoB: Alliance-----	2e	2e	---	5.50
Ar: Almeria-----	6w	---	---	---
AsF: Ashollow-----	6e	---	---	---
Tassel-----	6s	---	---	---
Bh: Bayard-----	3e	2e	---	5.50
BhB: Bayard-----	3e	2e	---	4.80
BhC: Bayard-----	4e	3e	---	4.20
BmB: Bayard-----	3e	2e	---	5.00
Bn: Bayard-----	3c	1	---	5.50
BpB: Blanche-----	4e	4e	1.50	3.20
BrF: Blueridge-----	6s	---	---	---
Bw: Broadwater-----	6w	---	---	---
BxD: Busher-----	4e	4e	---	3.20
Tassel-----	6s	---	---	---
BxE: Busher-----	6e	---	---	2.80
Tassel-----	6s	---	---	---
Cw: Crowther-----	5w	---	---	---
Cx: Crowther-----	5w	---	---	---
DbB: Dailey-----	4e	4e	---	3.60
DdC: Dankworth-----	6e	4e	---	3.50
Dw: Duroc-----	2c	1	2.00	6.00
Eh: Els-----	6e	4w	---	2.80
EuG: Epping-----	7s	---	---	---
Rock Outcrop-----	8s	---	---	---
Fu: Fluvaquents-----	8w	---	---	---
GP: Pits-----	8s	---	---	---
Gt: Gothenburg-----	7w	---	---	---

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
Hh: Hoffland-----	5w	---	---	---
Ho: Hoffland-----	5w	---	---	---
INT: Aquolls-----	5w	---	---	---
IsB: Ipage-----	6e	4e	---	3.50
Ja: Jankosh-----	6s	---	1.20	2.50
JeB: Jayem-----	4e	3e	1.20	4.20
JeC: Jayem-----	4e	4e	1.00	4.00
Jg: Jayem-----	3e	2e	---	4.80
JgC: Jayem-----	4e	3e	---	4.20
KeB: Keith-----	2e	2e	1.50	5.60
KeC: Keith-----	3e	3e	1.30	5.00
Ku: Kuma-----	2c	1	1.50	6.00
La: Lemoyne-----	6e	4e	1.80	3.60
Lb: Lewellen-----	6s	---	---	---
Lc: Lewellen-----	6s	---	---	---
Mcculigan-----	5w	---	---	---
Lf: Lodgepole-----	3w	4w	---	3.80
M-W: Miscellaneous Water-----	---	---	---	---
Ma: Marlake-----	8w	---	---	---
Mc: Marlake-----	8w	---	---	---
MtC: Mitchell-----	3e	3e	---	4.70
MtD: Mitchell-----	4e	4e	---	4.10
MxF: Mitchell-----	6e	---	---	---
Epping-----	6s	---	---	---
Ru: Rushcreek-----	4s	3s	2.50	4.00
SaB: Sarben-----	4e	3e	1.20	4.00
SaC: Sarben-----	4e	4e	1.20	3.80

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
SaD: Sarben-----	6e	4e	1.10	3.40
SaE: Sarben-----	6e	---	1.00	3.00
Sc: Scoville-----	4e	4e	---	3.60
SnC: Sidney-----	3e	3e	---	4.60
StD: Sidney-----	4e	4e	---	3.20
Canyon-----	6s	---	---	---
SuG: Sulco-----	7e	---	---	---
SxC2: Sulco-----	4e	3e	---	4.80
Mcconaughey-----	4e	3e	---	4.40
SxD2: Sulco-----	4e	4e	---	3.50
Mcconaughey-----	4e	4e	---	---
SxE2: Sulco-----	6e	---	---	---
Mcconaughey-----	6e	---	---	---
SxF: Sulco-----	6e	---	---	---
Mcconaughey-----	6e	---	---	---
TkG: Tassel-----	7s	---	---	---
Ashollow-----	7e	---	---	---
VaD: Valentine-----	6e	4e	---	3.00
VaE: Valentine-----	6e	---	---	2.50
VaF: Valentine-----	6e	---	---	---
Valentine-----	7e	---	---	---
VdB: Valentine-----	6e	4e	---	3.50
Vt: Vetal-----	2e	2e	2.50	5.50
W: Water-----	---	---	---	---
WeB: Wildhorse-----	6s	---	---	---
WhB: Wildhorse-----	6s	---	---	---
Hoffland-----	5w	---	---	---
WkB: Wildhorse-----	6s	---	---	3.90
Ipage-----	6e	4e	---	---

CONSERVATION TREE AND SHRUB MANAGEMENT
Garden County, Nebraska

A Conservation Tree/Shrub Suitability Group (CTSG), formerly Windbreak Suitability Group, is a physiographic unit or area having similar climatic and edaphic characteristics that control the selection and height growth of trees and shrubs.

In this table, the Conservation Tree and Shrub Grouping is expressed as a group index number. The group index for Conservation Tree and Shrub groups (CTSG) are a guide for species best suited for different kinds of soil and for prediction height, growth, and effectiveness. The groupings can be used when selection woody plants for windbreaks, wildlife plantings riparian buffers, reforestation, other environmental plantings, recreation, landscaping, wetland restoration or enhancement and critical area plantings. CTSG's are developed to assure satisfactory species selection and adaptation to specific conditions of soil, climate and physiography. CTSG's are a guide for selection species best suited for different kinds of soil and prediction height growth and effectiveness.

All soil series mapped in the state have been placed in 10 groups of similar soil characteristics. Groups 1, 2, 3, 4, 6, and 9 are further divided into subgroups. In addition, all groups provide information by Major Land Resource Areas.

Each tree or shrub species has certain climatic and physiographic limits. Within these parameters a tree or shrub may be well or poorly suited because of soil characteristics. Each tree or shrub also has definable potentials of height growth depending on the factors just mentioned. Accurate definitions of potential heights are necessary for proper windbreak planning and design.

Windbreaks protect livestock, buildings, roads and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low-growing and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Windbreaks are often planted on land that did not grow trees originally. Knowledge of how trees perform on such land can be gained only by observing and recording their performance where trees have been planted and survived. The problem is compounded by the fact that many favorite windbreak species are not indigenous to the areas in which they are planted.

The Kansas Field Office Technical Guide Notice KS-230, Conservation Tree and Shrub Plantings Suitability Groups shows the adapted species listing for each group index number. Showing the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates are based on measurements and observation of established plantings that have been given adequate care. This information should be used to determine the placement of a windbreak, the area protected and the arrangement of species.

A number of attributes are included in the CTSG species tables for each group number found in this section of the Field Office Technical Guide. These attributes were rated subjectively and assigned a relative value to further assist those unfamiliar with individual species characteristics or desirability for the intended use. Definitions and explanations can be found. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery. See part 537 of the National Forestry Manual for additional information.

In the Tree and Shrub Management table interpretive ratings are given for various aspects of forest and conservation tree and shrub management. Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. Well suited indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. Moderately well suited indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable and fair performance can be expected. Some maintenance is needed. Poorly suited indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. Unsited indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

The paragraphs that follow indicate the soil properties considered in rating the soils for forest and conservation tree and shrub management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet. Also, in the Kansas Field Office Technical Guide Notice KS-230, Conservation Tree and Shrub Plantings Suitability Groups.

Ratings in the columns suitability for hand planting and suitability for mechanical planting are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately well suited, poorly suited, or unsited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column suitability for mechanical site preparation (surface) are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsited to this management activity. The part of the soil from the surface to a depth of about 1-foot is considered in the ratings.

Ratings in the column suitability for mechanical site preparation (deep) are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column potential for seedling mortality are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality. See the National Forestry Manual, Subpart B for criteria used in rating management concerns. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

CONSERVATION TREE AND SHRUB MANAGEMENT
Garden County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
Ao: Alliance-----		Well suited	Well suited	Well suited	Well suited	Low
AoB: Alliance-----		Well suited	Well suited	Well suited	Well suited	Low
Ar: Almeria-----		Unsuited Wetness	Moderately suited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness
AsF: Ashollow-----		Well suited	Moderately suited Slope	Well suited	Well suited	Moderate
Tassel-----		Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Soil reaction Moderate Soil reaction
Bh: Bayard-----		Well suited	Well suited	Well suited	Well suited	Low
BhB: Bayard-----		Well suited	Well suited	Well suited	Well suited	Low
BhC: Bayard-----		Well suited	Moderately suited Slope	Well suited	Well suited	Low
BmB: Bayard-----		Well suited	Well suited	Well suited	Well suited	Low
Bn: Bayard-----		Well suited	Well suited	Well suited	Well suited	Low
BpB: Blanche-----		Well suited	Well suited	Well suited	Well suited	Low
BrF: Blueridge-----		Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Low
Bw: Broadwater-----		Well suited	Well suited	Well suited	Well suited	Low
BxD: Busher-----		Well suited	Moderately suited Slope	Well suited	Well suited	Low
Tassel-----		Moderately suited Rock fragments	Poorly suited Rock fragments Slope	Poorly suited Rock fragments	Well suited	Moderate Soil reaction
BxE: Busher-----		Well suited	Moderately suited Slope	Poorly suited Slope	Poorly suited Slope	Low
Tassel-----		Well suited	Moderately suited Slope	Poorly suited Slope	Poorly suited Slope	Moderate Soil reaction
Cw: Crowther-----		Unsuited Wetness	Moderately suited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness Lime Soil reaction
Cx: Crowther-----		Unsuited Wetness	Moderately suited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness Lime Soil reaction
DbB: Dailey-----		Well suited	Well suited	Well suited	Well suited	Low
DcC: Dankworth-----		Moderately suited Sandiness	Moderately suited Sandiness Slope	Well suited	Well suited	Low
Dw: Duroc-----		Well suited	Well suited	Well suited	Well suited	Low
Eh: Els-----		Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
EuG: Epping-----		Moderately suited Slope	Unsuited Slope	Unsuited Slope	Unsuited Slope	Low
Rock Outcrop-----		Not rated	Not rated	Not rated	Not rated	Not rated

CONSERVATION TREE AND SHRUB MANAGEMENT
Garden County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
Fu: Fluvaquents-----		Unsuited Wetness	Moderately suited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness
GP: Pits-----		Not rated	Not rated	Not rated	Not rated	Not rated
Gt: Gothenburg-----		Unsuited Wetness Sandiness	Moderately suited Wetness Sandiness	Unsuited Wetness	Unsuited Wetness	High Wetness
Hh: Hoffland-----		Unsuited Wetness	Moderately suited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness Lime
Ho: Hoffland-----		Unsuited Wetness	Moderately suited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness Lime Soil reaction
INT: Aquolls-----		Well suited	Well suited	Well suited	Well suited	High Wetness Soil reaction
IsB: Ipage-----		Well suited	Well suited	Well suited	Well suited	Low
Ja: Jankosh-----		Well suited	Well suited	Well suited	Well suited	High Salinity Soil reaction
JeB: Jayem-----		Well suited	Well suited	Well suited	Well suited	Low
JeC: Jayem-----		Well suited	Moderately suited Slope	Well suited	Well suited	Low
Jg: Jayem-----		Well suited	Well suited	Well suited	Well suited	Low
JgC: Jayem-----		Well suited	Well suited	Well suited	Well suited	Low
KeB: Keith-----		Well suited	Well suited	Well suited	Well suited	Low
KeC: Keith-----		Well suited	Moderately suited Slope	Well suited	Well suited	Low
Ku: Kuma-----		Well suited	Well suited	Well suited	Well suited	Low
La: Lemoyne-----		Well suited	Well suited	Well suited	Well suited	Low
Lb: Lewellen-----		Well suited	Well suited	Well suited	Well suited	High Soil reaction Salinity Lime
LC: Lewellen-----		Well suited	Well suited	Well suited	Well suited	High Soil reaction Salinity Lime
Mcculigan-----		Unsuited Wetness	Moderately suited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness Soil reaction
Lf: Lodgepole-----		Unsuited Wetness Stickiness	Poorly suited Stickiness Wetness	Unsuited Wetness Stickiness	Unsuited Wetness	High Wetness
M-W: Miscellaneous Water-		Not rated	Not rated	Not rated	Not rated	Not rated
Ma: Marlake-----		Unsuited Wetness	Poorly suited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness

CONSERVATION TREE AND SHRUB MANAGEMENT
Garden County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
MC: Marlake-----		Unsuited Wetness	Poorly suited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness
MtC: Mitchell-----		Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
MtD: Mitchell-----		Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
MxF: Mitchell-----		Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Moderate Soil reaction
Epping-----		Moderately suited Rock fragments	Poorly suited Slope Rock fragments	Poorly suited Rock fragments Slope	Poorly suited Slope	Moderate Soil reaction
Ru: Rushcreek-----		Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
SaB: Sarben-----		Well suited	Well suited	Well suited	Well suited	Low
SaC: Sarben-----		Well suited	Moderately suited Slope	Well suited	Well suited	Low
SaD: Sarben-----		Well suited	Moderately suited Slope	Well suited	Well suited	Low
SaE: Sarben-----		Well suited	Moderately suited Slope	Poorly suited Slope	Poorly suited Slope	Low
Sc: Scoville-----		Well suited	Well suited	Well suited	Well suited	High Available water
SnC: Sidney-----		Well suited	Moderately suited Slope	Well suited	Well suited	Low
StD: Sidney-----		Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
Canyon-----		Moderately suited Rock fragments	Poorly suited Rock fragments Slope	Poorly suited Rock fragments	Well suited	Moderate Soil reaction
SuG: Sulco-----		Moderately suited Slope	Unsuited Slope	Unsuited Slope	Unsuited Slope	Moderate Soil reaction
SxC2: Sulco-----		Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
Mcconaughey-----		Well suited	Moderately suited Slope	Well suited	Well suited	Low
SxD2: Sulco-----		Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
Mcconaughey-----		Well suited	Moderately suited Slope	Well suited	Well suited	Low
SxE2: Sulco-----		Well suited	Moderately suited Slope	Poorly suited Slope	Poorly suited Slope	Moderate Soil reaction
Mcconaughey-----		Well suited	Moderately suited Slope	Well suited	Well suited	Low

CONSERVATION TREE AND SHRUB MANAGEMENT
Garden County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
SxF: Sulco-----		Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Moderate Soil reaction
Mconnaughy-----		Well suited	Moderately suited Slope	Well suited	Well suited	Low
TkG: Tassel-----		Moderately suited Slope	Unsuited	Unsuited	Unsuited	Moderate
Ashollow-----		Moderately suited Slope	Slope Unsuited	Slope Unsuited	Slope Unsuited	Soil reaction Moderate
VaD: Valentine-----		Moderately suited Sandiness	Slope Moderately suited Sandiness Slope	Slope	Slope	Soil reaction
VaE: Valentine-----		Moderately suited Sandiness	Moderately suited Sandiness Slope	Well suited	Well suited	Low
VaF: Valentine-----		Moderately suited Sandiness	Poorly suited	Poorly suited	Poorly suited	Low
Valentine-----		Moderately suited Sandiness Slope	Poorly suited Slope Sandiness Unsuited	Poorly suited Slope	Poorly suited Slope	Low
VdB: Valentine-----		Well suited	Slope Sandiness	Unsuited	Unsuited	Low
Vt: Vetal-----		Well suited	Slope	Well suited	Well suited	Low
W: Water-----		Not rated	Well suited	Well suited	Well suited	Not rated
WeB: Wildhorse-----		Well suited	Not rated	Not rated	Not rated	Not rated
WhB: Wildhorse-----		Well suited	Well suited	Well suited	Well suited	High Soil reaction Salinity
Hoffland-----		Unsuited	Well suited	Well suited	Well suited	High Soil reaction Salinity
WkB: Wildhorse-----		Unsuited Wetness	Moderately suited Wetness	Unsuited Wetness	Unsuited Wetness	High Soil reaction Salinity High Wetness Lime
Ipage-----		Well suited	Well suited	Well suited	Well suited	High Soil reaction Salinity Moderate Soil reaction

ENGINEERING INDEX PROPERTIES
Garden County, Nebraska

Engineering Index Properties table gives the engineering classifications and the range of index properties for the layers of each soil in the survey area. Depth to the upper and lower boundaries of each layer is indicated. Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. Loam, for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, gravelly. Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 1998) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 1998). The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection. If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest. The AASHTO classification for soils tested, with group index numbers in parentheses, is given in Engineering Index Properties table.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and plasticity index (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

ENGINEERING INDEX PROPERTIES--Continued
Garden County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
Ao:	In											
Alliance-----	0-8	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	60-90	20-40	2-15
	8-30	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-100	30-50	10-25
	30-44	Loam	CL-ML, ML, SC, SM	A-4	0	0-5	85-100	85-100	70-100	40-90	15-30	NP-10
	44-60	Weathered bedrock			---	---	---	---	---	---	---	---
AoB:												
Alliance-----	0-12	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	60-90	20-40	2-15
	12-26	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-100	30-50	10-25
	26-34	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	60-90	20-40	2-15
	34-54	Very fine sandy loam	CL-ML, ML, SC, SM	A-4	0	0-5	85-100	85-100	70-100	40-90	15-30	NP-10
	54-60	Weathered bedrock			---	---	---	---	---	---	---	---
Ar:												
Almeria-----	0-3	Fine sandy loam	ML, SC, SC-SM, SM	A-4	0	0	100	100	70-100	40-70	15-25	NP-10
	3-60	Stratified sand to fine sandy loam	SP, SP-SM, SC-SM, SM	A-2, A-3, A-4	0	0	90-100	80-100	50-80	0-50	15-20	NP-5
AsF:												
Ashollow-----	0-3	Very fine sandy loam	CL, ML, SC, SM	A-1-b, A-2, A-4, A-6	0	0	95-100	75-100	40-100	20-80	15-30	NP-15
	3-60	Very fine sandy loam	CL, ML, SC, SM	A-1-b, A-2, A-4, A-6	0	0	95-100	75-100	40-100	20-80	15-30	NP-15
Tassel-----	0-7	Fine sandy loam	ML, SM	A-4	0	0	95-100	90-100	75-100	40-65	0-35	NP-7
	7-18	Gravelly loamy very fine sand	SM	A-1, A-2	0	0-5	55-100	50-75	40-60	10-35	0-25	NP-5
	18-60	Weathered bedrock			---	---	---	---	---	---	---	---
Bh:												
Bayard-----	0-12	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	45-85	25-55	15-25	3-10
	12-60	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	55-95	30-65	15-25	3-10
BhB:												
Bayard-----	0-13	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	45-85	25-55	15-25	3-10
	13-60	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	55-95	30-65	15-25	3-10
BhC:												
Bayard-----	0-9	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	45-85	25-55	15-25	3-10
	9-60	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	55-95	30-65	15-25	3-10
BmB:												
Bayard-----	0-16	Very fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	75-95	30-65	15-25	3-10
	16-60	Very fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	55-95	30-65	15-25	3-10
Bn:												
Bayard-----	0-15	Loam	CL, CL-ML, ML	A-4	0	0	95-100	90-100	75-95	55-75	15-30	3-10
	15-60	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	55-95	30-65	15-25	3-10
BpB:												
Blanche-----	0-8	Loamy fine sand	SM	A-2, A-4	0	0	100	100	60-80	20-45	---	NP
	8-32	Fine sandy loam	CL, ML, SC, SM	A-4	0	0	100	100	70-95	40-75	15-30	NP-10
	32-60	Weathered bedrock			---	---	---	---	---	---	---	---
BrF:												
Blueridge-----	0-4	Coarse sand	SC-SM, SM, SP, SP-SM	A-1, A-2, A-3	0	0	95-100	75-95	25-55	0-35	0-20	NP-5
	4-60	Gravelly coarse sand	SM, SP, SP-SM	A-1, A-2, A-3	0	0-5	70-100	50-95	25-60	0-35	0-20	NP
Bw:												
Broadwater-----	0-3	Loamy sand	SC-SM, SM, SP-SM	A-1-b, A-2, A-4	0	0	95-100	90-100	35-70	10-40	15-20	NP-5
	3-9	Loamy sand	SC-SM, SM, SP-SM	A-1-b, A-2, A-4	0	0	95-100	90-100	35-70	10-40	15-20	NP-5
	9-60	Gravelly coarse sand	SC-SM, SM, SP, SP-SM	A-1, A-2, A-3	0	0	70-100	50-95	25-60	0-35	15-20	NP-5
BxD:												
Busher-----	0-10	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	90-100	80-100	30-60	15-25	NP-5
	10-48	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	90-100	75-100	30-65	15-25	NP-5
	48-60	Weathered bedrock			---	---	---	---	---	---	---	---
Tassel-----	0-8	Fine sandy loam	ML, SM	A-4	0	0	95-100	90-100	75-100	40-65	0-35	NP-7
	8-11	Gravelly fine sandy loam	SM	A-1, A-2	0	0-5	55-100	50-75	40-60	10-35	0-25	NP-5
	11-60	Weathered bedrock			---	---	---	---	---	---	---	---

ENGINEERING INDEX PROPERTIES--Continued
Garden County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth In	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
BxE: Busher-----	0-10	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	90-100	80-100	30-60	15-25	NP-5
	10-44	Fine sandy loam	SC-SM, SM, CL-ML, ML	A-2, A-4	0	0	100	90-100	75-100	30-65	15-25	NP-5
	44-60	Weathered bedrock			---	---	---	---	---	---	---	---
Tassel-----	0-7	Fine sandy loam	ML, SM	A-4	0	0	95-100	90-100	75-100	40-65	0-35	NP-7
	7-18	Gravelly fine sandy loam	SM	A-1, A-2	0	0-5	55-100	50-75	40-60	10-35	0-25	NP-5
	18-60	Weathered bedrock			---	---	---	---	---	---	---	---
Cw: Crowther-----	0-18	Loam	CL	A-4, A-6	0	0	100	100	85-100	65-90	20-40	7-20
	18-27	Loam	CL, ML	A-4, A-6, A-7	0	0	100	100	70-100	50-85	30-50	4-24
	27-60	Loamy fine sand, fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	65-85	5-35	0-14	NP
Cx: Crowther-----	0-18	Loam	CL	A-4, A-6	0	0	100	100	85-100	65-90	20-40	7-20
	18-33	Loam	CL, ML	A-7, A-4, A-6	0	0	100	100	70-100	50-85	30-50	4-24
	33-60	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	65-85	5-35	---	NP
DbB: Dailey-----	0-14	Loamy fine sand	SM	A-2, A-4	0	0	100	100	70-95	20-40	0-20	NP
	14-60	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	75-95	5-35	0-20	NP
DdC: Dankworth-----	0-6	Loamy sand	SM	A-2	0	0	95-100	90-100	50-90	15-35	15-20	NP-5
	6-60	Sand, coarse sand	SM, SP, SP-SM	A-1, A-2, A-3	0	0	90-100	75-95	20-75	0-20	15-20	NP-5
Dw: Duroc-----	0-27	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	85-100	60-100	25-35	5-15
	27-32	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	85-100	70-100	25-35	5-15
	32-60	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	85-100	70-100	25-35	5-15
Eh: Els-----	0-7	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	70-100	5-30	10-20	NP-5
	7-15	Fine sand	SM, SP-SM	A-2, A-3	0	0	95-100	95-100	70-100	5-35	10-20	NP-5
	15-60	Fine sand	SM, SP-SM	A-2, A-3	0	0	95-100	95-100	70-100	5-35	10-20	NP-5
EuG: Epping-----	0-3	Very fine sandy loam	CL, CL-ML, ML	A-4	0	0	100	95-100	85-100	65-95	15-30	2-10
	3-16	Very fine sandy loam	CL, CL-ML, ML	A-4, A-6	0	0	100	90-100	75-100	60-95	15-35	2-15
	16-60	Weathered bedrock			---	---	---	---	---	---	---	---
Rock Outcrop---	0-60	Unweathered bedrock			---	---	---	---	---	---	0-14	---
Fu: Fluvaquents----	0-60	Sand	SM, SP-SM	A-2, A-3, A-4	0	0	100	100	50-70	5-40	15-25	NP-5
GP: Pits-----	0-60	Gravelly sand	GP-GM, SM, SP, SP-SM	A-1, A-2, A-3	---	0-5	45-100	40-100	0-80	0-40	0-14	NP
Gt: Gothenburg-----	0-6	Loamy sand	SM	A-2	0	0	100	95-100	50-90	15-35	0-20	NP
	6-14	Sand	SM, SP, SP-SM	A-2, A-3	0	0	100	80-100	65-80	3-15	0-20	NP
	14-60	Stratified coarse sand to fine sand	SM, SP, SP-SM	A-1, A-2, A-3	0	0	95-100	75-100	30-80	3-15	0-20	NP
Hh: Hoffland-----	0-10	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	70-95	40-55	15-25	4-10
	10-20	Loamy fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	51-90	5-35	10-20	NP-5
	20-60	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	51-90	5-35	10-20	NP-5
Ho: Hoffland-----	0-13	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	70-95	40-55	15-25	4-10
	13-42	Loamy fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	51-90	5-35	10-20	NP-5
	42-60	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	51-90	5-35	10-20	NP-5
INT: Aquolls-----	0-72	Variable			---	---	---	---	---	---	---	---
IsB: Ipage-----	0-5	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	50-100	5-30	---	NP
	5-16	Fine sand	SM, SP, SP-SM	A-2, A-3	0	0	100	95-100	50-100	2-30	---	NP
	16-60	Sand	SM, SP, SP-SM	A-2, A-3	0	0	100	95-100	50-100	2-30	---	NP
Ja: Jankosh-----	0-4	Loam	CL, CL-ML, ML	A-4	0	0	100	100	85-95	60-75	20-30	3-10
	4-18	Loam	CL, CL-ML, ML	A-4	0	0	100	100	85-95	50-65	20-35	3-10
	18-33	Very fine sandy loam	CL, CL-ML, ML	A-4	0	0	100	100	85-95	50-65	20-35	3-10
	33-60	Gravelly coarse sand	SM, SP-SM	A-2	0	0	80-100	50-75	0-55	0-35	15-20	NP-5
JeB: Jayem-----	0-17	Loamy fine sand	SM	A-2	0	0	100	85-100	75-85	25-35	15-25	NP-5
	17-37	Fine sandy loam	ML, SM	A-2, A-4	0	0	100	85-100	70-95	25-60	15-25	NP-5
	37-60	Fine sandy loam	ML, SM	A-2, A-4	0	0	100	85-100	70-95	25-60	15-25	NP-5

ENGINEERING INDEX PROPERTIES--Continued
Garden County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
JeC: Jayem-----	In											
	0-10	Loamy fine sand	SM	A-2	0	0	100	85-100	75-85	25-35	15-25	NP-5
	10-18	Fine sandy loam	SM, ML	A-2, A-4	0	0	100	85-100	70-95	25-60	15-25	NP-5
	18-60	Fine sandy loam, loamy very fine sand	ML, SM	A-2, A-4	0	0	100	85-100	70-95	25-60	15-25	NP-5
Jg: Jayem-----	0-9	Fine sandy loam	SM	A-2, A-4	0	0	100	85-100	55-95	25-50	15-25	NP-5
	9-22	Fine sandy loam	ML, SM	A-2, A-4	0	0	100	85-100	70-95	25-60	15-25	NP-5
	22-60	Fine sandy loam	ML, SM	A-2, A-4	0	0	100	85-100	70-95	25-60	15-25	NP-5
JgC: Jayem-----	0-11	Fine sandy loam	SM	A-2, A-4	0	0	100	85-100	55-95	25-50	15-25	NP-5
	11-18	Fine sandy loam	ML, SM	A-2, A-4	0	0	100	85-100	70-95	25-60	15-25	NP-5
	18-60	Fine sandy loam	ML, SM	A-2, A-4	0	0	100	85-100	70-95	25-60	15-25	NP-5
KeB: Keith-----	0-13	Loam	CL, CL-ML, ML	A-4	0	0	100	100	85-100	80-100	20-35	2-10
	13-48	Silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	80-100	30-45	10-25
	48-60	Very fine sandy loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	80-100	20-35	2-12
KeC: Keith-----	0-7	Loam	CL, CL-ML, ML	A-4	0	0	100	100	85-100	80-100	20-35	2-10
	7-28	Silt loam, silty clay loam, loam	CL	A-6, A-7	0	0	100	100	95-100	80-100	30-45	10-25
	28-60	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	80-100	20-35	2-12
Ku: Kuma-----	0-17	Loam	ML	A-4	0	0	100	95-100	90-100	75-95	25-35	NP-10
	17-44	Loam	CL	A-6, A-7	0	0	100	95-100	90-100	85-95	30-45	10-25
	44-60	Loam	CL, CL-ML, ML	A-6, A-4	0	0	95-100	95-100	90-100	70-95	20-40	NP-20
La: Lemoyne-----	0-6	Sand	SC-SM, SM, SP-SM	A-2, A-3, A-4	0	0	100	95-100	50-90	5-40	15-20	NP-5
	6-18	Sand, loamy sand	ML, SC-SM, SM	A-2, A-4	0	0	100	95-100	55-70	20-55	15-20	NP-5
	18-36	Clay loam, loam	CH, CL	A-6, A-7	0	0	100	95-100	55-100	55-90	30-60	10-30
	36-54	Clay loam	CH, CL	A-6, A-7	0	0	100	95-100	55-100	55-90	30-60	10-30
	54-60	Coarse sand	SC-SM, SM, SP-SM	A-1, A-2, A-3	0	0	100	75-100	30-70	5-30	15-20	NP-5
Lb: Lewellen-----	0-4	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	85-100	60-75	20-35	5-15
	4-8	Loam	CL, SC	A-6, A-7	0	0	100	95-100	50-100	40-70	30-45	10-25
	8-12	Very fine sandy loam	ML, SC, SC-SM, SM	A-4, A-6	0	0	100	95-100	70-100	40-75	15-30	NP-15
	12-29	Fine sand	ML, SC-SM, SM	A-2, A-4	0	0	100	85-100	55-70	20-55	15-20	NP-5
	29-60	Coarse sand	SC-SM, SM, SP-SM	A-1, A-2, A-3	0	0	70-100	50-95	25-60	0-35	15-20	NP-5
Lc: Lewellen-----	0-4	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	85-100	60-75	20-35	5-15
	4-11	Loam	CL, SC	A-6, A-7	0	0	100	95-100	50-100	40-70	30-45	10-25
	11-14	Fine sandy loam	ML, SC, SC-SM, SM	A-4, A-6	0	0	100	95-100	70-100	40-75	15-30	NP-15
	14-30	Fine sand, loamy fine sand	ML, SC-SM, SM	A-2, A-4	0	0	100	85-100	55-70	20-55	15-20	NP-5
	30-60	Coarse sand	SC-SM, SM, SP, SP-SM	A-1, A-2, A-3	0	0	70-100	50-95	25-60	0-35	15-20	NP-5
Mcculigan-----	0-7	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	85-100	60-75	20-35	5-15
	7-12	Loam, very fine sandy loam	ML, SC	A-4, A-6	0	0	100	95-100	70-100	40-75	15-30	NP-15
	12-18	Sand	SM, SP-SM	A-2, A-3, A-4	0	0	100	95-100	60-100	5-40	15-20	NP-5
	18-60	Coarse sand	SM, SP, SP-SM	A-1, A-2, A-3	0	0	70-100	50-95	25-60	0-35	15-20	NP-5
Lf: Lodgepole-----	0-5	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	70-95	20-40	3-20
	5-32	Silty clay loam, silty clay loam	CH	A-7	0	0	100	100	90-100	85-95	50-65	25-40
	32-60	Loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	60-90	20-35	3-10
M-W: Miscellaneous Water-----	---	---	---	---	---	---	---	---	---	---	---	---
Ma: Marlake-----	0-6	Fine sandy loam	ML, SM	A-4	0	0	100	100	70-85	40-55	15-20	NP
	6-16	Fine sand, loamy fine sand	SM, SP-SM	A-2, A-3, A-4	0	0	100	100	50-85	5-50	---	NP
	16-60	Fine sand, loamy fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	50-80	5-35	---	NP
Mc: Marlake-----	0-16	Mucky peat	PT	A-1-a, A-8	---	---	---	---	---	---	---	NP
	16-80	Loamy fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	50-80	5-35	---	NP
MtC: Mitchell-----	0-7	Very fine sandy loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	65-95	20-35	NP-15
	7-60	Very fine sandy loam	CL, CL-ML, ML	A-4, A-6	0	0	100	95-100	85-100	60-100	20-35	NP-15

ENGINEERING INDEX PROPERTIES--Continued
Garden County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
MtD: Mitchell-----	In											
	0-5	Very fine sandy loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	65-95	20-35	NP-15
	5-60	Very fine sandy loam	CL, CL-ML, ML	A-4, A-6	0	0	100	95-100	85-100	60-100	20-35	NP-15
MxF: Mitchell-----	0-8	Very fine sandy loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	65-95	20-35	NP-15
	8-60	Very fine sandy loam	CL, CL-ML, ML	A-4, A-6	0	0	100	95-100	85-100	60-100	20-35	NP-15
Epping-----	0-5	Very fine sandy loam	CL, CL-ML, ML	A-4	0	0	100	95-100	85-100	65-95	15-30	2-10
	5-8	Very fine sandy loam	CL, CL-ML, ML	A-4, A-6	0	0	100	90-100	75-100	60-95	15-35	2-15
	8-11	Loam	CL, CL-ML	A-4, A-6	0	0	100	90-100	75-100	60-95	20-40	5-20
	11-60	Weathered bedrock			---	---	---	---	---	---	---	---
Ru: Rushcreek-----	0-11	Loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	85-100	60-75	20-35	5-15
	11-34	Loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	95-100	80-100	45-90	20-40	5-20
	34-56	Sandy loam	CL, CL-ML, SC	A-4, A-6	0	0	100	95-100	50-100	35-80	20-35	5-15
	56-60	Gravelly coarse sand	SC-SM, SM, SP, SP-SM	A-1, A-2, A-3	0	0	80-100	50-95	25-90	0-35	15-20	NP-5
SaB: Sarben-----	0-7	Loamy fine sand	SM	A-2	0	0	100	100	50-75	15-30	15-20	NP-5
	7-15	Fine sandy loam	ML, SM	A-4	0	0	100	100	90-100	40-65	15-20	NP-5
	15-60	Fine sandy loam	ML, SM	A-4	0	0	100	100	90-100	40-65	15-20	NP-5
SaC: Sarben-----	0-7	Loamy fine sand	SM	A-2	0	0	100	100	50-75	15-30	15-20	NP-5
	7-15	Fine sandy loam	ML, SM	A-4	0	0	100	100	90-100	40-65	15-20	NP-5
	15-60	Fine sandy loam	ML, SM	A-4	0	0	100	100	90-100	40-65	15-20	NP-5
SaD: Sarben-----	0-5	Loamy fine sand	SM	A-2	0	0	100	100	50-75	15-30	15-20	NP-5
	5-15	Fine sandy loam	ML, SM	A-4	0	0	100	100	90-100	40-65	15-20	NP-5
	15-60	Fine sandy loam	ML, SM	A-4	0	0	100	100	90-100	40-65	15-20	NP-5
SaE: Sarben-----	0-10	Loamy fine sand	SM	A-2	0	0	100	100	50-75	15-30	15-20	NP-5
	10-15	Fine sandy loam	ML, SM	A-4	0	0	100	100	90-100	40-65	15-20	NP-5
	15-60	Fine sandy loam	ML, SM	A-4	0	0	100	100	90-100	40-65	15-20	NP-5
Sc: Scoville-----	0-6	Loamy fine sand	SM	A-2	0	0	100	100	75-100	15-50	0-20	NP
	6-42	Fine sand, loamy fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	75-100	5-50	0-20	NP
	42-60	Very fine sandy loam	CL-ML, ML, SM	A-4	0	0	100	100	70-100	35-75	0-30	NP-10
SnC: Sidney-----	0-11	Loam	CL, CL-ML, ML	A-4, A-6	0	0	95-100	90-100	80-100	55-90	20-36	2-15
	11-29	Loam, very fine sandy loam	CL, CL-ML, ML, SC-SM	A-4, A-6	0	0	95-100	85-100	65-100	35-85	20-40	2-15
	29-48	Very fine sandy loam	CL, ML, SC, SM	A-4, A-6	0	0	95-100	80-100	60-100	35-85	20-40	2-15
	48-60	Weathered bedrock			---	---	---	---	---	---	---	---
StD: Sidney-----	0-9	Loam	ML, CL, CL-ML	A-4, A-6	0	0	95-100	90-100	80-100	55-90	20-36	2-15
	9-30	Loam, very fine sandy loam	CL, CL-ML, ML, SC-SM	A-4, A-6	0	0	95-100	85-100	65-100	35-85	20-40	2-15
	30-44	Very fine sandy loam	CL, ML, SC, SM	A-4, A-6	0	0	95-100	80-100	60-100	35-85	20-40	2-15
	44-60	Weathered bedrock			---	---	---	---	---	---	---	---
Canyon-----	0-5	Loam	CL, CL-ML, ML, SM	A-4	0	0-5	90-100	75-100	50-95	40-75	15-30	2-10
	5-10	Very fine sandy loam	GM, ML, SC, SM	A-2, A-4, A-6	0	0-5	60-100	50-100	40-95	30-75	20-40	NP-15
	10-60	Weathered bedrock			---	---	---	---	---	---	---	---
SuG: Sulco-----	0-3	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	80-100	60-90	20-35	NP-15
	3-60	Loam	CL, CL-ML, ML	A-4	0	0	100	100	85-100	50-90	20-30	NP-10
SxC2: Sulco-----	0-5	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	80-100	60-90	20-35	NP-15
	5-60	Loam	CL, CL-ML, ML	A-4	0	0	100	100	85-100	50-90	20-30	NP-10
McConaughy----	0-7	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	60-100	20-35	NP-12
	7-28	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	65-100	20-35	NP-12
	28-60	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	80-100	20-35	NP-12
SxD2: Sulco-----	0-5	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	80-100	60-90	20-35	NP-15
	5-60	Loam	CL, CL-ML, ML	A-4	0	0	100	100	85-100	50-90	20-30	NP-10
McConaughy----	0-6	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	60-100	20-35	NP-12
	6-21	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	65-100	20-35	NP-12
	21-60	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	80-100	20-35	NP-12

ENGINEERING INDEX PROPERTIES--Continued
Garden County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
SxE2:												
Sulco-----	0-6	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	80-100	60-90	20-35	NP-15
	6-60	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	50-90	20-30	NP-10
Mcconaughey----	0-6	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	60-100	20-35	NP-12
	6-24	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	65-100	20-35	NP-12
	24-60	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	80-100	20-35	NP-12
SxF:												
Sulco-----	0-4	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	80-100	60-90	20-35	NP-15
	4-60	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	50-90	20-30	NP-10
Mcconaughey----	0-10	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	60-100	20-35	NP-12
	10-24	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	65-100	20-35	NP-12
	24-60	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-100	80-100	20-35	NP-12
TkG:												
Tassel-----	0-7	Fine sandy loam	ML, SM	A-4	0	0	95-100	90-100	75-100	40-65	0-35	NP-7
	7-18	Gravelly fine sandy loam	SM	A-1, A-2	0	0-5	55-100	50-75	40-60	10-35	0-25	NP-5
	18-60	Weathered bedrock			---	---	---	---	---	---	---	---
Ashollow-----	0-3	Very fine sandy loam	CL, ML, SC, SM	A-1-b, A-2, A-4, A-6	0	0	95-100	75-100	40-100	20-80	15-30	NP-15
	3-60	Very fine sandy loam	ML, SC, SM, CL	A-1-b, A-2, A-4, A-6	0	0	95-100	75-100	40-100	20-80	15-30	NP-15
VaD:												
Valentine-----	0-5	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	60-70	5-20	---	NP
	5-60	Fine sand	SM, SP-SM	A-2	0	0	100	95-100	75-90	10-30	---	NP
VaE:												
Valentine-----	0-4	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	60-70	5-20	---	NP
	4-60	Fine sand	SM, SP-SM	A-2	0	0	100	95-100	75-90	10-30	---	NP
VaF:												
Valentine-----	0-3	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	60-70	5-20	---	NP
	3-60	Fine sand	SM, SP-SM	A-2	0	0	100	95-100	75-90	10-30	---	NP
Valentine-----	0-3	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	60-70	5-20	---	NP
	3-60	Fine sand	SM, SP-SM	A-2	0	0	100	95-100	75-90	10-30	---	NP
VdB:												
Valentine-----	0-6	Loamy fine sand	SM, SP-SM	A-2	0	0	100	100	70-95	10-30	15-25	NP-5
	6-60	Fine sand	SM, SP-SM	A-2	0	0	100	95-100	75-90	10-30	---	NP
Vt:												
Vetal-----	0-8	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	95-100	60-100	30-55	20-30	NP-10
	8-22	Very fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	95-100	60-100	30-65	20-30	NP-10
	22-60	Very fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	90-100	60-100	30-65	20-30	NP-10
W:												
Water-----	---	---	---	---	---	---	---	---	---	---	---	---
WeB:												
Wildhorse-----	0-8	Fine sand	SM, SP-SM	A-2, A-3, A-4	0	0	100	100	50-100	5-40	10-20	NP-5
	8-60	Fine sand, sand	SM, SP-SM	A-2, A-3	0	0	100	100	50-100	5-35	10-20	NP-5
WhB:												
Wildhorse-----	0-8	Fine sand	SM, SP-SM	A-2, A-3, A-4	0	0	100	100	50-100	5-40	10-20	NP-5
	8-60	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	50-100	5-35	10-20	NP-5
Hoffland-----	0-12	Fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	70-95	40-55	15-25	4-10
	12-60	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	51-90	5-35	10-20	NP-5
WkB:												
Wildhorse-----	0-5	Fine sand	SM, SP-SM	A-2, A-3, A-4	0	0	100	100	50-100	5-40	10-20	NP-5
	5-60	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	50-100	5-35	10-20	NP-5
Ipage-----	0-5	Fine sand	SM, SP-SM	A-2, A-3	0	0	100	100	50-100	5-30	---	NP
	5-10	Fine sand	SM, SP, SP-SM	A-2, A-3	0	0	100	95-100	50-100	2-30	---	NP
	10-60	Fine sand	SM, SP, SP-SM	A-2, A-3	0	0	100	95-100	50-100	2-30	---	NP

Physical Properties

This table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in micrometers per second (um/sec), when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in this table as the K factor (K_w and K_f) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor K_w indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor K_f indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.

PHYSICAL PROPERTIES OF THE SOILS
Garden County, Nebraska: Published

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth In	Sand Pct	Silt Pct	Clay Pct	Moist bulk density g/cc	Permeability (Ksat) in/hr	Available water capacity In/in	Linear extensibility Pct	Organic matter Pct	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		

2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.
- 4L. Calcareous loams, silt loams, clay loams, and silty clay loams.
4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

PHYSICAL PROPERTIES OF THE SOILS
Garden County, Nebraska: Published

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
Ao:														
Alliance-----	0-8	41	42	15-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	2.0-4.0	.28	.28	4	5	56
	8-30	26	44	25-35	1.15-1.30	0.20-2.00	0.18-0.20	3.0-5.9	0.5-1.0	.43	.43			
	30-44	42	43	10-20	1.30-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.24	.24			
	44-60			---	---	0.20-0.60	---	---	---	---	---			
AoB:														
Alliance-----	0-12	41	42	15-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	2.0-4.0	.28	.28	4	5	56
	12-26	26	44	25-35	1.15-1.30	0.20-2.00	0.18-0.20	3.0-5.9	0.5-1.0	.43	.43			
	26-34	37	43	15-25	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.5-1.0	.43	.43			
	34-54	59	26	10-20	1.30-1.60	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.24	.24			
	54-60			---	---	0.20-0.60	---	---	---	---	---			
Ar:														
Almeria-----	0-3	67	20	5-15	1.30-1.50	2.00-6.00	0.13-0.18	0.0-2.9	1.0-12	.24	.24	5	8	0
	3-60			1-10	1.55-1.80	5.95-19.98	0.05-0.12	0.0-2.9	0.0-0.5	.15	.17			
AsF:														
Ashollow-----	0-3	63	25	5-18	1.20-1.40	2.00-6.00	0.17-0.19	0.0-2.9	1.0-2.0	.37	.37	5	3	86
	3-60	63	25	5-18	1.20-1.50	2.00-6.00	0.15-0.18	0.0-2.9	0.5-1.0	.43	.43			
Tassel-----	0-7	65	27	5-12	1.50-1.75	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.24	.24	2	3	86
	7-18	80	12	5-12	1.50-1.60	2.00-6.00	0.09-0.11	0.0-2.9	0.0-0.5	.10	.20			
	18-60			---	---	0.20-0.60	---	---	---	---	---			
Bh:														
Bayard-----	0-12	62	26	5-18	1.30-1.50	2.00-6.00	0.13-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	12-60	62	26	5-18	1.20-1.50	2.00-6.00	0.12-0.18	0.0-2.9	0.5-1.0	.28	.28			
BhB:														
Bayard-----	0-13	62	26	5-18	1.30-1.50	2.00-6.00	0.13-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	13-60	62	26	5-18	1.20-1.50	2.00-6.00	0.12-0.18	0.0-2.9	0.5-1.0	.28	.28			
BhC:														
Bayard-----	0-9	62	26	5-18	1.30-1.50	2.00-6.00	0.13-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	9-60	62	26	5-18	1.20-1.50	2.00-6.00	0.12-0.18	0.0-2.9	0.5-1.0	.28	.28			
BmB:														
Bayard-----	0-16	63	25	5-18	1.20-1.50	2.00-6.00	0.17-0.18	0.0-2.9	1.0-3.0	.32	.32	5	3	86
	16-60	63	25	5-18	1.20-1.50	2.00-6.00	0.12-0.18	0.0-2.9	0.5-1.0	.28	.28			
Bn:														
Bayard-----	0-15	44	40	7-25	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	15-60	62	26	5-18	1.20-1.50	2.00-6.00	0.12-0.18	0.0-2.9	0.5-1.0	.28	.28			
BpB:														
Blanche-----	0-8	85	7	6-10	1.40-1.60	5.95-19.98	0.10-0.12	0.0-2.9	1.0-2.0	.17	.17	3	2	134
	8-32	66	20	9-18	1.30-1.50	2.00-6.00	0.15-0.17	0.0-2.9	0.5-1.0	.24	.24			
	32-60			---	---	0.06-0.20	---	---	---	---	---			
BrF:														
Blueridge----	0-4	91	6	0-5	1.45-1.65	5.95-19.98	0.04-0.06	0.0-2.9	0.5-1.0	.10	.10	5	1	160
	4-60	92	7	0-3	1.65-1.85	19.98-19.98	0.02-0.05	0.0-2.9	0.0-0.5	.05	.10			
Bw:														
Broadwater---	0-3	84	9	3-10	1.35-1.55	5.95-19.98	0.10-0.12	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	3-9	84	9	3-10	1.35-1.55	5.95-19.98	0.10-0.12	0.0-2.9	0.5-1.0	.17	.17			
	9-60	92	7	0-3	1.65-1.85	19.98-19.98	0.02-0.05	0.0-2.9	0.0-0.5	.05	.10			
BxD:														
Busher-----	0-10	64	26	5-15	1.30-1.50	2.00-6.00	0.15-0.18	0.0-2.9	1.0-3.0	.20	.20	4	3	86
	10-48	65	27	5-12	1.40-1.60	2.00-6.00	0.13-0.19	0.0-2.9	0.5-1.0	.28	.28			
	48-60			---	---	0.20-0.60	---	---	---	---	---			
Tassel-----	0-8	65	27	5-12	1.50-1.75	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.24	.24	2	3	86
	8-11	65	27	5-12	1.50-1.60	2.00-6.00	0.09-0.11	0.0-2.9	0.0-0.5	.10	.20			
	11-60			---	---	0.20-0.60	---	---	---	---	---			
BxE:														
Busher-----	0-10	64	26	5-15	1.30-1.50	2.00-6.00	0.15-0.18	0.0-2.9	1.0-3.0	.20	.20	4	3	86
	10-44	65	27	5-12	1.40-1.60	2.00-6.00	0.13-0.19	0.0-2.9	0.5-1.0	.28	.28			
	44-60			---	---	0.20-0.60	---	---	---	---	---			
Tassel-----	0-7	65	27	5-12	1.50-1.75	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.24	.24	2	3	86
	7-18	65	27	5-12	1.50-1.60	2.00-6.00	0.09-0.11	0.0-2.9	0.0-0.5	.10	.20			
	18-60			---	---	0.20-0.60	---	---	---	---	---			
Cw:														
Crowther----	0-18	43	40	7-27	1.20-1.40	0.57-5.95	0.17-0.23	3.0-5.9	8.0-16	.24	.24	4	8	0
	18-27	36	34	20-40	1.20-1.50	0.57-5.95	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
	27-60	78	16	1-10	1.50-1.70	5.95-19.98	0.06-0.11	0.0-2.9	0.5-1.0	.17	.17			
Cx:														
Crowther----	0-18	43	40	7-27	1.20-1.40	0.60-2.00	0.17-0.23	0.0-2.9	8.0-16	.24	.24	4	8	0
	18-33	36	34	20-40	1.20-1.50	0.57-5.95	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
	33-60	93	1	1-10	1.50-1.70	5.95-19.98	0.06-0.11	0.0-2.9	0.5-1.0	.17	.17			
DbB:														
Dailey-----	0-14	84	6	3-15	1.70-1.85	5.95-19.98	0.07-0.12	0.0-2.9	1.0-3.0	.17	.17	5	2	134
	14-60	96	1	2-7	1.75-1.95	5.95-19.98	0.04-0.07	0.0-2.9	0.5-1.0	.10	.10			
DdC:														
Dankworth----	0-6	85	9	2-10	1.35-1.55	5.95-19.98	0.08-0.14	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	6-60	96	2	1-3	1.65-1.85	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.5	.10	.10			
Dw:														
Duroc-----	0-27	37	43	15-27	1.20-1.45	0.60-2.00	0.12-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	27-32	33	44	18-27	1.40-1.65	0.60-2.00	0.12-0.20	3.0-5.9	1.0-3.0	.43	.43			
	32-60	33	44	18-27	1.40-1.65	0.60-2.00	0.12-0.20	3.0-5.9	0.5-1.0	.43	.43			
Eh:														
Els-----	0-7	96	1	1-7	1.60-1.70	5.95-19.98	0.07-0.09	0.0-2.9	0.5-3.0	.15	.15	5	1	220
	7-15	93	1	1-10	1.50-1.70	5.95-19.98	0.05-0.08	0.0-2.9	0.0-0.5	.15	.15			
	15-60	93	1	1-10	1.50-1.70	5.95-19.98	0.04-0.07	0.0-2.9	0.0-0.5	.15	.15			

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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
EuG:														
Epping-----	0-3	63	25	5-18	1.25-1.45	2.00-6.00	0.12-0.20	0.0-2.9	0.5-2.0	.43	---	2	3	86
	3-16	61	24	10-20	1.20-1.45	0.60-2.00	0.12-0.20	0.0-2.9	0.5-1.0	.43	---			
	16-60			---	---	0.06-0.20	---	---	---	---	---			
Rock Outcrop-	0-60			0-0	---	0.00-0.00	0.00-0.00	---	---	---	---		8	0
Fu:														
Fluvaquents--	0-60	95	2	0-7	1.30-1.80	5.95-19.98	0.07-0.13	0.0-2.9	2.0-8.0	.17	.17	5	8	0
GP:														
Pits-----	0-60	95	2	0-7	1.70-2.00	5.95-19.98	0.02-0.09	0.0-2.9	0.0-0.5	.10	.17	2	8	0
Gt:														
Gothenburg---	0-6	83	9	3-15	1.35-1.55	5.95-19.98	0.10-0.12	0.0-2.9	0.5-1.0	.17	.17	5	8	0
	6-14	96	2	1-5	1.60-1.80	5.95-19.98	0.06-0.08	0.0-2.9	0.0-0.5	.15	.15			
	14-60			0-5	1.65-1.85	5.95-19.98	0.05-0.07	0.0-2.9	0.0-0.5	.10	.15			
Hh:														
Hoffland----	0-10	67	20	5-20	1.20-1.50	2.00-6.00	0.16-0.19	0.0-2.9	4.0-12	.20	.20	3	8	0
	10-20	78	16	1-10	1.40-1.70	5.95-19.98	0.06-0.11	0.0-2.9	0.5-1.0	.15	.15			
	20-60	93	1	1-10	1.40-1.70	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.15	.15			
Ho:														
Hoffland----	0-13	67	20	5-20	1.20-1.50	2.00-6.00	0.16-0.19	0.0-2.9	4.0-12	.20	.20	3	8	0
	13-42	78	16	1-10	1.40-1.70	5.95-19.98	0.06-0.11	0.0-2.9	0.5-1.0	.15	.15			
	42-60	93	1	1-10	1.40-1.70	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.15	.15			
INT:														
Aquolls-----	0-72			---	---	---	---	---	---	---	---		---	0
IsB:														
Ipage-----	0-5	96	1	1-7	1.40-1.50	5.95-19.98	0.07-0.09	0.0-2.9	0.5-1.0	.15	.15	5	1	220
	5-16	95	1	1-8	1.50-1.60	5.95-19.98	0.04-0.10	0.0-2.9	0.0-0.5	.15	.15			
	16-60	94	1	1-8	1.50-1.60	5.95-19.98	0.04-0.09	0.0-2.9	0.0-0.5	.15	.15			
Ja:														
Jankosh-----	0-4	43	43	10-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32	4	4L	86
	4-18	43	43	10-18	1.20-1.45	0.60-2.00	0.16-0.19	0.0-2.9	0.5-1.0	.37	.37			
	18-33	60	26	10-18	1.20-1.45	0.60-2.00	0.16-0.19	0.0-2.9	0.0-0.5	.43	.43			
	33-60	92	7	0-3	1.65-1.85	19.98-19.98	0.02-0.04	0.0-2.9	0.0-0.5	.05	.10			
JeB:														
Jayem-----	0-17	84	6	3-15	1.35-1.45	5.95-19.98	0.08-0.11	0.0-2.9	1.0-3.0	.17	.17	5	2	134
	17-37	62	26	5-18	1.30-1.45	2.00-6.00	0.13-0.15	0.0-2.9	0.5-1.0	.32	.32			
	37-60	62	26	5-18	1.30-1.50	2.00-6.00	0.13-0.15	0.0-2.9	0.1-0.5	.32	.32			
JeC:														
Jayem-----	0-10	84	6	3-15	1.35-1.45	5.95-19.98	0.08-0.11	0.0-2.9	1.0-3.0	.17	.17	5	2	134
	10-18	62	26	5-18	1.30-1.45	2.00-6.00	0.13-0.15	0.0-2.9	0.5-1.0	.32	.32			
	18-60	62	26	5-18	1.30-1.50	2.00-6.00	0.13-0.15	0.0-2.9	0.1-0.5	.32	.32			
Jg:														
Jayem-----	0-9	64	26	5-15	1.20-1.35	2.00-6.00	0.13-0.15	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	9-22	62	26	5-18	1.30-1.45	2.00-6.00	0.13-0.15	0.0-2.9	0.5-1.0	.32	.32			
	22-60	62	26	5-18	1.30-1.50	2.00-6.00	0.13-0.15	0.0-2.9	0.1-0.5	.32	.32			
JgC:														
Jayem-----	0-11	64	26	5-15	1.20-1.35	2.00-6.00	0.13-0.15	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	11-18	62	26	5-18	1.30-1.45	2.00-6.00	0.13-0.15	0.0-2.9	0.5-1.0	.32	.32			
	18-60	62	26	5-18	1.30-1.50	2.00-6.00	0.13-0.15	0.0-2.9	0.1-0.5	.32	.32			
KeB:														
Keith-----	0-13	41	42	7-25	1.25-1.45	0.60-2.00	0.20-0.23	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	13-48	9	64	20-35	1.10-1.20	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	48-60	60	26	8-20	1.30-1.40	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.43	.43			
KeC:														
Keith-----	0-7	41	42	7-25	1.25-1.45	0.60-2.00	0.20-0.23	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	7-28	9	64	20-35	1.10-1.20	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	28-60	43	43	8-20	1.30-1.40	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.43	.43			
Ku:														
Kuma-----	0-17	41	42	7-27	1.20-1.30	0.60-2.00	0.18-0.21	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	17-44	32	42	18-35	1.25-1.35	0.60-2.00	0.18-0.21	3.0-5.9	1.0-3.0	.37	.37			
	44-60	37	43	10-30	1.40-1.50	0.60-2.00	0.16-0.18	0.0-2.9	0.5-1.0	.32	.32			
La:														
Lemoyn-----	0-6	95	2	1-7	1.40-1.60	5.95-19.98	0.07-0.09	0.0-2.9	0.5-1.0	.15	.15	4	1	220
	6-18	94	1	1-8	1.55-1.80	5.95-19.98	0.06-0.11	0.0-2.9	0.5-1.0	.15	.15			
	18-36	34	36	20-40	1.30-1.65	0.20-0.60	0.15-0.19	3.0-5.9	0.5-1.0	.37	.37			
	36-54	34	36	20-40	1.30-1.65	0.20-0.60	0.14-0.19	3.0-5.9	0.5-1.0	.37	.37			
	54-60	91	6	0-6	1.60-1.85	5.95-19.98	0.02-0.07	0.0-2.9	0.0-0.5	.10	.10			
Lb:														
Lewellen----	0-4	43	40	12-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	4.0-8.0	.24	.24	3	4L	86
	4-8	40	38	18-27	1.35-1.65	0.60-2.00	0.16-0.19	0.0-2.9	2.0-4.0	.37	.37			
	8-12	63	24	5-20	1.30-1.70	0.60-2.00	0.15-0.19	0.0-2.9	0.5-1.0	.37	.37			
	12-29	96	1	1-5	1.55-1.80	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.15	.15			
	29-60	92	7	0-3	1.65-1.85	19.98-19.98	0.02-0.04	0.0-2.9	0.0-0.5	.05	.10			
Lc:														
Lewellen----	0-4	43	40	12-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	4.0-8.0	.24	.24	3	4L	86
	4-11	40	38	18-27	1.35-1.65	0.60-2.00	0.16-0.19	0.0-2.9	2.0-4.0	.37	.37			
	11-14	67	20	5-20	1.30-1.70	0.60-2.00	0.15-0.19	0.0-2.9	0.5-1.0	.37	.37			
	14-30	96	1	1-5	1.55-1.80	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.15	.15			
	30-60	92	7	0-3	1.65-1.85	19.98-19.98	0.02-0.04	0.0-2.9	0.0-0.5	.05	.10			
Mcculigan----	0-7	42	38	12-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	4.0-8.0	.24	.24	3	4L	86
	7-12	46	42	5-20	1.30-1.70	0.60-2.00	0.15-0.19	0.0-2.9	0.5-2.0	.37	.37			
	12-18	94	1	1-8	1.40-1.60	5.95-19.98	0.07-0.09	0.0-2.9	0.0-0.5	.15	.15			
	18-60	92	7	0-3	1.60-1.85	19.98-19.98	0.02-0.04	0.0-2.9	0.0-0.5	.05	.10			

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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
Lf:														
Lodgepole----	0-5	26	53	16-27	1.20-1.40	0.60-2.00	0.22-0.24	0.0-2.9	2.0-4.0	.37	.37	5	6	48
	5-32	7	51	35-50	1.25-1.50	0.00-0.06	0.13-0.18	6.0-8.9	1.0-3.0	.28	.28			
	32-60	43	40	8-27	1.30-1.50	0.60-2.00	0.22-0.24	0.0-2.9	0.5-1.0	.43	.43			
M-W:														
Miscellaneous Water-----	---			---	---	---	---	---	---	---	---			
Ma:														
Marlake-----	0-6	64	26	5-15	1.40-1.50	2.00-6.00	0.16-0.18	0.0-2.9	4.0-8.0	.20	.20	5	8	0
	6-16			3-8	1.50-1.60	5.95-19.98	0.06-0.11	0.0-2.9	0.5-1.0	.17	.17			
	16-60			0-5	1.50-1.60	5.95-19.98	0.05-0.07	0.0-2.9	0.0-0.5	.17	.17			
Mc:														
Marlake-----	0-16			---	0.07-0.18	2.00-6.00	0.35-0.45	0.0-2.9	8.0-50	---	---	3	8	0
	16-80	84	6	3-15	1.50-1.60	5.95-19.98	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
MtC:														
Mitchell-----	0-7	61	28	10-18	1.30-1.60	2.00-6.00	0.16-0.20	0.0-2.9	0.5-2.0	.43	.43	5	3	86
	7-60	60	27	8-18	1.20-1.60	0.60-2.00	0.16-0.22	0.0-2.9	0.5-1.0	.43	.43			
MtD:														
Mitchell-----	0-5	61	28	10-18	1.30-1.60	2.00-6.00	0.16-0.20	0.0-2.9	0.5-2.0	.43	.43	5	3	86
	5-60	60	27	8-18	1.20-1.60	0.60-2.00	0.16-0.22	0.0-2.9	0.5-1.0	.43	.43			
MxF:														
Mitchell-----	0-8	61	28	10-18	1.30-1.60	2.00-6.00	0.16-0.20	0.0-2.9	0.5-2.0	.43	.43	5	3	86
	8-60	60	27	8-18	1.20-1.60	0.60-2.00	0.16-0.22	0.0-2.9	0.5-1.0	.43	.43			
Epping-----	0-5	61	24	10-20	1.25-1.45	2.00-6.00	0.12-0.20	0.0-2.9	0.5-2.0	.43	.43	2	3	86
	5-8	61	24	10-20	1.20-1.45	0.60-2.00	0.12-0.20	0.0-2.9	0.5-1.0	.43	.43			
	8-11	40	38	15-30	1.20-1.45	0.60-2.00	0.12-0.20	3.0-5.9	0.5-1.0	.43	.43			
	11-60			---	---	0.06-0.20	---	---	---	---	---			
Ru:														
Rushcreek----	0-11	42	38	12-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	4	4L	86
	11-34	42	37	12-30	1.30-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
	34-56	67	15	10-25	1.45-1.70	0.60-2.00	0.11-0.19	0.0-2.9	0.0-0.5	.28	.28			
	56-60	92	7	0-3	1.65-1.85	19.98-19.98	0.02-0.04	0.0-2.9	0.0-0.5	.05	.10			
SaB:														
Sarben-----	0-7	86	7	4-10	1.35-1.55	5.95-19.98	0.10-0.12	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	7-15	66	20	10-18	1.45-1.75	2.00-6.00	0.10-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-60	66	20	10-18	1.45-1.75	2.00-6.00	0.10-0.18	0.0-2.9	0.0-0.5	.24	.24			
SaC:														
Sarben-----	0-7	86	7	4-10	1.35-1.55	5.95-19.98	0.10-0.12	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	7-15	66	20	10-18	1.45-1.75	2.00-6.00	0.10-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-60	66	20	10-18	1.45-1.75	2.00-6.00	0.10-0.18	0.0-2.9	0.0-0.5	.24	.24			
SaD:														
Sarben-----	0-5	86	7	4-10	1.35-1.55	5.95-19.98	0.10-0.12	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	5-15	66	20	10-18	1.45-1.75	2.00-6.00	0.10-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-60	66	20	10-18	1.45-1.75	2.00-6.00	0.10-0.18	0.0-2.9	0.0-0.5	.24	.24			
SaE:														
Sarben-----	0-10	86	7	4-10	1.35-1.55	5.95-19.98	0.10-0.12	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	10-15	66	20	10-18	1.45-1.75	2.00-6.00	0.10-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-60	66	20	10-18	1.45-1.75	2.00-6.00	0.10-0.18	0.0-2.9	0.0-0.5	.24	.24			
Sc:														
Scoville-----	0-6	79	16	2-8	1.35-1.55	5.95-19.98	0.10-0.12	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	6-42	94	1	2-8	1.55-1.80	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.15	.15			
	42-60	63	24	8-18	1.45-1.70	0.60-2.00	0.12-0.19	0.0-2.9	0.0-0.5	.24	.24			
SnC:														
Sidney-----	0-11	44	40	10-25	1.20-1.40	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.28	.28	4	5	56
	11-29	46	42	5-20	1.15-1.30	0.60-2.00	0.15-0.19	0.0-2.9	0.5-1.0	.37	.37			
	29-48	63	24	5-20	1.20-1.50	0.60-2.00	0.12-0.19	0.0-2.9	0.5-1.0	.37	.37			
	48-60			---	---	0.20-0.60	---	---	---	---	---			
StD:														
Sidney-----	0-9	44	40	10-25	1.20-1.40	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.28	.28	4	4L	86
	9-30	46	42	5-20	1.15-1.30	0.60-2.00	0.15-0.19	0.0-2.9	0.5-1.0	.37	.37			
	30-44	63	24	5-20	1.20-1.50	0.60-2.00	0.12-0.19	0.0-2.9	0.5-1.0	.37	.37			
	44-60			---	---	0.20-0.60	---	---	---	---	---			
Canyon-----	0-5	44	41	10-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32	2	4L	86
	5-10	61	21	12-25	1.45-1.70	0.60-2.00	0.13-0.18	0.0-2.9	0.5-2.0	.20	.37			
	10-60			---	---	0.20-0.60	---	---	---	---	---			
SuG:														
Sulco-----	0-3	44	45	5-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.5-2.0	.37	.37	5	4L	86
	3-60	44	44	8-17	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.5-1.0	.43	.43			
SxC2:														
Sulco-----	0-5	44	45	5-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.5-2.0	.37	.37	5	4L	86
	5-60	44	44	8-17	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.5-1.0	.43	.43			
Mcconaughey---	0-7	44	44	7-18	1.20-1.40	0.60-2.00	0.20-0.23	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	7-28	43	43	10-18	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.5-1.0	.43	.43			
	28-60	44	44	5-18	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.0-0.5	.43	---			
SxD2:														
Sulco-----	0-5	44	45	5-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.5-2.0	.37	.37	5	4L	86
	5-60	44	44	8-17	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.5-1.0	.43	.43			
Mcconaughey---	0-6	44	44	7-18	1.20-1.40	0.60-2.00	0.20-0.23	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	6-21	43	43	10-18	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.5-1.0	.43	.43			
	21-60	44	44	5-18	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.0-0.5	.43	---			

PHYSICAL PROPERTIES OF THE SOILS
Garden County, Nebraska: Published

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
SxE2:														
Sulco-----	0-6	44	45	5-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.5-2.0	.37	.37	5	4L	86
	6-60	44	44	8-17	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.5-1.0	.43	.43			
Mcconaughy---	0-6	44	44	7-18	1.20-1.40	0.60-2.00	0.20-0.23	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	6-24	43	43	10-18	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.5-1.0	.43	.43			
	24-60	44	44	5-18	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.0-0.5	.43	---			
SxF:														
Sulco-----	0-4	44	45	5-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.5-2.0	.37	.37	5	4L	86
	4-60	44	44	8-17	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.5-1.0	.43	.43			
Mcconaughy---	0-10	44	44	7-18	1.20-1.40	0.60-2.00	0.20-0.23	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	10-24	43	43	10-18	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.5-1.0	.43	.43			
	24-60	44	44	5-18	1.20-1.40	0.60-2.00	0.16-0.20	0.0-2.9	0.0-0.5	.43	---			
TkG:														
Tassel-----	0-7	65	27	5-12	1.50-1.75	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.24	.24	2	3	86
	7-18	65	27	5-12	1.50-1.60	2.00-6.00	0.09-0.11	0.0-2.9	0.0-0.5	.10	.20			
	18-60	---	---	---	---	0.20-0.60	---	---	---	---	---			
Ashollow-----	0-3	63	25	5-18	1.20-1.40	2.00-6.00	0.17-0.19	0.0-2.9	1.0-2.0	.37	.37	5	3	86
	3-60	63	25	5-18	1.20-1.50	2.00-6.00	0.15-0.18	0.0-2.9	0.5-1.0	.43	.43			
VaD:														
Valentine----	0-5	95	1	2-6	1.55-1.65	5.95-19.98	0.05-0.10	0.0-2.9	0.5-1.0	.15	.15	5	1	250
	5-60	94	1	2-8	1.60-1.70	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
VaE:														
Valentine----	0-4	95	1	2-6	1.55-1.65	5.95-19.98	0.05-0.10	0.0-2.9	0.5-1.0	.15	.15	5	1	250
	4-60	94	1	2-8	1.60-1.70	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
VaF:														
Valentine----	0-3	95	1	2-6	1.55-1.65	5.95-19.98	0.05-0.10	0.0-2.9	0.5-1.0	.15	.15	5	1	250
	3-60	94	1	2-8	1.60-1.70	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	0-3	95	1	2-6	1.55-1.65	5.95-19.98	0.05-0.10	0.0-2.9	0.5-1.0	.15	.15			
	3-60	94	1	2-8	1.60-1.70	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
VdB:														
Valentine----	0-6	87	7	3-10	1.55-1.65	5.95-19.98	0.07-0.12	0.0-2.9	0.5-1.0	.17	.17	5	2	134
	6-60	94	1	2-8	1.60-1.70	5.95-19.98	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
Vt:														
Vetal-----	0-8	66	20	10-18	1.25-1.40	2.00-6.00	0.11-0.17	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	8-22	61	24	12-18	1.25-1.40	2.00-6.00	0.11-0.17	0.0-2.9	0.5-2.0	.20	.20			
	22-60	62	24	10-18	1.30-1.40	2.00-6.00	0.11-0.17	0.0-2.9	0.5-2.0	.20	.20			
W:														
Water-----	---	---	---	---	---	---	---	---	---	---	---	-	---	0
WeB:														
Wildhorse----	0-8	96	1	2-7	1.60-1.90	5.95-19.98	0.03-0.10	0.0-2.9	0.5-3.0	.15	.15	5	1	220
	8-60	93	1	1-10	1.50-1.70	5.95-19.98	0.01-0.08	0.0-2.9	0.0-0.5	.15	.15			
WhB:														
Wildhorse----	0-8	96	1	2-7	1.60-1.90	5.95-19.98	0.03-0.10	0.0-2.9	0.5-3.0	.15	.15	5	1	220
	8-60	93	1	1-10	1.50-1.70	5.95-19.98	0.01-0.08	0.0-2.9	0.0-0.5	.15	.15			
Hoffland-----	0-12	67	20	5-20	1.20-1.50	2.00-6.00	0.16-0.19	0.0-2.9	4.0-12	.20	.20	3	8	0
	12-60	93	1	1-10	1.40-1.70	5.95-19.98	0.06-0.11	0.0-2.9	0.0-0.5	.15	.15			
WkB:														
Wildhorse----	0-5	96	1	2-7	1.60-1.90	5.95-19.98	0.03-0.10	0.0-2.9	0.5-3.0	.15	.15	5	1	220
	5-60	93	1	1-10	1.50-1.70	5.95-19.98	0.01-0.08	0.0-2.9	0.0-0.5	.15	.15			
Ipage-----	0-5	96	1	1-7	1.40-1.50	5.95-19.98	0.07-0.09	0.0-2.9	0.5-1.0	.15	.15	5	1	220
	5-10	95	1	1-8	1.50-1.60	5.95-19.98	0.04-0.10	0.0-2.9	0.0-0.5	.15	.15			
	10-60	95	1	1-8	1.50-1.60	5.95-19.98	0.04-0.09	0.0-2.9	0.0-0.5	.15	.15			

CHEMICAL PROPERTIES OF THE SOILS
Garden County, Nebraska

The Chemical Properties table shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils. Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. Soils having a high cation-exchange capacity can retain cations. The ability to retain cations helps to prevent the pollution of ground water.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water and can be dissolved and removed by water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

CHEMICAL PROPERTIES OF THE SOILS--Continued
Garden County, Nebraska

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
Ao:							
Alliance-----	0-8	10-20	6.6-7.8	0	0	0	0
	8-30	20-35	6.6-7.8	0	0	0	0
	30-44	10-25	7.4-8.4	1-10	0	0	0
	44-60	---	---	---	---	---	---
AoB:							
Alliance-----	0-12	10-20	6.6-7.8	0	0	0	0
	12-26	20-35	6.6-7.8	0	0	0	0
	26-34	15-30	6.6-8.4	0-10	0	0	0
	34-54	10-25	7.4-8.4	1-10	0	0	0
	54-60	---	---	---	---	---	---
Ar:							
Almeria-----	0-3	4.0-22	6.1-8.4	0-5	0	0.0-4.0	0
	3-60	1.0-8.0	5.6-7.3	0	0	0.0-4.0	0
AsF:							
Ashollow-----	0-3	3.0-15	7.4-8.4	1-5	0	0	0
	3-60	3.0-15	7.4-8.4	1-10	0	0	0
Tassel-----	0-7	5.0-10	7.4-8.4	2-10	0	0.0-2.0	0-6
	7-18	5.0-10	7.4-8.4	2-15	0	0.0-2.0	0-6
	18-60	---	---	---	---	---	---
Bh:							
Bayard-----	0-12	5.0-20	6.6-7.8	0-1	0	0	0
	12-60	5.0-20	7.4-8.4	1-10	0	0	0
BhB:							
Bayard-----	0-13	5.0-20	6.6-7.8	0-1	0	0	0
	13-60	5.0-20	7.4-8.4	1-10	0	0	0
BhC:							
Bayard-----	0-9	5.0-20	6.6-7.8	0-1	0	0	0
	9-60	5.0-20	7.4-8.4	1-10	0	0	0
BmB:							
Bayard-----	0-16	5.0-20	6.6-7.8	0-1	0	0	0
	16-60	5.0-20	7.4-8.4	1-10	0	0	0
Bn:							
Bayard-----	0-15	10-20	6.6-7.8	0-1	0	0	0
	15-60	5.0-20	7.4-8.4	1-10	0	0	0
BpB:							
Blanche-----	0-8	5.0-10	6.6-7.8	0	0	0	0
	8-32	7.0-15	6.6-8.4	0-10	0	0	0
	32-60	---	---	---	---	---	---
BrF:							
Blueridge-----	0-4	0.0-5.0	5.6-7.3	0	0	0	0
	4-60	0.0-2.0	5.6-7.3	0	0	0	0
Bw:							
Broadwater-----	0-3	2.0-10	6.6-7.8	0-10	0	0	0
	3-9	2.0-10	6.6-7.8	0-10	0	0	0
	9-60	0.0-2.0	6.6-7.8	0-10	0	0	0
BxD:							
Busher-----	0-10	5.0-15	6.1-7.8	0	0	0	0
	10-48	4.0-9.0	6.6-8.4	1-5	0	0	0
	48-60	---	---	---	---	---	---
Tassel-----	0-8	5.0-10	7.4-8.4	2-10	0	0.0-2.0	0-6
	8-11	5.0-10	7.4-8.4	2-15	0	0.0-2.0	0-6
	11-60	---	---	---	---	---	---
BxE:							
Busher-----	0-10	5.0-15	6.1-7.8	0	0	0	0
	10-44	4.0-9.0	6.6-8.4	1-5	0	0	0
	44-60	---	---	---	---	---	---
Tassel-----	0-7	5.0-10	7.4-8.4	2-10	0	0.0-2.0	0-6
	7-18	5.0-10	7.4-8.4	2-15	0	0.0-2.0	0-6
	18-60	---	---	---	---	---	---
Cw:							
Crowther-----	0-18	15-50	7.4-8.4	15-40	0	0	0
	18-27	15-30	7.9-8.4	15-40	0	0	0
	27-60	1.0-10	6.6-8.4	0-2	0	0	0
Cx:							
Crowther-----	0-18	15-50	7.4-8.4	15-40	0	0	0
	18-33	10-30	7.9-8.4	15-40	0	0	0
	33-60	1.0-10	6.6-8.4	0-2	0	0	0
DbB:							
Dailey-----	0-14	2.0-10	6.6-7.3	0	0	0	0
	14-60	0.0-5.0	6.6-8.4	0-2	0	0.0-2.0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Garden County, Nebraska

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
DdC:							
Dankworth-----	0-6	1.0-10	6.1-7.3	0	0	0	0
	6-60	1.0-2.0	6.1-7.3	0	0	0	0
Dw:							
Duroc-----	0-27	10-20	6.6-7.8	0	0	0	0
	27-32	10-25	6.6-7.8	0	0	0	0
	32-60	10-25	6.6-7.8	0-10	0	0	0
Eh:							
Els-----	0-7	0.0-5.0	7.4-8.4	1-5	0	0.0-2.0	0-6
	7-15	0.0-5.0	7.4-8.4	1-10	0	0.0-2.0	0-6
	15-60	0.0-5.0	7.4-9.0	1-10	0	0.0-2.0	0-6
EuG:							
Epping-----	0-3	5.0-15	6.6-8.4	0-10	0	0	0
	3-16	5.0-15	7.4-8.4	1-10	0	0	0
	16-60	---	---	---	---	---	---
Rock Outcrop----	0-60	---	---	---	---	0	---
Fu:							
Fluvaquents-----	0-60	1.0-20	6.6-8.4	0-5	0	0.0-2.0	0
GP:							
Pits-----	0-60	0.0-5.0	6.6-8.4	0	0	0	0
Gt:							
Gothenburg-----	0-6	0.0-10	6.6-8.4	0-5	0	0	0
	6-14	0.0-5.0	6.6-7.8	0-5	0	0	0
	14-60	0.0-5.0	6.6-7.8	0	0	0	0
Hh:							
Hoffland-----	0-10	10-35	7.9-8.4	15-40	0	0.0-2.0	0-5
	10-20	0.0-10	6.6-8.4	0-5	0	0	0
	20-60	0.0-10	6.6-7.8	0-5	0	0	0
Ho:							
Hoffland-----	0-13	10-35	7.9-8.4	15-40	0	0.0-2.0	0-5
	13-42	0.0-10	6.6-8.4	0-5	0	0	0
	42-60	0.0-10	6.6-7.8	0-5	0	0	0
INT:							
Aquolls-----	0-72	---	---	---	---	---	---
IsB:							
Ipage-----	0-5	0.0-5.0	6.6-8.4	0-5	0	0.0-2.0	0
	5-16	0.0-5.0	6.6-8.4	1-5	0	0.0-2.0	0
	16-60	0.0-5.0	7.4-9.0	1-5	0	0.0-2.0	0
Ja:							
Jankosh-----	0-4	5.0-15	7.4-8.4	1-15	0	2.0-16.0	0-9
	4-18	5.0-15	8.5-9.6	5-15	0	4.0-16.0	13-30
	18-33	5.0-15	8.5-9.6	5-15	0	4.0-16.0	13-30
	33-60	0.0-2.0	6.6-7.3	0-5	0	0.0-2.0	0-6
JeB:							
Jayem-----	0-17	4.0-10	6.6-7.8	0	0	0	0
	17-37	4.0-11	6.6-7.8	0	0	0	0
	37-60	3.0-10	6.6-7.8	0-2	0	0	0
JeC:							
Jayem-----	0-10	4.0-10	6.6-7.8	0	0	0	0
	10-18	4.0-11	6.6-7.8	0	0	0	0
	18-60	3.0-10	6.6-7.8	0-2	0	0	0
Jg:							
Jayem-----	0-9	5.0-14	6.6-7.8	0	0	0	0
	9-22	4.0-11	6.6-7.8	0	0	0	0
	22-60	3.0-10	6.6-7.8	0-2	0	0	0
JgC:							
Jayem-----	0-11	5.0-14	6.6-7.8	0	0	0	0
	11-18	4.0-11	6.6-7.8	0	0	0	0
	18-60	3.0-10	6.6-7.8	0-2	0	0	0
KeB:							
Keith-----	0-13	10-20	6.1-7.3	0	0	0	0
	13-48	15-30	6.6-7.3	0	0	0	0
	48-60	5.0-15	7.4-8.4	1-10	0	0	0
KeC:							
Keith-----	0-7	10-20	6.1-7.3	0	0	0	0
	7-28	15-30	6.6-7.3	0	0	0	0
	28-60	5.0-15	7.4-8.4	1-10	0	0	0
Ku:							
Kuma-----	0-17	10-25	6.1-7.3	0	0	0	0
	17-44	10-30	6.6-8.4	1-10	0	0	0
	44-60	5.0-20	7.9-9.0	1-10	0-2	0.0-2.0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
 Garden County, Nebraska

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
		meq/100g	pH	Pct	Pct	mmhos/cm	
Lc:							
Lemoyne-----	0-6	1.0-6.0	6.6-7.8	0-5	0	0.0-2.0	0-6
	6-18	1.0-6.0	6.6-7.8	0-5	0	0.0-2.0	0-6
	18-36	10-30	7.9-9.0	1-10	0	0.0-4.0	0-6
	36-54	10-30	7.9-9.0	15-40	0	0.0-4.0	6-13
	54-60	0.0-4.0	7.9-9.0	1-10	0	0.0-4.0	3-9
Lb:							
Lewellen-----	0-4	10-30	7.9-9.0	15-20	0	2.0-16.0	14-54
	4-8	10-25	7.9-9.0	15-20	0	2.0-16.0	14-54
	8-12	5.0-20	7.9-9.0	1-10	0	2.0-16.0	14-54
	12-29	1.0-4.0	7.9-9.0	0-5	0	2.0-16.0	5-22
	29-60	0.0-2.0	6.1-7.3	0	0	0	0-5
Lc:							
Lewellen-----	0-4	10-30	7.9-9.0	15-20	0	2.0-16.0	14-54
	4-11	10-25	7.9-9.0	15-20	0	2.0-16.0	14-54
	11-14	5.0-20	7.9-9.0	1-10	0	2.0-16.0	14-54
	14-30	1.0-4.0	7.9-9.0	0-5	0	2.0-16.0	5-22
	30-60	0.0-2.0	6.1-7.3	0	0	0	0-5
Mcculigan-----	0-7	10-30	7.9-8.4	1-5	0	0.0-4.0	0-6
	7-12	5.0-20	7.9-8.4	1-10	0	0.0-4.0	6-13
	12-18	0.0-5.0	7.9-8.4	0-5	0	0.0-4.0	6-13
	18-60	0.0-2.0	6.6-7.8	0	0	0.0-2.0	0
Lf:							
Lodgepole-----	0-5	15-25	6.1-7.8	0	0	0	0
	5-32	25-40	6.1-7.8	0	0	0	0
	32-60	5.0-20	6.6-8.4	0-5	0	0	0
M-W:							
Miscellaneous Water-----	---	---	---	---	---	---	---
Ma:							
Marlake-----	0-6	10-25	6.6-8.4	0-5	0	0	0
	6-16	0.0-10	6.6-8.4	0-5	0	0	0
	16-60	0.0-5.0	6.6-8.4	0-5	0	0	0
Mc:							
Marlake-----	0-16	25-85	5.6-7.3	0	0	0	0
	16-80	0.0-5.0	6.1-7.3	0	0	0	0
MtC:							
Mitchell-----	0-7	10-30	7.4-8.4	1-10	0	0	0
	7-60	10-30	7.4-8.4	1-15	0	0	0
MtD:							
Mitchell-----	0-5	10-30	7.4-8.4	1-10	0	0	0
	5-60	10-30	7.4-8.4	1-15	0	0	0
MxF:							
Mitchell-----	0-8	10-30	7.4-8.4	1-10	0	0	0
	8-60	10-30	7.4-8.4	1-15	0	0	0
Epping-----	0-5	5.0-15	7.4-8.4	0-10	0	0	0
	5-8	5.0-15	7.4-8.4	1-10	0	0	0
	8-11	10-20	7.4-8.4	1-10	0	0	0
	11-60	---	---	---	---	---	---
Ru:							
Rushcreek-----	0-11	5.0-25	7.4-8.4	1-5	0	0.0-4.0	0-9
	11-34	5.0-25	7.4-8.4	1-10	0	0.0-4.0	9-13
	34-56	5.0-20	7.4-8.4	1-15	0	0.0-4.0	6-13
	56-60	0.0-2.0	6.6-7.8	0-5	0	0	0
SaB:							
Sarben-----	0-7	3.0-10	6.1-7.3	0	0	0	0
	7-15	7.0-15	6.1-7.3	0	0	0	0
	15-60	5.0-15	6.6-7.8	0-5	0	0	0
SaC:							
Sarben-----	0-7	3.0-10	6.1-7.3	0	0	0	0
	7-15	7.0-15	6.1-7.3	0	0	0	0
	15-60	5.0-15	6.6-7.8	0-5	0	0	0
SaD:							
Sarben-----	0-5	3.0-10	6.1-7.3	0	0	0	0
	5-15	7.0-15	6.1-7.3	0	0	0	0
	15-60	5.0-15	6.6-7.8	0-5	0	0	0
SaE:							
Sarben-----	0-10	3.0-10	6.1-7.3	0	0	0	0
	10-15	7.0-15	6.1-7.3	0	0	0	0
	15-60	5.0-15	6.6-7.8	0-5	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Garden County, Nebraska

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
Sc:							
Scoville-----	0-6	5.0-10	6.1-7.8	0-1	0	0	0
	6-42	5.0-10	6.6-7.8	0-1	0	0	0
	42-60	10-15	7.4-8.4	1-5	0	0	0
SnC:							
Sidney-----	0-11	5.0-20	6.6-7.8	0	0	0	0
	11-29	2.0-15	7.4-8.4	1-10	0	0	0
	29-48	2.0-15	7.4-9.0	10-20	0	0	0
	48-60	---	---	---	---	---	---
StD:							
Sidney-----	0-9	5.0-20	7.4-8.4	1-10	0	0	0
	9-30	2.0-15	7.4-8.4	1-15	0	0	0
	30-44	2.0-15	7.4-9.0	1-15	0	0.0-4.0	0-9
	44-60	---	---	---	---	---	---
Canyon-----	0-5	5.0-16	7.4-8.4	1-10	0	0.0-2.0	0
	5-10	10-20	7.4-8.4	1-10	0	0.0-2.0	0
	10-60	---	---	---	---	---	---
SuG:							
Sulco-----	0-3	10-25	7.4-8.4	1-5	0	0	0
	3-60	10-15	7.4-9.0	5-15	0	0.0-4.0	0-9
SxC2:							
Sulco-----	0-5	10-25	7.4-8.4	1-5	0	0	0
	5-60	10-15	7.4-9.0	5-15	0	0.0-4.0	0-9
Mcconaughey-----	0-7	5.0-20	6.6-7.8	0-5	0	0	0
	7-28	5.0-15	7.4-8.4	1-5	0	0	0
	28-60	5.0-15	7.9-9.0	1-5	0	0	0
SxD2:							
Sulco-----	0-5	10-25	7.4-8.4	1-5	0	0	0
	5-60	10-15	7.4-9.0	5-15	0	0.0-4.0	0-9
Mcconaughey-----	0-6	5.0-20	6.6-7.8	0-5	0	0	0
	6-21	5.0-15	7.4-8.4	1-5	0	0	0
	21-60	5.0-15	7.9-9.0	1-5	0	0	0
SxE2:							
Sulco-----	0-6	10-25	7.4-8.4	1-5	0	0	0
	6-60	10-15	7.4-9.0	5-15	0	0.0-4.0	0-9
Mcconaughey-----	0-6	5.0-20	6.6-7.8	0-5	0	0	0
	6-24	5.0-15	7.4-8.4	1-5	0	0	0
	24-60	5.0-15	7.9-9.0	1-5	0	0	0
SxF:							
Sulco-----	0-4	10-25	7.4-8.4	1-5	0	0	0
	4-60	10-15	7.4-9.0	5-15	0	0.0-4.0	0-9
Mcconaughey-----	0-10	5.0-20	6.6-7.8	0-5	0	0	0
	10-24	5.0-15	7.4-8.4	1-5	0	0	0
	24-60	5.0-15	7.9-9.0	1-5	0	0	0
TkG:							
Tassel-----	0-7	5.0-10	7.4-8.4	2-10	0	0.0-2.0	0-6
	7-18	5.0-10	7.4-8.4	2-15	0	0.0-2.0	0-6
	18-60	---	---	---	---	---	---
Ashollow-----	0-3	3.0-15	7.4-8.4	1-5	0	0	0
	3-60	3.0-15	7.4-8.4	1-10	0	0	0
VaD:							
Valentine-----	0-5	0.0-5.0	6.6-7.8	0	0	0	0
	5-60	0.0-5.0	6.6-7.8	0	0	0	0
VaE:							
Valentine-----	0-4	0.0-5.0	6.6-7.8	0	0	0	0
	4-60	0.0-5.0	6.6-7.8	0	0	0	0
VaF:							
Valentine-----	0-3	0.0-5.0	6.6-7.8	0	0	0	0
	3-60	0.0-5.0	6.6-7.8	0	0	0	0
Valentine-----	0-3	0.0-5.0	6.6-7.8	0	0	0	0
	3-60	0.0-5.0	6.6-7.8	0	0	0	0
VdB:							
Valentine-----	0-6	3.0-10	6.6-7.8	0	0	0	0
	6-60	0.0-5.0	6.6-7.8	0	0	0	0
Vt:							
Vetal-----	0-8	10-22	5.6-7.8	0	0	0	0
	8-22	10-22	6.1-7.8	0	0	0	0
	22-60	9.0-19	6.1-8.4	0-5	0	0	0
W:							
Water-----	---	---	---	---	---	---	---

CHEMICAL PROPERTIES OF THE SOILS--Continued
Garden County, Nebraska

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
WeB:							
Wildhorse-----	0-8	1.0-10	8.5-9.9	1-5	0	0.0-8.0	6-105
	8-60	1.0-10	8.5-9.6	1-10	0	0.0-4.0	6-80
WhB:							
Wildhorse-----	0-8	1.0-10	8.5-9.9	1-5	0	0.0-8.0	6-105
	8-60	1.0-10	8.5-9.6	1-10	0	0.0-4.0	6-80
Hoffland-----	0-12	10-35	7.9-8.4	15-40	0	0.0-2.0	0-5
	12-60	0.0-10	6.6-7.8	0-5	0	0	0
WkB:							
Wildhorse-----	0-5	1.0-10	8.5-9.9	1-5	0	0.0-8.0	6-105
	5-60	1.0-10	8.5-9.6	1-10	0	0.0-4.0	6-80
Ipage-----	0-5	0.0-5.0	7.4-8.4	0-5	0	0.0-2.0	0
	5-10	0.0-5.0	7.4-8.4	1-5	0	0.0-2.0	0
	10-60	0.0-5.0	7.4-9.0	1-5	0	0.0-2.0	0

WATER FEATURES
Garden County, Nebraska

The Water Features table gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The months in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The Water Features table indicates, by month, depth to the top (upper limit) and base (lower limit) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The Water Features table indicates surface water depth and the duration and frequency of ponding. Duration is expressed as very brief if less than 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. None means that ponding is not probable; rare that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); occasional that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and frequent that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding, the temporary inundation of an area, is caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and frequency are estimated. Duration is expressed as extremely brief if 0.1 hour to 4 hours, very brief if 4 hours to 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. None means that flooding is not probable; very rare that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); rare that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); occasional that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); frequent that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and very frequent that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Ao: Alliance-----	B		---	---	---	---	---	---	---
AoB: Alliance-----	B		---	---	---	---	---	---	---
Ar: Almeria-----	D		---	---	---	---	---	---	---
		January	0.0-1.5	>6.0	---	---	---	---	None
		February	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		March	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		April	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		May	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		June	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		July	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		August	0.0-1.5	>6.0	---	---	---	---	None
		September	0.0-1.5	>6.0	---	---	---	---	None
		October	0.0-1.5	>6.0	---	---	---	---	None
		November	0.0-1.5	>6.0	---	---	---	---	None
		December	0.0-1.5	>6.0	---	---	---	---	None
AsF: Ashollow-----	B		---	---	---	---	---	---	---
Tassel-----	D		---	---	---	---	---	---	---
Bh: Bayard-----	B		---	---	---	---	---	---	---
BhB: Bayard-----	B		---	---	---	---	---	---	---
BhC: Bayard-----	B		---	---	---	---	---	---	---
BmB: Bayard-----	B		---	---	---	---	---	---	---
Bn: Bayard-----	B		---	---	---	---	---	---	---
BpB: Blanche-----	B		---	---	---	---	---	---	---
BrF: Blueridge-----	A		---	---	---	---	---	---	---
Bw: Broadwater-----	A		---	---	---	---	---	---	---
		March	---	---	---	---	---	Very brief	Frequent
		April	---	---	---	---	---	Very brief	Frequent
		May	---	---	---	---	---	Very brief	Frequent
		June	---	---	---	---	---	Very brief	Frequent
		July	---	---	---	---	---	Very brief	Frequent
		August	---	---	---	---	---	Very brief	Frequent
BxD: Busher-----	B		---	---	---	---	---	---	---
Tassel-----	D		---	---	---	---	---	---	---
BxE: Busher-----	B		---	---	---	---	---	---	---
Tassel-----	D		---	---	---	---	---	---	---
Cw: Crowther-----	D		---	---	---	---	---	---	---
		January	0.0-1.5	>6.0	---	---	---	---	None
		February	0.0-1.5	>6.0	---	---	---	---	None
		March	0.0-1.5	>6.0	---	---	---	---	None
		April	0.0-1.5	>6.0	---	---	---	---	None
		May	0.0-1.5	>6.0	---	---	---	---	None
		June	0.0-1.5	>6.0	---	---	---	---	None
		July	0.0-1.5	>6.0	---	---	---	---	None
		August	0.0-1.5	>6.0	---	---	---	---	None
		September	0.0-1.5	>6.0	---	---	---	---	None
		October	0.0-1.5	>6.0	---	---	---	---	None
		November	0.0-1.5	>6.0	---	---	---	---	None
		December	0.0-1.5	>6.0	---	---	---	---	None
Cx:									

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Crowther-----	D	January	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		February	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		March	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		April	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		May	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		June	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		July	0.0-1.0	>6.0	---	---	---	---	None
		August	0.0-1.0	>6.0	---	---	---	---	None
		September	0.0-1.0	>6.0	---	---	---	---	None
		October	0.0-1.0	>6.0	---	---	---	---	None
		November	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		December	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
DbB: Dailey-----	A		---	---	---	---	---	---	
DdC: Dankworth-----	A		---	---	---	---	---	---	
Dw: Duroc-----	B		---	---	---	---	---	---	
Eh: Els-----	A	January	1.5-3.0	>6.0	---	---	---	None	
		February	1.5-3.0	>6.0	---	---	---	None	
		March	1.5-3.0	>6.0	---	---	---	None	
		April	1.5-3.0	>6.0	---	---	---	None	
		May	1.5-3.0	>6.0	---	---	---	None	
		June	1.5-3.0	>6.0	---	---	---	None	
		July	1.5-3.0	>6.0	---	---	---	None	
		August	1.5-3.0	>6.0	---	---	---	None	
		September	1.5-3.0	>6.0	---	---	---	None	
		October	1.5-3.0	>6.0	---	---	---	None	
		November	1.5-3.0	>6.0	---	---	---	None	
		December	1.5-3.0	>6.0	---	---	---	None	
EuG: Epping-----	D		---	---	---	---	---	---	
Rock Outcrop-----	D		---	---	---	---	---	---	
Fu: Fluvaquents-----	D	January	0.0-1.0	>6.0	0.0-2.0	Very long	---	Very long	Frequent
		February	0.0-1.0	>6.0	0.0-2.0	Very long	---	Very long	Frequent
		March	0.0-1.0	>6.0	0.0-2.0	Very long	---	Very long	Frequent
		April	0.0-1.0	>6.0	0.0-2.0	Very long	---	Very long	Frequent
		May	0.0-1.0	>6.0	0.0-2.0	Very long	---	Very long	Frequent
		June	0.0-1.0	>6.0	0.0-2.0	Very long	---	Very long	Frequent
		July	0.0-1.0	>6.0	---	---	---	---	None
		August	0.0-1.0	>6.0	---	---	---	---	None
		September	0.0-1.0	>6.0	---	---	---	---	None
		October	0.0-1.0	>6.0	---	---	---	---	None
		November	0.0-1.0	>6.0	0.0-2.0	Very long	---	Very long	Frequent
		December	0.0-1.0	>6.0	0.0-2.0	Very long	---	Very long	Frequent
GP: Pits-----	A		---	---	---	---	---	---	
Gt: Gothenburg-----	D	January	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		February	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		March	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		April	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		May	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		June	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		July	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		August	0.0-1.5	>6.0	---	---	---	---	None
		September	0.0-1.5	>6.0	---	---	---	---	None
		October	0.0-1.5	>6.0	---	---	---	---	None
		November	0.0-1.5	>6.0	---	---	---	---	None
		December	0.0-1.5	>6.0	---	---	---	Brief	Frequent
Hh:									

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro-logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Hoffland-----	D	January	0.0-1.5	>6.0	---	---	---	---	None
		February	0.0-1.5	>6.0	---	---	---	---	None
		March	0.0-1.5	>6.0	---	---	---	---	None
		April	0.0-1.5	>6.0	---	---	---	---	None
		May	0.0-1.5	>6.0	---	---	---	---	None
		June	0.0-1.5	>6.0	---	---	---	---	None
		July	0.0-1.5	>6.0	---	---	---	---	None
		August	0.0-1.5	>6.0	---	---	---	---	None
		September	0.0-1.5	>6.0	---	---	---	---	None
		October	0.0-1.5	>6.0	---	---	---	---	None
		November	0.0-1.5	>6.0	---	---	---	---	None
		December	0.0-1.5	>6.0	---	---	---	---	None
Ho: Hoffland-----	D	January	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		February	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		March	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		April	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		May	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		June	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		July	0.0-1.0	>6.0	---	---	---	---	None
		August	0.0-1.0	>6.0	---	---	---	---	None
		September	0.0-1.0	>6.0	---	---	---	---	None
		October	0.0-1.0	>6.0	---	---	---	---	None
		November	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
		December	0.0-1.0	>6.0	0.0-0.5	Long	---	---	None
INT: Aguolls-----	C	March	0.0	>6.0	0.0-0.8	Brief	Occasional	---	None
		April	0.0	>6.0	0.0-0.8	Brief	Occasional	---	None
		May	0.0	>6.0	0.0-0.8	Brief	Occasional	---	None
		June	0.0	>6.0	0.0-0.8	Brief	Occasional	---	None
IsB: Ipage-----	A	January	3.0-5.0	>6.0	---	---	---	---	None
		February	3.0-5.0	>6.0	---	---	---	---	None
		March	3.0-5.0	>6.0	---	---	---	---	None
		April	3.0-5.0	>6.0	---	---	---	---	None
		May	3.0-5.0	>6.0	---	---	---	---	None
		June	3.0-5.0	>6.0	---	---	---	---	None
		July	3.0-5.0	>6.0	---	---	---	---	None
		August	3.0-5.0	>6.0	---	---	---	---	None
		September	3.0-5.0	>6.0	---	---	---	---	None
		October	3.0-5.0	>6.0	---	---	---	---	None
		November	3.0-5.0	>6.0	---	---	---	---	None
		December	3.0-5.0	>6.0	---	---	---	---	None
Ja: Jankosh-----	C	January	1.5-3.0	>6.0	---	---	---	---	None
		February	1.5-3.0	>6.0	---	---	---	---	None
		March	1.5-3.0	>6.0	---	---	---	---	None
		April	1.5-3.0	>6.0	---	---	---	---	None
		May	1.5-3.0	>6.0	---	---	---	---	None
		June	1.5-3.0	>6.0	---	---	---	---	None
		July	1.5-3.0	>6.0	---	---	---	---	None
		August	1.5-3.0	>6.0	---	---	---	---	None
		September	1.5-3.0	>6.0	---	---	---	---	None
		October	1.5-3.0	>6.0	---	---	---	---	None
		November	1.5-3.0	>6.0	---	---	---	---	None
		December	1.5-3.0	>6.0	---	---	---	---	None
JeB: Jayem-----	B								
JeC: Jayem-----	B								
Jg: Jayem-----	B								
JgC: Jayem-----	B								
KeB: Keith-----	B								
KeC: Keith-----	B								
Ku: Kuma-----	B								
La:									

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro-logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Lemoyne-----	B	January	3.0-6.0	>6.0	---	---	---	Brief	Rare
		February	3.0-6.0	>6.0	---	---	---	Brief	Rare
		March	3.0-6.0	>6.0	---	---	---	Brief	Rare
		April	3.0-6.0	>6.0	---	---	---	Brief	Rare
		May	3.0-6.0	>6.0	---	---	---	Brief	Rare
		June	3.0-6.0	>6.0	---	---	---	---	None
		July	3.0-6.0	>6.0	---	---	---	---	None
		August	3.0-6.0	>6.0	---	---	---	---	None
		September	3.0-6.0	>6.0	---	---	---	---	None
		October	3.0-6.0	>6.0	---	---	---	---	None
		November	3.0-6.0	>6.0	---	---	---	---	None
		December	3.0-6.0	>6.0	---	---	---	Brief	Rare
Lb: Lewellen-----	B	January	1.5-3.0	>6.0	---	---	---	Brief	Rare
February		1.5-3.0	>6.0	---	---	---	Brief	Rare	
March		1.5-3.0	>6.0	---	---	---	Brief	Rare	
April		1.5-3.0	>6.0	---	---	---	Brief	Rare	
May		1.5-3.0	>6.0	---	---	---	Brief	Rare	
June		1.5-3.0	>6.0	---	---	---	---	None	
July		1.5-3.0	>6.0	---	---	---	---	None	
August		1.5-3.0	>6.0	---	---	---	---	None	
September		1.5-3.0	>6.0	---	---	---	---	None	
October		1.5-3.0	>6.0	---	---	---	---	None	
November		1.5-3.0	>6.0	---	---	---	---	None	
December		1.5-3.0	>6.0	---	---	---	Brief	Rare	
Lc: Lewellen-----	B	January	1.5-3.0	>6.0	---	---	---	Brief	Rare
February		1.5-3.0	>6.0	---	---	---	Brief	Rare	
March		1.5-3.0	>6.0	---	---	---	Brief	Rare	
April		1.5-3.0	>6.0	---	---	---	Brief	Rare	
May		1.5-3.0	>6.0	---	---	---	Brief	Rare	
June		1.5-3.0	>6.0	---	---	---	---	None	
July		1.5-3.0	>6.0	---	---	---	---	None	
August		1.5-3.0	>6.0	---	---	---	---	None	
September		1.5-3.0	>6.0	---	---	---	---	None	
October		1.5-3.0	>6.0	---	---	---	---	None	
November		1.5-3.0	>6.0	---	---	---	---	None	
December		1.5-3.0	>6.0	---	---	---	Brief	Rare	
Mcculigan-----	D	January	0.0-1.5	>6.0	---	---	---	---	None
		February	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		March	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		April	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		May	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		June	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		July	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		August	0.0-1.5	>6.0	---	---	---	---	None
		September	0.0-1.5	>6.0	---	---	---	---	None
		October	0.0-1.5	>6.0	---	---	---	---	None
		November	0.0-1.5	>6.0	---	---	---	---	None
		December	0.0-1.5	>6.0	---	---	---	---	None
Lf: Lodgepole-----	D	January	0.0-1.0	1.0-2.0	---	---	---	---	None
February		0.0-1.0	1.0-2.0	---	---	---	---	---	None
March		0.0-1.0	1.0-2.0	---	---	---	---	---	None
April		0.0-1.0	1.0-2.0	---	---	---	---	---	None
May		0.0-1.0	1.0-2.0	---	---	---	---	---	None
June		0.0-1.0	1.0-2.0	0.0-1.0	Brief	---	---	---	None
July		0.0-1.0	1.0-2.0	0.0-1.0	Brief	---	---	---	None
August		0.0-1.0	1.0-2.0	0.0-1.0	Brief	---	---	---	None
September		0.0-1.0	1.0-2.0	0.0-1.0	Brief	---	---	---	None
October		0.0-1.0	1.0-2.0	0.0-1.0	Brief	---	---	---	None
November		0.0-1.0	1.0-2.0	---	---	---	---	---	None
December		0.0-1.0	1.0-2.0	---	---	---	---	---	None
Ma: Marlake-----	D	January	0.0	>6.0	0.0-2.0	Very long	---	---	None
February		0.0	>6.0	0.0-2.0	Very long	---	---	---	None
March		0.0	>6.0	0.0-2.0	Very long	---	---	---	None
April		0.0	>6.0	0.0-2.0	Very long	---	---	---	None
May		0.0	>6.0	0.0-2.0	Very long	---	---	---	None
June		0.0	>6.0	0.0-2.0	Very long	---	---	---	None
July		0.0	>6.0	0.0-2.0	Very long	---	---	---	None
August		0.0	>6.0	0.0-2.0	Very long	---	---	---	None
September		0.0	>6.0	0.0-2.0	Very long	---	---	---	None
October		0.0	>6.0	0.0-2.0	Very long	---	---	---	None
November		0.0	>6.0	0.0-2.0	Very long	---	---	---	None
December		0.0	>6.0	0.0-2.0	Very long	---	---	---	None
Mc:									

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Marlake-----	D	January	0.0	>6.0	0.0-2.0	Very long	---	---	None
		February	0.0	>6.0	0.0-2.0	Very long	---	---	None
		March	0.0	>6.0	0.0-2.0	Very long	---	---	None
		April	0.0	>6.0	0.0-2.0	Very long	---	---	None
		May	0.0	>6.0	0.0-2.0	Very long	---	---	None
		June	0.0	>6.0	0.0-2.0	Very long	---	---	None
		July	0.0	>6.0	0.0-2.0	Very long	---	---	None
		August	0.0	>6.0	0.0-2.0	Very long	---	---	None
		September	0.0	>6.0	0.0-2.0	Very long	---	---	None
		October	0.0	>6.0	0.0-2.0	Very long	---	---	None
		November	0.0	>6.0	0.0-2.0	Very long	---	---	None
		December	0.0	>6.0	0.0-2.0	Very long	---	---	None
MtC: Mitchell-----	B		---	---	---	---	---	---	---
MtD: Mitchell-----	B		---	---	---	---	---	---	---
MxF: Mitchell-----	B		---	---	---	---	---	---	---
Epping-----	D		---	---	---	---	---	---	---
Ru: Rushcreek-----	B	January	3.0-6.0	>6.0	---	---	---	Extremely brief	Rare
		February	3.0-6.0	>6.0	---	---	---	Extremely brief	Rare
		March	3.0-6.0	>6.0	---	---	---	Extremely brief	Rare
		April	3.0-6.0	>6.0	---	---	---	Extremely brief	Rare
		May	3.0-6.0	>6.0	---	---	---	---	None
		June	3.0-6.0	>6.0	---	---	---	---	None
		July	3.0-6.0	>6.0	---	---	---	---	None
		August	3.0-6.0	>6.0	---	---	---	---	None
		September	3.0-6.0	>6.0	---	---	---	---	None
		October	3.0-6.0	>6.0	---	---	---	---	None
		November	3.0-6.0	>6.0	---	---	---	Extremely brief	Rare
		December	3.0-6.0	>6.0	---	---	---	Extremely brief	Rare
SaB: Sarben-----	B		---	---	---	---	---	---	---
SaC: Sarben-----	B		---	---	---	---	---	---	---
SaD: Sarben-----	B		---	---	---	---	---	---	---
SaE: Sarben-----	B		---	---	---	---	---	---	---
Sc: Scoville-----	A		---	---	---	---	---	---	---
SnC: Sidney-----	B		---	---	---	---	---	---	---
StD: Sidney-----	B		---	---	---	---	---	---	---
Canyon-----	D		---	---	---	---	---	---	---
SuG: Sulco-----	B		---	---	---	---	---	---	---
SxC2: Sulco-----	B		---	---	---	---	---	---	---
Mcconaughy-----	B		---	---	---	---	---	---	---
SxD2: Sulco-----	B		---	---	---	---	---	---	---
Mcconaughy-----	B		---	---	---	---	---	---	---
SxE2: Sulco-----	B		---	---	---	---	---	---	---
Mcconaughy-----	B		---	---	---	---	---	---	---

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
SxF: Sulco-----	B		---	---	---	---	---	---	---
Mcconaughey-----	B		---	---	---	---	---	---	---
TkG: Tassel-----	D		---	---	---	---	---	---	---
Ashollow-----	B		---	---	---	---	---	---	---
VaD: Valentine-----	A		---	---	---	---	---	---	---
VaE: Valentine-----	A		---	---	---	---	---	---	---
VaF: Valentine-----	A		---	---	---	---	---	---	---
Valentine-----	A		---	---	---	---	---	---	---
VdB: Valentine-----	A		---	---	---	---	---	---	---
Vt: Vetal-----	B		---	---	---	---	---	---	---
W: Water-----	---		---	---	---	---	---	---	---
WeB: Wildhorse-----	A	January	1.5-3.5	>6.0	---	---	---	---	None
		February	1.5-3.5	>6.0	---	---	---	---	None
		March	1.5-3.5	>6.0	---	---	---	---	None
		April	1.5-3.5	>6.0	---	---	---	---	None
		May	1.5-3.5	>6.0	---	---	---	---	None
		June	1.5-3.5	>6.0	---	---	---	---	None
		July	1.5-3.5	>6.0	---	---	---	---	None
		August	1.5-3.5	>6.0	---	---	---	---	None
		September	1.5-3.5	>6.0	---	---	---	---	None
		October	1.5-3.5	>6.0	---	---	---	---	None
		November	1.5-3.5	>6.0	---	---	---	---	None
		December	1.5-3.5	>6.0	---	---	---	---	None
WhB: Wildhorse-----	A	January	1.5-3.5	>6.0	---	---	---	---	None
		February	1.5-3.5	>6.0	---	---	---	---	None
		March	1.5-3.5	>6.0	---	---	---	---	None
		April	1.5-3.5	>6.0	---	---	---	---	None
		May	1.5-3.5	>6.0	---	---	---	---	None
		June	1.5-3.5	>6.0	---	---	---	---	None
		July	1.5-3.5	>6.0	---	---	---	---	None
		August	1.5-3.5	>6.0	---	---	---	---	None
		September	1.5-3.5	>6.0	---	---	---	---	None
		October	1.5-3.5	>6.0	---	---	---	---	None
		November	1.5-3.5	>6.0	---	---	---	---	None
		December	1.5-3.5	>6.0	---	---	---	---	None
Hoffland-----	D	January	0.0-1.5	>6.0	---	---	---	---	None
		February	0.0-1.5	>6.0	---	---	---	---	None
		March	0.0-1.5	>6.0	---	---	---	---	None
		April	0.0-1.5	>6.0	---	---	---	---	None
		May	0.0-1.5	>6.0	---	---	---	---	None
		June	0.0-1.5	>6.0	---	---	---	---	None
		July	0.0-1.5	>6.0	---	---	---	---	None
		August	0.0-1.5	>6.0	---	---	---	---	None
		September	0.0-1.5	>6.0	---	---	---	---	None
		October	0.0-1.5	>6.0	---	---	---	---	None
		November	0.0-1.5	>6.0	---	---	---	---	None
		December	0.0-1.5	>6.0	---	---	---	---	None
WkB:									

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Wildhorse-----	A	January	1.5-3.5	>6.0	---	---	---	---	None
		February	1.5-3.5	>6.0	---	---	---	---	None
		March	1.5-3.5	>6.0	---	---	---	---	None
		April	1.5-3.5	>6.0	---	---	---	---	None
		May	1.5-3.5	>6.0	---	---	---	---	None
		June	1.5-3.5	>6.0	---	---	---	---	None
		July	1.5-3.5	>6.0	---	---	---	---	None
		August	1.5-3.5	>6.0	---	---	---	---	None
		September	1.5-3.5	>6.0	---	---	---	---	None
		October	1.5-3.5	>6.0	---	---	---	---	None
		November	1.5-3.5	>6.0	---	---	---	---	None
		December	1.5-3.5	>6.0	---	---	---	---	None
Ipage-----	A	January	3.0-5.0	>6.0	---	---	---	---	None
		February	3.0-5.0	>6.0	---	---	---	---	None
		March	3.0-5.0	>6.0	---	---	---	---	None
		April	3.0-5.0	>6.0	---	---	---	---	None
		May	3.0-5.0	>6.0	---	---	---	---	None
		June	3.0-5.0	>6.0	---	---	---	---	None
		July	3.0-5.0	>6.0	---	---	---	---	None
		August	3.0-5.0	>6.0	---	---	---	---	None
		September	3.0-5.0	>6.0	---	---	---	---	None
		October	3.0-5.0	>6.0	---	---	---	---	None
		November	3.0-5.0	>6.0	---	---	---	---	None
		December	3.0-5.0	>6.0	---	---	---	---	None

The following table gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A restrictive layer is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. Depth to top is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as low, moderate, or high, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as low, moderate, or high. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
		In	In				
Ao: Alliance-----	40-60	Bedrock (paralithic)	---	---	Moderate	Moderate	Low
AoB: Alliance-----	40-60	Bedrock (paralithic)	---	---	Moderate	Moderate	Low
Ar: Almeria-----	---	---	---	---	Moderate	High	Low
AsF: Ashollow-----	---	---	---	---	Low	Low	Low
Tassel-----	6-20	Bedrock (paralithic)	---	---	Low	High	Low
Bh: Bayard-----	---	---	---	---	Moderate	Low	Low
BhB: Bayard-----	---	---	---	---	Moderate	Low	Low
BhC: Bayard-----	---	---	---	---	Moderate	Low	Low
BmB: Bayard-----	---	---	---	---	Moderate	Low	Low
Bn: Bayard-----	---	---	---	---	Moderate	Low	Low
BpB: Blanche-----	20-40	Bedrock (paralithic)	---	---	Low	Low	Low
BrF: Blueridge-----	---	---	---	---	Low	Low	Low
Bw: Broadwater-----	---	---	---	---	Low	Low	Low
BxD: Busher-----	40-60	Bedrock (paralithic)	---	---	Low	Low	Low
Tassel-----	6-20	Bedrock (paralithic)	---	---	Low	High	Low
BxE: Busher-----	40-60	Bedrock (paralithic)	---	---	Low	Low	Low
Tassel-----	6-20	Bedrock (paralithic)	---	---	Low	High	Low
Cw: Crowther-----	---	---	---	---	Moderate	High	Low
Cx: Crowther-----	---	---	---	---	Moderate	High	Low
DbB: Dailey-----	---	---	---	---	Low	High	Low
DdC: Dankworth-----	---	---	---	---	Low	Low	Low
Dw: Duroc-----	---	---	---	---	Low	Low	Low
Eh: Els-----	---	---	---	---	Moderate	Moderate	Moderate
EuG: Epping-----	10-20	Bedrock (paralithic)	---	---	Low	Low	Low
Rock Outcrop----	0-0	Bedrock (paralithic)	---	---	None	---	---
Fu: Fluvaquents-----	---	---	---	---	Moderate	High	Low
GP: Pits-----	---	---	---	---	Low	Low	Low
Gt: Gothenburg-----	---	---	---	---	Moderate	Moderate	Low
Hh: Hoffland-----	---	---	---	---	Moderate	High	Low
Ho: Hoffland-----	---	---	---	---	Moderate	High	Low
INT: Aguolls-----	---	---	---	---	Low	---	---
IsB: Ipage-----	---	---	---	---	Moderate	Low	Moderate
Ja: Jankosh-----	---	---	---	---	Moderate	High	High
JeB: Jayem-----	---	---	---	---	Low	Moderate	Low
JeC: Jayem-----	---	---	---	---	Low	Moderate	Low
Jg: Jayem-----	---	---	---	---	Low	Moderate	Low
JgC: Jayem-----	---	---	---	---	Low	Moderate	Low
KeB: Keith-----	---	---	---	---	Moderate	Moderate	Low
KeC: Keith-----	---	---	---	---	Moderate	Moderate	Low
Ku: Kuma-----	---	---	---	---	Moderate	High	Moderate

SOIL FEATURES--Continued
Garden County, Nebraska

Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
		In	In				
La:							
Lemoyne-----	---	---	---	---	Low	Moderate	Low
Lb:							
Lewellen-----	---	---	---	---	Moderate	High	Low
Lc:							
Lewellen-----	---	---	---	---	Moderate	High	Low
Mcculigan-----	---	---	---	---	Moderate	High	Low
Lf:							
Lodgepole-----	---	---	---	---	High	High	Low
M-W:							
Miscellaneous Water-----	---	---	---	---	---	---	---
Ma:							
Marlake-----	---	---	---	---	Moderate	High	Low
Mc:							
Marlake-----	---	---	---	---	Moderate	Moderate	Moderate
MtC:							
Mitchell-----	---	---	---	---	Low	Low	Low
MtD:							
Mitchell-----	---	---	---	---	Low	Low	Low
MxF:							
Mitchell-----	---	---	---	---	Low	Low	Low
Epping-----	10-20	Bedrock (paralithic)	---	---	Low	Low	Low
Ru:							
Rushcreek-----	---	---	---	---	Moderate	High	Low
SaB:							
Sarben-----	---	---	---	---	Low	High	Low
SaC:							
Sarben-----	---	---	---	---	Low	High	Low
SaD:							
Sarben-----	---	---	---	---	Low	High	Low
SaE:							
Sarben-----	---	---	---	---	Low	High	Low
Sc:							
Scoville-----	---	---	---	---	Low	High	Low
SnC:							
Sidney-----	40-60	Bedrock (paralithic)	---	---	Moderate	High	Low
StD:							
Sidney-----	40-60	Bedrock (paralithic)	---	---	Moderate	High	Low
Canyon-----	6-20	Bedrock (paralithic)	---	---	Low	Low	Low
SuG:							
Sulco-----	---	---	---	---	Low	High	Low
SxC2:							
Sulco-----	---	---	---	---	Low	High	Low
Mcconaughy-----	---	---	---	---	Moderate	High	Moderate
SxD2:							
Sulco-----	---	---	---	---	Low	High	Low
Mcconaughy-----	---	---	---	---	Moderate	High	Moderate
SxE2:							
Sulco-----	---	---	---	---	Low	High	Low
Mcconaughy-----	---	---	---	---	Moderate	High	Moderate
SxF:							
Sulco-----	---	---	---	---	Low	High	Low
Mcconaughy-----	---	---	---	---	Moderate	High	Moderate
TkG:							
Tassel-----	6-20	Bedrock (paralithic)	---	---	Low	High	Low
Ashollow-----	---	---	---	---	Low	Low	Low
VaD:							
Valentine-----	---	---	---	---	Low	Moderate	Low
VaE:							
Valentine-----	---	---	---	---	Low	Moderate	Low
VaF:							
Valentine-----	---	---	---	---	Low	Moderate	Low
Valentine-----	---	---	---	---	Low	Moderate	Low
VdB:							
Valentine-----	---	---	---	---	Low	Moderate	Low
Vt:							
Vetal-----	---	---	---	---	Moderate	Moderate	Low
W:							
Water-----	---	---	---	---	---	---	---
WeB:							
Wildhorse-----	---	---	---	---	Moderate	High	High
WhB:							
Wildhorse-----	---	---	---	---	Moderate	High	High
Hoffland-----	---	---	---	---	Moderate	High	Low
WkB:							
Wildhorse-----	---	---	---	---	Moderate	High	High
Ipage-----	---	---	---	---	Moderate	Low	Moderate

WATER MANAGEMENT
Garden County, Nebraska

The soils of the survey area are rated in the Water Management table according to limitations that affect their suitability for water management. Soils are rated for pond reservoir areas, drainage, irrigation, terraces and diversions, and grassed waterways. Restrictive features that affect each soil for the specified use is also provided in the table.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Moderately limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Limited indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but generally require special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate to high maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Limitation class terms, such as very limited or limited, etc., limitation ratings, and numerical ratings are shown for each soil feature listed. As many as three soil features may be listed for each soil component if applicable. The overall limitation rating for the soil component is based on the most severe limitation.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects traffic ability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditch banks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or to a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or to a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a very limited hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, which conduct surface water to outlets at a non-erosive velocity. Large stones, wetness, slope, and depth to bedrock or to a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

WATER MANAGEMENT--Continued
Garden County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Ao: Alliance-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily too arid
AoB: Alliance-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily too arid
Ar: Almeria-----	Limitation: flooding cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness	Limitation: rooting depth wetness droughty
AsF: Ashollow-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily slope soil blowing	Limitation: erodes easily slope too arid
Tassel-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: slope soil blowing depth to rock	Limitation: slope too arid
Bh: Bayard-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Limitation: too arid
BhB: Bayard-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Limitation: too arid
BhC: Bayard-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Limitation: too arid
BmB: Bayard-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Limitation: too arid
Bn: Bayard-----	Limitation: deep to water	Favorable	Favorable	Limitation: too arid
BpB: Blanche-----	Limitation: deep to water	Limitation: fast intake soil blowing	Limitation: soil blowing depth to rock	Limitation: too arid depth to rock
BrF: Blueridge-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope too arid droughty
Bw: Broadwater-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: rooting depth too arid droughty
BxD: Busher-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Limitation: too arid
Tassel-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing depth to rock	Limitation: too arid
BxE: Busher-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: slope soil blowing	Limitation: slope too arid
Tassel-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: slope soil blowing depth to rock	Limitation: slope too arid
Cw: Crowther-----	Limitation: cutbanks cave	Limitation: wetness	Limitation: too sandy wetness	Limitation: wetness
Cx: Crowther-----	Limitation: ponding cutbanks cave	Limitation: ponding	Limitation: too sandy ponding	Limitation: wetness
DbB: Dailey-----	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: too arid droughty
DdC: Dankworth-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: rooting depth too arid droughty

WATER MANAGEMENT--Continued
Garden County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Dw: Duroc-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
Eh: Els-----	Limitation: cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: droughty
EuG: Epping-----	Limitation: deep to water	Limitation: slope soil blowing depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope too arid
Rock Outcrop---	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
Fu: Fluvaquents----	Limitation: flooding ponding	Limitation: rooting depth ponding droughty	Limitation: too sandy ponding	Limitation: rooting depth wetness droughty
GP: Pits-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy	Limitation: rooting depth slope droughty
Gt: Gothenburg-----	Limitation: flooding cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness	Limitation: rooting depth wetness droughty
Hh: Hoffland-----	Limitation: cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness	Limitation: wetness droughty
Ho: Hoffland-----	Limitation: ponding cutbanks cave	Limitation: ponding droughty	Limitation: too sandy ponding	Limitation: wetness droughty
INT: Aquolls-----	---	---	---	---
IsB: Ipage-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
Ja: Jankosh-----	Limitation: excess salt cutbanks cave	Limitation: rooting depth wetness	Limitation: erodes easily too sandy wetness	Limitation: erodes easily excess salt rooting depth
JeB: Jayem-----	Limitation: deep to water	Limitation: fast intake soil blowing	Limitation: soil blowing	Limitation: too arid
JeC: Jayem-----	Limitation: deep to water	Limitation: fast intake slope soil blowing	Limitation: soil blowing	Limitation: too arid
Jg: Jayem-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Limitation: too arid
JgC: Jayem-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: soil blowing	Limitation: too arid
KeB: Keith-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily too arid
KeC: Keith-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily too arid
Ku: Kuma-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
La: Lemoyne-----	Limitation: deep to water	Limitation: fast intake rooting depth soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily rooting depth too arid

WATER MANAGEMENT--Continued
Garden County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Lb: Lewellen-----	Limitation: excess sodium excess salt cutbanks cave	Limitation: rooting depth wetness droughty	Limitation: erodes easily too sandy wetness	Limitation: erodes easily excess sodium excess salt
Lc: Lewellen-----	Limitation: excess sodium excess salt cutbanks cave	Limitation: rooting depth wetness droughty	Limitation: erodes easily too sandy wetness	Limitation: erodes easily excess sodium excess salt
Mcculigan-----	Limitation: flooding cutbanks cave	Limitation: rooting depth wetness droughty	Limitation: erodes easily too sandy wetness	Limitation: erodes easily wetness droughty
Lf: Lodgepole-----	Limitation: frost action percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly wetness
M-W: Miscellaneous Water-----	---	---	---	---
Ma: Marlake-----	Limitation: ponding cutbanks cave	Limitation: ponding droughty	Limitation: too sandy ponding	Limitation: wetness droughty
Mc: Marlake-----	Limitation: ponding cutbanks cave	Limitation: ponding	Limitation: too sandy ponding	Limitation: wetness
MtC: Mitchell-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily too arid
MtD: Mitchell-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily too arid
MxF: Mitchell-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily slope soil blowing	Limitation: erodes easily slope too arid
Epping-----	Limitation: deep to water	Limitation: slope soil blowing depth to rock	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope too arid
Ru: Rushcreek-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
SaB: Sarben-----	Limitation: deep to water	Limitation: fast intake droughty	Limitation: soil blowing	Limitation: rooting depth droughty
SaC: Sarben-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: soil blowing	Limitation: rooting depth droughty
SaD: Sarben-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: soil blowing	Limitation: rooting depth droughty
SaE: Sarben-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope soil blowing	Limitation: rooting depth slope droughty
Sc: Scoville-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: rooting depth too arid droughty
SnC: Sidney-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily too arid
StD: Sidney-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily too arid
Canyon-----	Limitation: deep to water	Limitation: slope depth to rock	Limitation: depth to rock	Limitation: too arid

WATER MANAGEMENT--Continued
Garden County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
SuG: Sulco-----	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope too arid
SxC2: Sulco-----	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily	Limitation: erodes easily too arid
Mcconaughy-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily too arid
SxD2: Sulco-----	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily	Limitation: erodes easily too arid
Mcconaughy-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily too arid
SxE2: Sulco-----	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope too arid
Mcconaughy-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope too arid
SxF: Sulco-----	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily slope	Limitation: erodes easily slope too arid
Mcconaughy-----	Limitation: deep to water	Limitation: slope	Limitation: erodes easily slope	Limitation: erodes easily slope too arid
TkG: Tassel-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: slope soil blowing depth to rock	Limitation: slope too arid
Ashollow-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily slope soil blowing	Limitation: erodes easily slope too arid
VaD: Valentine-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: too arid droughty
VaE: Valentine-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope too arid droughty
VaF: Valentine-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope too arid droughty
Valentine-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope too arid droughty
VdB: Valentine-----	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: too arid droughty
Vt: Vetal-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Favorable
W: Water-----	---	---	---	---
WeB: Wildhorse-----	Limitation: excess sodium cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: excess sodium excess salt droughty
WhB: Wildhorse-----	Limitation: excess sodium cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: excess sodium excess salt droughty

WATER MANAGEMENT--Continued
Garden County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Hoffland-----	Limitation: cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness	Limitation: wetness droughty
WkB: Wildhorse-----	Limitation: excess sodium cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: excess sodium excess salt droughty
Ipage-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty

WATER MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ao: Alliance-----	100	Somewhat limited Seepage Depth to bedrock	0.70 0.00	Somewhat limited Piping Thin layer	0.99 0.11	Very limited Deep to water	1.00
AoB: Alliance-----	100	Somewhat limited Seepage Depth to bedrock	0.70 0.00	Somewhat limited Piping Thin layer Seepage	1.00 0.11 0.05	Very limited Deep to water	1.00
Ar: Almeria-----	100	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.10	Very limited Cutbanks cave	1.00
AsF: Ashollow-----	70	Very limited Seepage Slope	1.00 0.01	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
Tassel-----	30	Somewhat limited Depth to bedrock Slope Seepage	0.74 0.12 0.05	Very limited Thin layer Seepage	1.00 0.08	Very limited Deep to water	1.00
Bh: Bayard-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
BhB: Bayard-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
BhC: Bayard-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
BmB: Bayard-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
Bn: Bayard-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
BpB: Blanche-----	100	Very limited Seepage Depth to bedrock	1.00 0.11	Very limited Piping Thin layer Seepage	1.00 0.85 0.09	Very limited Deep to water	1.00
BrF: Blueridge-----	100	Very limited Seepage Slope	1.00 0.08	Somewhat limited Seepage	0.97	Very limited Deep to water	1.00
Ew: Broadwater-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.97	Very limited Deep to water	1.00
BxD: Busher-----	60	Very limited Seepage Depth to bedrock	1.00 0.00	Somewhat limited Thin layer Seepage	0.11 0.08	Very limited Deep to water	1.00
Tassel-----	40	Somewhat limited Depth to bedrock Seepage	0.74 0.05	Very limited Thin layer Seepage	1.00 0.08	Very limited Deep to water	1.00
BxE: Busher-----	60	Very limited Seepage Slope Depth to bedrock	1.00 0.03 0.00	Somewhat limited Thin layer Seepage	0.11 0.08	Very limited Deep to water	1.00
Tassel-----	40	Somewhat limited Depth to bedrock Seepage	0.74 0.05	Very limited Thin layer Seepage	1.00 0.08	Very limited Deep to water	1.00

WATER MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Slope	0.03				
Cw: Crowther-----	100	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.17	Very limited Cutbanks cave	1.00
Cx: Crowther-----	100	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.99	Very limited Cutbanks cave	1.00
DbB: Dailey-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
DdC: Dankworth-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
Dw: Duroc-----	100	Somewhat limited Seepage	0.70	Very limited Piping	1.00	Very limited Deep to water	1.00
Eh: Els-----	100	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.99 0.95	Very limited Cutbanks cave Deep to water	1.00 0.02
EuG: Epping-----	75	Somewhat limited Slope Depth to bedrock	0.97 0.66	Very limited Thin layer Piping Seepage	1.00 1.00 0.06	Very limited Deep to water	1.00
Rock Outcrop-----	25	Not rated		Not rated		Not rated	
Fu: Fluvaquents-----	100	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Cutbanks cave	1.00
GP: Pits-----	100	Not rated		Not rated		Not rated	
Gt: Gothenburg-----	100	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Cutbanks cave	1.00
Hh: Hoffland-----	100	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.99	Very limited Cutbanks cave	1.00
Ho: Hoffland-----	100	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.99	Very limited Cutbanks cave	1.00
INT: Aquolls-----	100	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Somewhat limited Cutbanks cave	0.10
IsB: Ipage-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Cutbanks cave	1.00

WATER MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ja: Jankosh-----	100	Very limited Seepage	1.00	Very limited Piping Seepage Depth to saturated zone Salinity	1.00 0.97 0.95 0.12	Deep to water Very limited Cutbanks cave Salty water Deep to water	0.81 1.00 0.50 0.02
JeB: Jayem-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
JeC: Jayem-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.46	Very limited Deep to water	1.00
Jg: Jayem-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
JgC: Jayem-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00
KeB: Keith-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping Seepage	0.63 0.05	Very limited Deep to water	1.00
KeC: Keith-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.99	Very limited Deep to water	1.00
Ku: Kuma-----	100	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.77	Very limited Deep to water	1.00
La: Lemoyne-----	100	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.93	Very limited Cutbanks cave Deep to water	1.00 0.96
Lb: Lewellen-----	100	Very limited Seepage	1.00	Very limited Seepage Piping Depth to saturated zone Salinity	1.00 1.00 0.95 0.03	Very limited Cutbanks cave Salty water Deep to water	1.00 0.35 0.02
Lc: Lewellen-----	55	Very limited Seepage	1.00	Very limited Seepage Piping Depth to saturated zone Salinity	1.00 1.00 0.95 0.03	Very limited Cutbanks cave Salty water Deep to water	1.00 0.35 0.02
Mcculigan-----	45	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage Piping	1.00 0.97 0.78	Very limited Cutbanks cave	1.00
Lf: Lodgepole-----	100	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.08	Very limited Deep to water	1.00
M-W: Miscellaneous Water-	100	Not rated		Not rated		Not rated	
Ma: Marlake-----	100	Very limited		Very limited		Very limited	

WATER MANAGEMENT--Continued
Garden County, Nebraska

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Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Mc: Marlake-----	100	Seepage	1.00	Depth to saturated zone Seepage	1.00 0.22	Cutbanks cave	1.00
		Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.46	Very limited Cutbanks cave	1.00
MtC: Mitchell-----	100	Somewhat limited Seepage	0.70	Very limited Piping Seepage	1.00 0.06	Very limited Deep to water	1.00
MtD: Mitchell-----	100	Somewhat limited Seepage	0.70	Very limited Piping Seepage	1.00 0.06	Very limited Deep to water	1.00
MxF: Mitchell-----	60	Somewhat limited Seepage Slope	0.70 0.21	Very limited Piping Seepage	1.00 0.06	Very limited Deep to water	1.00
		Somewhat limited Depth to bedrock Slope	0.66 0.12	Very limited Thin layer Seepage	1.00 0.06	Very limited Deep to water	1.00
Ru: Rushcreek-----	100	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.97	Very limited Cutbanks cave Deep to water	1.00 0.96
SaB: Sarben-----	100	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.09	Very limited Deep to water	1.00
SaC: Sarben-----	100	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.09	Very limited Deep to water	1.00
SaD: Sarben-----	100	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.09	Very limited Deep to water	1.00
SaE: Sarben-----	100	Very limited Seepage Slope	1.00 0.03	Very limited Piping Seepage	1.00 0.62	Very limited Deep to water	1.00
Sc: Scoville-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	1.00	Very limited Deep to water	1.00
SnC: Sidney-----	100	Somewhat limited Seepage	0.70	Very limited Piping	1.00	Very limited Deep to water	1.00
		Depth to bedrock	0.00	Thin layer Seepage	0.11 0.07		
StD: Sidney-----	70	Somewhat limited Seepage	0.70	Very limited Piping	1.00	Very limited Deep to water	1.00
		Depth to bedrock	0.00	Thin layer	0.11		
Canyon-----	30	Somewhat limited Depth to bedrock Seepage	0.74 0.05	Very limited Thin layer	1.00	Very limited Deep to water	1.00
SuG: Sulco-----	100	Somewhat limited Slope Seepage	0.97 0.70	Very limited Piping	1.00	Very limited Deep to water	1.00
SxC2: Sulco-----	60	Somewhat limited		Very limited		Very limited	

WATER MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Mcconaughy-----	40	Seepage	0.70	Piping	1.00	Deep to water	1.00
		Somewhat limited Seepage	0.70	Very limited Piping	1.00	Very limited Deep to water	1.00
SxD2: Sulco-----	60	Somewhat limited Seepage	0.70	Very limited Piping	1.00	Very limited Deep to water	1.00
Mcconaughy-----	40	Somewhat limited Seepage	0.70	Very limited Piping	1.00	Very limited Deep to water	1.00
SxE2: Sulco-----	60	Somewhat limited Seepage Slope	0.70 0.03	Very limited Piping	1.00	Very limited Deep to water	1.00
Mcconaughy-----	40	Somewhat limited Seepage Slope	0.70 0.00	Very limited Piping	1.00	Very limited Deep to water	1.00
SxF: Sulco-----	75	Somewhat limited Seepage Slope	0.70 0.21	Very limited Piping	1.00	Very limited Deep to water	1.00
Mcconaughy-----	25	Somewhat limited Seepage Slope	0.70 0.00	Very limited Piping	1.00	Very limited Deep to water	1.00
TkG: Tassel-----	50	Somewhat limited Slope Depth to bedrock Seepage	0.88 0.74 0.05	Very limited Thin layer Seepage	1.00 0.08	Very limited Deep to water	1.00
Ashollow-----	35	Very limited Seepage Slope	1.00 0.88	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
VaD: Valentine-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
VaE: Valentine-----	100	Very limited Seepage Slope	1.00 0.06	Very limited Seepage	1.00	Very limited Deep to water	1.00
VaF: Valentine-----	50	Very limited Seepage Slope	1.00 0.06	Very limited Seepage	1.00	Very limited Deep to water	1.00
Valentine-----	50	Very limited Seepage Slope	1.00 0.92	Very limited Seepage	1.00	Very limited Deep to water	1.00
VdB: Valentine-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	1.00	Very limited Deep to water	1.00
Vt: Vetal-----	100	Very limited Seepage	1.00	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
W: Water-----	100	Not rated		Not rated		Not rated	
WeB: Wildhorse-----	100	Very limited Seepage	1.00	Very limited Seepage Piping Depth to saturated zone	1.00 1.00 0.84	Very limited Cutbanks cave Deep to water	1.00 0.07
WhB: Wildhorse-----	65	Very limited		Very limited		Very limited	

WATER MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Hoffland-----	35	Seepage	1.00	Seepage Piping Depth to saturated zone	1.00 1.00 0.84	Cutbanks cave Deep to water	1.00 0.07
		Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.99	Very limited Cutbanks cave	1.00
WkB: Wildhorse-----	60	Very limited Seepage	1.00	Very limited Seepage Piping Depth to saturated zone	1.00 1.00 0.84	Very limited Cutbanks cave Deep to water	1.00 0.07
Ipage-----	40	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Cutbanks cave Deep to water	1.00 0.81

SANITARY FACILITIES
Garden County, Nebraska

Sanitary Facilities

The following tables show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A trench sanitary landfill is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

SANITARY FACILITIES
Garden County, Nebraska

In an area sanitary landfill, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

SANITARY FACILITIES--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Ao: Alliance-----	100	Somewhat limited Depth to bedrock Restricted permeability	0.78 0.68	Somewhat limited Seepage Depth to soft bedrock	0.50 0.42
AoB: Alliance-----	100	Somewhat limited Depth to bedrock Restricted permeability	0.78 0.68	Somewhat limited Seepage Depth to soft bedrock Slope	0.50 0.42 0.00
Ar: Almeria-----	100	Very limited Flooding Depth to saturated zone Filtering capacity	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
AsF: Ashollow-----	70	Somewhat limited Slope	0.84	Very limited Slope Seepage	1.00 1.00
Tassel-----	30	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope Seepage	1.00 1.00 1.00
Bh: Bayard-----	100	Not limited		Very limited Seepage	1.00
BhB: Bayard-----	100	Not limited		Very limited Seepage Slope	1.00 0.00
BhC: Bayard-----	100	Not limited		Very limited Seepage Slope	1.00 0.67
BmB: Bayard-----	100	Not limited		Very limited Seepage Slope	1.00 0.00
Bn: Bayard-----	100	Not limited		Very limited Seepage	1.00
BpB: Blanche-----	100	Very limited Depth to bedrock	1.00	Very limited Depth to soft bedrock Seepage	1.00 1.00
BrF: Blueridge-----	100	Very limited Filtering capacity Slope	1.00 1.00	Very limited Seepage Slope	1.00 1.00
Bw: Broadwater-----	100	Very limited Flooding Filtering capacity	1.00 1.00	Very limited Flooding Seepage	1.00 1.00
BxD: Busher-----	60	Somewhat limited Depth to bedrock	0.78	Very limited Seepage Slope Depth to soft bedrock	1.00 0.91 0.42
Tassel-----	40	Very limited Depth to bedrock	1.00	Very limited Depth to soft bedrock Slope	1.00 0.91
BxE: Busher-----	60	Very limited Slope Depth to bedrock	1.00 0.78	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 0.42
Tassel-----	40	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00

SANITARY FACILITIES--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Cw: Crowther-----	100	Very limited Depth to saturated zone Filtering capacity	1.00 1.00	Seepage Very limited Seepage Depth to saturated zone	1.00 1.00 1.00
Cx: Crowther-----	100	Very limited Depth to saturated zone Filtering capacity	1.00 1.00	Very limited Seepage Depth to saturated zone	1.00 1.00
DbB: Dailey-----	100	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
DdC: Dankworth-----	100	Very limited Filtering capacity	1.00	Very limited Seepage Slope	1.00 0.67
Dw: Duroc-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
Eh: Els-----	100	Very limited Depth to saturated zone Filtering capacity	1.00 1.00	Very limited Seepage Depth to saturated zone	1.00 1.00
EuG: Epping-----	75	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope Seepage	1.00 1.00 0.50
Rock Outcrop-----	25	Not rated		Not rated	
Fu: Fluvaquents-----	100	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
GP: Pits-----	100	Not rated		Not rated	
Gt: Gothenburg-----	100	Very limited Flooding Depth to saturated zone Filtering capacity	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
Hh: Hoffland-----	100	Very limited Depth to saturated zone Filtering capacity	1.00 1.00	Very limited Seepage Depth to saturated zone	1.00 1.00
Ho: Hoffland-----	100	Very limited Depth to saturated zone Filtering capacity	1.00 1.00	Very limited Seepage Depth to saturated zone	1.00 1.00
INT: Aquolls-----	100	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
IsB: Ipage-----	100	Very limited Filtering capacity Depth to saturated zone	1.00 1.00	Very limited Seepage Depth to saturated zone	1.00 0.71

SANITARY FACILITIES--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Ja: Jankosh-----	100	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50		
JeB: Jayem-----	100	Not limited		Very limited Seepage	1.00
JeC: Jayem-----	100	Not limited		Very limited Seepage Slope	1.00 0.67
Jg: Jayem-----	100	Not limited		Very limited Seepage	1.00
JgC: Jayem-----	100	Not limited		Very limited Seepage Slope	1.00 0.33
KeB: Keith-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
				Slope	0.00
KeC: Keith-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Slope	0.67
				Seepage	0.50
Ku: Kuma-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Seepage	0.50
La: Lemoyne-----	100	Very limited Restricted permeability	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Flooding	0.40
		Depth to saturated zone	0.84	Depth to saturated zone	0.17
		Flooding	0.40		
Lb: Lewellen-----	100	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40
Lc: Lewellen-----	55	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40
Mcculigan-----	45	Very limited Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
Lf: Lodgepole-----	100	Very limited Restricted permeability	1.00	Somewhat limited Seepage	0.50
		Depth to saturated zone	1.00		
M-W: Miscellaneous Water-	100	Not rated		Not rated	
Ma: Marlake-----	100	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00

SANITARY FACILITIES--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Mc: Marlake-----	100	Very limited Depth to saturated zone Filtering capacity	1.00 1.00	Very limited Seepage Depth to saturated zone Content of organic matter	1.00 1.00 1.00
MtC: Mitchell-----	100	Somewhat limited Restricted permeability	0.50	Somewhat limited Slope Seepage	0.67 0.50
MtD: Mitchell-----	100	Somewhat limited Restricted permeability Slope	0.50 0.00	Very limited Slope Seepage	1.00 0.50
MxF: Mitchell-----	60	Very limited Slope Restricted permeability	1.00 0.50	Very limited Slope Seepage	1.00 0.50
Epping-----	40	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00
Ru: Rushcreek-----	100	Very limited Filtering capacity Depth to saturated zone Restricted permeability Flooding	1.00 0.84 0.50 0.40	Very limited Seepage Flooding Depth to saturated zone	1.00 0.40 0.17
SaB: Sarben-----	100	Not limited		Very limited Seepage	1.00
SaC: Sarben-----	100	Not limited		Very limited Seepage Slope	1.00 0.67
SaD: Sarben-----	100	Somewhat limited Slope	0.00	Very limited Seepage Slope	1.00 1.00
SaE: Sarben-----	100	Very limited Slope	1.00	Very limited Slope Seepage	1.00 1.00
Sc: Scoville-----	100	Very limited Filtering capacity Restricted permeability	1.00 0.50	Very limited Seepage	1.00
SnC: Sidney-----	100	Somewhat limited Depth to bedrock Restricted permeability	0.78 0.50	Somewhat limited Slope Seepage Depth to soft bedrock	0.67 0.50 0.42
StD: Sidney-----	70	Somewhat limited Depth to bedrock Restricted permeability Slope	0.78 0.50 0.00	Very limited Slope Seepage Depth to soft bedrock	1.00 0.50 0.42
Canyon-----	30	Very limited Depth to bedrock Slope	1.00 0.00	Very limited Depth to soft bedrock Slope	1.00 1.00
SuG: Sulco-----	100	Very limited Slope Restricted permeability	1.00 0.50	Very limited Slope Seepage	1.00 0.50

SANITARY FACILITIES--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
SxC2: Sulco-----	60	Somewhat limited Restricted permeability	0.50	Somewhat limited Slope	0.67
Mcconaughey-----	40	Somewhat limited Restricted permeability	0.50	Seepage Somewhat limited Slope	0.50 0.67
SxD2: Sulco-----	60	Somewhat limited Restricted permeability	0.50	Seepage	0.50
Mcconaughey-----	40	Slope Somewhat limited Restricted permeability	0.00 0.50	Very limited Slope Seepage	1.00 0.50
SxE2: Sulco-----	60	Very limited Slope Restricted permeability	1.00 0.50	Very limited Slope Seepage	1.00 0.50
Mcconaughey-----	40	Somewhat limited Slope Restricted permeability	0.63 0.50	Very limited Slope Seepage	1.00 0.50
SxF: Sulco-----	75	Very limited Slope Restricted permeability	1.00 0.50	Very limited Slope Seepage	1.00 0.50
Mcconaughey-----	25	Somewhat limited Slope Restricted permeability	0.63 0.50	Very limited Slope Seepage	1.00 0.50
TkG: Tassel-----	50	Very limited Depth to bedrock	1.00	Very limited Depth to soft bedrock	1.00
Ashollow-----	35	Slope	1.00	Slope Seepage	1.00 1.00
VaD: Valentine-----	100	Very limited Slope	1.00	Very limited Slope Seepage	1.00 0.91
VaE: Valentine-----	100	Filtering capacity	1.00	Very limited Slope Seepage	1.00 1.00
VaF: Valentine-----	50	Very limited Slope Filtering capacity	1.00 1.00	Very limited Slope Seepage	1.00 1.00
Valentine-----	50	Very limited Slope Filtering capacity	1.00 1.00	Very limited Slope Seepage	1.00 1.00
VdB: Valentine-----	100	Very limited Slope Filtering capacity	1.00	Very limited Slope Seepage	1.00
Vt: Vetal-----	100	Not limited		Very limited Slope Seepage	1.00
W: Water-----	100	Not rated		Not rated	
WeB: Wildhorse-----	100	Very limited Depth to saturated zone Filtering capacity	1.00 1.00	Very limited Slope Seepage Depth to saturated zone	1.00 1.00

SANITARY FACILITIES--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
WhB: Wildhorse-----	65	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
Hoffland-----	35	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
WkB: Wildhorse-----	60	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
Ipage-----	40	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.71

SANITARY FACILITIES--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ao: Alliance-----	100	Very limited Depth to bedrock	1.00	Not limited		Somewhat limited Depth to bedrock	0.42
AoB: Alliance-----	100	Very limited Depth to bedrock	1.00	Not limited		Somewhat limited Depth to bedrock	0.42
Ar: Almeria-----	100	Very limited Flooding Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Too Sandy Seepage Depth to saturated zone	1.00 1.00 1.00
AsF: Ashollow-----	70	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Somewhat limited Slope Seepage	0.84 0.50
Tassel-----	30	Very limited Depth to bedrock Too Sandy Slope	1.00 1.00 1.00	Very limited Slope	1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.50
Bh: Bayard-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Somewhat limited Seepage	0.50
BhB: Bayard-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Somewhat limited Seepage	0.50
BhC: Bayard-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Somewhat limited Seepage	0.50
BmB: Bayard-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Somewhat limited Seepage	0.50
Bn: Bayard-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Somewhat limited Seepage	0.50
BpB: Blanche-----	100	Very limited Depth to bedrock	1.00	Not limited		Very limited Depth to bedrock Seepage	1.00 0.50
BrF: Blueridge-----	100	Very limited Too Sandy Slope	1.00 1.00	Very limited Slope	1.00	Very limited Too Sandy Seepage Slope Gravel content	1.00 1.00 1.00 0.00
Bw: Broadwater-----	100	Very limited Flooding Too Sandy	1.00 1.00	Very limited Flooding	1.00	Very limited Too Sandy Seepage	1.00 1.00
BxD: Busher-----	60	Very limited Depth to bedrock	1.00	Not limited		Somewhat limited Seepage Depth to bedrock	0.50 0.42
Tassel-----	40	Very limited Depth to bedrock	1.00	Not limited		Very limited Depth to bedrock	1.00
BxE: Busher-----	60	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Slope	1.00	Very limited Slope Seepage Depth to bedrock	1.00 0.50 0.42
Tassel-----	40	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Slope	1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.50
Cw: Crowther-----	100	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Seepage Depth to saturated zone Too Sandy	1.00 1.00 0.50
Cx: Crowther-----	100	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Too Sandy Seepage	1.00 1.00 1.00
DbB: Dailey-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Too Sandy	1.00

SANITARY FACILITIES--Continued
Garden County, Nebraska

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Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
DdC: Dankworth-----	100	Too Sandy	1.00			Seepage	1.00
		Very limited Too Sandy	1.00	Not limited		Very limited Too Sandy Seepage	1.00 1.00
Dw: Duroc-----	100	Not limited		Not limited		Not limited	
Eh: Els-----	100	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too Sandy Seepage Depth to saturated zone	1.00 1.00 0.68
EuG: Epping-----	75	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope	1.00	Very limited Depth to bedrock Slope	1.00 1.00
Rock Outcrop-----	25	Not rated		Not rated		Not rated	
Fu: Fluvaquents-----	100	Very limited Flooding Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Too Sandy Seepage	1.00 1.00 1.00
GP: Pits-----	100	Not rated		Not rated		Not rated	
Gt: Gothenburg-----	100	Very limited Flooding Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Too Sandy Seepage Depth to saturated zone	1.00 1.00 1.00
Hh: Hoffland-----	100	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too Sandy Seepage Depth to saturated zone	1.00 1.00 1.00
Ho: Hoffland-----	100	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 0.50
INT: Aquolls-----	100	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
IsB: Ipage-----	100	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too Sandy Seepage	1.00 1.00
Ja: Jankosh-----	100	Very limited Depth to saturated zone Seepage Too Sandy Sodium content	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too Sandy Seepage Sodium content Depth to saturated zone	1.00 1.00 0.68
JeB: Jayem-----	100	Not limited		Not limited		Somewhat limited Seepage	0.50
JeC: Jayem-----	100	Not limited		Not limited		Somewhat limited Seepage	0.50

SANITARY FACILITIES--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Jg: Jayem-----	100	Not limited		Not limited		Somewhat limited Seepage	0.50
JgC: Jayem-----	100	Not limited		Not limited		Somewhat limited Seepage	0.50
KeB: Keith-----	100	Not limited		Not limited		Not limited	
KeC: Keith-----	100	Not limited		Not limited		Not limited	
Ku: Kuma-----	100	Not limited		Not limited		Not limited	
La: Lemoyne-----	100	Very limited Depth to saturated zone Seepage Too clayey Flooding	1.00 1.00 0.50 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Hard to compact Too clayey	1.00 0.50
Lb: Lewellen-----	100	Very limited Depth to saturated zone Sodium content Seepage Too Sandy Flooding	1.00 1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Seepage Flooding	1.00 1.00 0.40	Very limited Too Sandy Seepage Sodium content Depth to saturated zone	1.00 1.00 1.00 0.68
Lc: Lewellen-----	55	Very limited Depth to saturated zone Sodium content Seepage Too Sandy Flooding	1.00 1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Seepage Flooding	1.00 1.00 0.40	Very limited Too Sandy Seepage Sodium content Depth to saturated zone	1.00 1.00 1.00 0.68
Mcculigan-----	45	Very limited Flooding Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Too Sandy Seepage Depth to saturated zone	1.00 1.00 1.00
Lf: Lodgepole-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
M-W: Miscellaneous Water-	100	Not rated		Not rated		Not rated	
Ma: Marlake-----	100	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Too Sandy Seepage	1.00 1.00 1.00
Mc: Marlake-----	100	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 0.50
MtC: Mitchell-----	100	Not limited		Not limited		Not limited	
MtD: Mitchell-----	100	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00
MxF: Mitchell-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Epping-----	40	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Slope	1.00	Very limited Depth to bedrock Slope	1.00 1.00
Ru: Rushcreek-----	100	Very limited Depth to saturated zone Seepage Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Not limited	
SaB: Sarben-----	100	Not limited		Not limited		Somewhat limited	

SANITARY FACILITIES--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
SaC: Sarben-----	100	Not limited		Not limited		Seepage	0.50
SaD: Sarben-----	100	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Somewhat limited Seepage	0.50
SaE: Sarben-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Somewhat limited Slope	0.50
Sc: Scoville-----	100	Very limited Too Sandy	1.00	Very limited Slope	1.00	Very limited Seepage	1.00 0.50
SnC: Sidney-----	100	Very limited Depth to bedrock	1.00	Not limited		Very limited Too Sandy Seepage	1.00 1.00
StD: Sidney-----	70	Very limited Depth to bedrock Slope	1.00 0.00	Not limited		Somewhat limited Depth to bedrock	0.42
Canyon-----	30	Very limited Depth to bedrock Slope	1.00 0.00	Somewhat limited Depth to bedrock Slope	0.42 0.00	Somewhat limited Slope	0.42 0.00
SuG: Sulco-----	100	Very limited Slope	1.00	Somewhat limited Slope	0.00	Very limited Depth to bedrock Slope	1.00 0.00
SxC2: Sulco-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Mcconaughy-----	40	Not limited		Not limited		Not limited	
SxD2: Sulco-----	60	Not limited		Not limited		Not limited	
Mcconaughy-----	40	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00
SxE2: Sulco-----	60	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00
Mcconaughy-----	40	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00
SxF: Sulco-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Mcconaughy-----	25	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
TkG: Tassel-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ashollow-----	35	Very limited Depth to bedrock	1.00	Very limited Slope	1.00	Very limited Depth to bedrock Slope	1.00 1.00
VaD: Valentine-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Depth to bedrock Slope	1.00 1.00
VaE: Valentine-----	100	Very limited Seepage	1.00	Very limited Slope	1.00	Very limited Seepage	1.00
VaF: Valentine-----	50	Very limited Too Sandy	1.00	Very limited Seepage	1.00	Very limited Too Sandy Seepage	1.00 1.00
Valentine-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
VdB: Valentine-----	100	Very limited Seepage	1.00	Very limited Slope	1.00	Very limited Seepage	1.00
Vt: Vetal-----	100	Very limited Too Sandy	1.00	Very limited Seepage	1.00	Very limited Too Sandy Seepage	1.00 1.00
W: Water-----	100	Very limited Seepage	1.00	Very limited Seepage	1.00	Somewhat limited Seepage	0.50
Water-----	100	Not rated		Not rated		Not rated	

SANITARY FACILITIES--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WeB: Wildhorse-----	100	Very limited Depth to saturated zone Seepage Too Sandy Sodium content	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too Sandy Seepage Sodium content Depth to saturated zone	1.00 1.00 1.00 0.44
WhB: Wildhorse-----	65	Very limited Depth to saturated zone Seepage Too Sandy Sodium content	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too Sandy Seepage Sodium content Depth to saturated zone	1.00 1.00 1.00 0.44
Hoffland-----	35	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too Sandy Seepage Depth to saturated zone	1.00 1.00 1.00
WkB: Wildhorse-----	60	Very limited Depth to saturated zone Seepage Too Sandy Sodium content	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too Sandy Seepage Sodium content Depth to saturated zone	1.00 1.00 1.00 0.44
Ipage-----	40	Very limited Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too Sandy Seepage	1.00 1.00

AGRICULTURAL WASTE MANAGEMENT
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The nature of the soil is also important in the application of organic wastes and wastewater to land as fertilizers and irrigation; it is also important when the soil is used as a medium for treatment and disposal of these wastes. Favorable soil properties are required to prevent environmental damage.

The use of organic wastes and wastewater as production resources will result in energy conservation, prevent the waste of these important resources, and prevent problems associated with their disposal. Where disposal is the goal, and a maximum amount is disposed in a minimum area to hold costs to a minimum, risk of environmental damage is the principal constraint. Where the reuse goal is pursued, and a minimum amount is applied to a maximum area to obtain the greatest benefit, environmental damage is unlikely.

Interpretations developed for waste management may include ratings for (1) manure and food processing wastes; (2) municipal sewage sludge; (3) irrigation use of wastewater; or (4) treatment of wastewater by the slow rate process, overland flow process, or rapid infiltration process. If available, these should be located in this subsection.

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

The Ag-Waste tables show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, phosphorus, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are generally favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

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Garden County, Nebraska

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding.

The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

See the National Soil Handbook, September 1992, Part 620, for criteria used in rating soils for sanitary facilities and waste management.

AGRICULTURAL WASTE MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ao: Alliance-----	100	Not limited		Not limited		Not limited	
AoB: Alliance-----	100	Not limited		Not limited		Not limited	
Ar: Almeria-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Runoff limitation	0.40	Droughty	0.02	Droughty	0.02
		Droughty	0.02				
AsF: Ashollow-----	70	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Too steep for surface application	1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Too steep for sprinkler application	0.89
						Filtering capacity	0.00
Tassel-----	30	Very limited Depth to bedrock	1.00	Very limited Droughty	1.00	Very limited Droughty	1.00
		Droughty	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Runoff limitation	0.40	Filtering capacity	0.00	Too steep for sprinkler application	1.00
		Filtering capacity	0.00			Filtering capacity	0.00
Bh: Bayard-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
BhB: Bayard-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
BhC: Bayard-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Too steep for surface application	0.31
						Filtering capacity	0.00
BmB: Bayard-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
Bn: Bayard-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
BpB: Blanche-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Droughty	0.48	Droughty	0.48	Droughty	0.48
		Depth to bedrock	0.42	Depth to bedrock	0.42	Depth to bedrock	0.42
BrF: Blueridge-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Droughty	1.00	Droughty	1.00	Droughty	1.00
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Leaching limitation	0.45			Too steep for sprinkler application	1.00
Ew: Broadwater-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BxD: Busher-----	60	Flooding Droughty Leaching limitation	1.00 1.00 0.45	Flooding Droughty	1.00 1.00	Flooding Droughty	1.00 1.00
		Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Too steep for surface application Filtering capacity Too steep for sprinkler application	0.66 0.00 0.00
Tassel-----	40	Very limited Depth to bedrock Droughty Runoff limitation	1.00 1.00 0.40	Very limited Droughty Depth to bedrock Filtering capacity	1.00 1.00 0.00	Very limited Droughty Depth to bedrock Too steep for surface application Low adsorption Filtering capacity	1.00 1.00 0.66 0.00
		Low adsorption Filtering capacity	0.00 0.00				
BxE: Busher-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Too steep for sprinkler application Filtering capacity	1.00 0.00
Tassel-----	40	Very limited Depth to bedrock Droughty Slope	1.00 1.00 1.00	Very limited Droughty Depth to bedrock Slope	1.00 1.00 1.00	Very limited Droughty Depth to bedrock Too steep for surface application	1.00 1.00 1.00
		Runoff limitation Filtering capacity	0.40 0.00	Filtering capacity	0.00	Too steep for sprinkler application Filtering capacity	1.00 0.00
Cw: Crowther-----	100	Very limited Depth to saturated zone Filtering capacity Runoff limitation	1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Filtering capacity	1.00 1.00 1.00	Very limited Depth to saturated zone Filtering capacity	1.00 1.00
Cx: Crowther-----	100	Very limited Depth to saturated zone Filtering capacity Runoff limitation	1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Filtering capacity	1.00 1.00 1.00	Very limited Depth to saturated zone Filtering capacity	1.00 1.00
DbB: Dailey-----	100	Very limited Depth to dense layer Filtering capacity Droughty Leaching limitation	1.00 1.00 0.67 0.45	Very limited Filtering capacity Droughty	1.00 0.67	Very limited Filtering capacity Droughty	1.00 0.67
DdC: Dankworth-----	100	Very limited Filtering capacity Droughty Leaching limitation	1.00 0.96 0.45	Very limited Filtering capacity Droughty	1.00 0.96	Very limited Filtering capacity Droughty Too steep for surface application	1.00 0.96 0.31
Dw: Duroc-----	100	Not limited		Not limited		Not limited	

AGRICULTURAL WASTE MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Eh: Els-----	100	Very limited Filtering capacity Depth to saturated zone Droughty Leaching limitation	1.00 0.95 0.83 0.45	Very limited Filtering capacity Depth to saturated zone Droughty	1.00 0.95 0.83	Very limited Filtering capacity Depth to saturated zone Droughty	1.00 0.95 0.83
EuG: Epping-----	75	Very limited Slope Depth to bedrock Droughty Runoff limitation Filtering capacity	1.00 1.00 1.00 0.40 0.00	Very limited Depth to bedrock Slope Droughty Filtering capacity	1.00 1.00 1.00 0.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler application Droughty Filtering capacity	1.00 1.00 1.00 1.00 0.00
Rock Outcrop-----	25	Not rated		Not rated		Not rated	
Fu: Fluvaquents-----	100	Very limited Depth to saturated zone Flooding Filtering capacity Runoff limitation	1.00 1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 1.00 1.00 1.00
GP: Pits-----	100	Not rated		Not rated		Not rated	
Gt: Gothenburg-----	100	Very limited Depth to saturated zone Flooding Filtering capacity Droughty Runoff limitation	1.00 1.00 1.00 1.00 0.76 0.40	Very limited Depth to saturated zone Flooding Filtering capacity Droughty	1.00 1.00 1.00 1.00 0.76	Very limited Depth to saturated zone Flooding Filtering capacity Droughty	1.00 1.00 1.00 1.00 0.76
Hh: Hoffland-----	100	Very limited Depth to saturated zone Filtering capacity Runoff limitation	1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Filtering capacity	1.00 1.00 1.00	Very limited Depth to saturated zone Filtering capacity	1.00 1.00 1.00
Ho: Hoffland-----	100	Very limited Depth to saturated zone Filtering capacity Runoff limitation	1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Filtering capacity	1.00 1.00 1.00	Very limited Depth to saturated zone Filtering capacity	1.00 1.00 1.00
INT: Aquolls-----	100	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00 1.00
IsB: Ipage-----	100	Very limited Filtering capacity Droughty Leaching limitation	1.00 0.62 0.45	Very limited Filtering capacity Droughty	1.00 0.62	Very limited Filtering capacity Droughty	1.00 0.62

AGRICULTURAL WASTE MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ja: Jankosh-----	100	Very limited Filtering capacity Sodium content Depth to saturated zone Salinity	1.00 1.00 0.95 0.50	Very limited Filtering capacity Sodium content Salinity Depth to saturated zone	1.00 1.00 1.00 0.95	Very limited Filtering capacity Sodium content Salinity Depth to saturated zone	1.00 1.00 1.00 0.95
JeB: Jayem-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
JeC: Jayem-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity Too steep for surface application	1.00 0.31
Jg: Jayem-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
JgC: Jayem-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Too steep for surface application Filtering capacity	0.08 0.00
KeB: Keith-----	100	Not limited		Not limited		Not limited	
KeC: Keith-----	100	Not limited		Not limited		Somewhat limited Too steep for surface application	0.31
Ku: Kuma-----	100	Not limited		Not limited		Not limited	
La: Lemoyne-----	100	Very limited Filtering capacity Restricted permeability	1.00 0.30	Very limited Filtering capacity Flooding Restricted permeability	1.00 0.40 0.22	Very limited Filtering capacity Restricted permeability	1.00 0.22
Lb: Lewellen-----	100	Very limited Filtering capacity Sodium content Depth to saturated zone Salinity Droughty	1.00 1.00 0.95 0.35 0.34	Very limited Filtering capacity Sodium content Salinity Depth to saturated zone Flooding	1.00 1.00 1.00 0.95 0.40	Very limited Filtering capacity Sodium content Salinity Depth to saturated zone Droughty	1.00 1.00 1.00 0.95 0.34
Lc: Lewellen-----	55	Very limited Filtering capacity Sodium content Depth to saturated zone Salinity Droughty	1.00 1.00 0.95 0.35 0.21	Very limited Filtering capacity Sodium content Salinity Depth to saturated zone Flooding	1.00 1.00 1.00 0.95 0.40	Very limited Filtering capacity Sodium content Salinity Depth to saturated zone Droughty	1.00 1.00 1.00 0.95 0.21
Mcculigan-----	45	Very limited Filtering capacity Depth to saturated zone Sodium content Droughty Flooding	1.00 1.00 0.82 0.73 0.60	Very limited Filtering capacity Depth to saturated zone Flooding Sodium content Droughty	1.00 1.00 1.00 0.82 0.73	Very limited Filtering capacity Depth to saturated zone Sodium content Droughty Flooding	1.00 1.00 0.82 0.73 0.60
Lf: Lodgepole-----	100	Very limited		Very limited		Very limited	

AGRICULTURAL WASTE MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
M-W: Miscellaneous Water-	100	Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff limitation	0.40				
		Not rated		Not rated		Not rated	
Ma: Marlake-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Droughty Runoff limitation	0.42	Droughty	0.42	Droughty	0.42
Mc: Marlake-----	100	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Filtering capacity	1.00	Low adsorption	1.00	Filtering capacity	1.00
		Runoff limitation	0.40	Filtering capacity	1.00		
MtC: Mitchell-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Too steep for surface application Filtering capacity	0.31
							0.00
MtD: Mitchell-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Very limited Too steep for surface application	1.00
		Slope	0.00	Slope	0.00	Too steep for sprinkler application	0.10
						Filtering capacity	0.00
MxF: Mitchell-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Too steep for sprinkler application	1.00
						Filtering capacity	0.00
Epping-----	40	Very limited Depth to bedrock	1.00	Very limited Droughty	1.00	Very limited Droughty	1.00
		Droughty	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Runoff limitation	0.40	Filtering capacity	0.00	Too steep for sprinkler application	1.00
		Low adsorption	0.15			Low adsorption	0.15
Ru: Rushcreek-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Sodium content	0.92	Sodium content	0.92	Sodium content	0.92
				Flooding	0.40		
SaB: Sarben-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
SaC: Sarben-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
SaD: Sarben-----	100	Very limited Filtering capacity Slope	1.00 0.00	Very limited Filtering capacity Slope	1.00 0.00	Too steep for surface application	0.31
						Very limited Filtering capacity	1.00
						Too steep for surface application	1.00
SaE: Sarben-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Too steep for sprinkler application	0.10
						Very limited Too steep for surface application	1.00
						Filtering capacity	1.00
Sc: Scoville-----	100	Very limited Filtering capacity Leaching limitation	1.00 0.45	Very limited Filtering capacity	1.00	Too steep for sprinkler application	1.00
						Very limited Filtering capacity	1.00
						Filtering capacity	1.00
SnC: Sidney-----	100	Not limited		Not limited		Somewhat limited Too steep for surface application	0.31
StD: Sidney-----	70	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Very limited Too steep for surface application	1.00
						Very limited Too steep for sprinkler application	0.10
						Very limited Droughty Depth to bedrock	1.00 1.00
Canyon-----	30	Very limited Depth to bedrock Droughty Runoff limitation	1.00 1.00 0.40	Very limited Droughty Depth to bedrock Slope	1.00 1.00 0.00	Too steep for surface application	1.00
						Very limited Droughty Depth to bedrock	1.00 1.00
						Low adsorption Slope	0.14 0.00
SuG: Sulco-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Low adsorption Too steep for sprinkler application	0.14 0.10
						Very limited Too steep for surface application	1.00
						Sodium content	0.08
SxC2: Sulco-----	60	Somewhat limited Sodium content	0.08	Somewhat limited Sodium content	0.08	Too steep for sprinkler application	1.00
						Sodium content	0.08
						Sodium content	0.08
Mcconaughey-----	40	Not limited		Not limited		Somewhat limited Too steep for surface application	0.31
						Sodium content	0.08
						Sodium content	0.08
SxD2: Sulco-----	60	Somewhat limited Sodium content	0.08	Somewhat limited Sodium content	0.08	Too steep for surface application	0.31
						Very limited Too steep for surface application	1.00
						Very limited Too steep for surface application	1.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Mcconaughy-----	40	Slope	0.00	Slope	0.00	Too steep for sprinkler application	0.10
		Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Sodium content	0.08
						Very limited	1.00
						Too steep for surface application	0.10
SxE2: Sulco-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Too steep for sprinkler application	1.00
		Sodium content	0.08	Sodium content	0.08	Too steep for surface application	1.00
Mcconaughy-----	40	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Too steep for sprinkler application	0.08
						Very limited	1.00
SxF: Sulco-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Too steep for surface application	0.77
		Sodium content	0.08	Sodium content	0.08	Too steep for sprinkler application	1.00
Mcconaughy-----	25	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Sodium content	0.08
						Very limited	1.00
TkG: Tassel-----	50	Very limited Slope	1.00	Very limited Droughty	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Too steep for surface application	1.00
		Droughty	1.00	Slope	1.00	Too steep for surface application	1.00
		Runoff limitation	0.40	Filtering capacity	0.00	Too steep for sprinkler application	1.00
Ashollow-----	35	Filtering capacity	0.00			Filtering capacity	0.00
		Very limited Slope	1.00	Very limited Slope	1.00	Too steep for surface application	1.00
VaD: Valentine-----	100	Filtering capacity	0.00	Filtering capacity	0.00	Too steep for sprinkler application	1.00
		Leaching limitation	0.45	Droughty	0.29	Filtering capacity	0.00
VaE: Valentine-----	100	Droughty	0.29			Very limited	1.00
						Filtering capacity	1.00
						Too steep for surface application	0.66
						Droughty	0.29
						Too steep for sprinkler application	0.00
						Very limited	

AGRICULTURAL WASTE MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
VaF: Valentine-----	50	Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Too steep for sprinkler application	1.00
		Leaching limitation	0.45	Droughty	0.29	Filtering capacity	1.00
		Droughty	0.29	Droughty	0.29	Droughty	0.29
Valentine-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Too steep for sprinkler application	1.00
		Leaching limitation	0.45	Droughty	0.29	Filtering capacity	1.00
		Droughty	0.29	Droughty	0.29	Droughty	0.29
VdB: Valentine-----	100	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Too steep for sprinkler application	1.00
		Leaching limitation	0.45	Droughty	0.23	Filtering capacity	1.00
		Droughty	0.23	Droughty	0.23	Droughty	0.23
Vt: Vetal-----	100	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
W: Water-----	100	Not rated		Not rated		Not rated	
WeB: Wildhorse-----	100	Very limited Sodium content	1.00	Very limited Sodium content	1.00	Very limited Sodium content	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Droughty	0.99	Droughty	0.99	Droughty	0.99
		Depth to saturated zone	0.84	Depth to saturated zone	0.84	Depth to saturated zone	0.84
WhB: Wildhorse-----	65	Leaching limitation	0.45	Salinity	0.00	Salinity	0.00
		Very limited Sodium content	1.00	Very limited Sodium content	1.00	Very limited Sodium content	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Droughty	0.99	Droughty	0.99	Droughty	0.99
Hoffland-----	35	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Runoff limitation	0.40	Runoff limitation	0.40	Runoff limitation	0.40
		Leaching limitation	0.45	Salinity	0.00	Salinity	0.00
WkB: Wildhorse-----	60	Very limited Sodium content	1.00	Very limited Sodium content	1.00	Very limited Sodium content	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Droughty	1.00	Droughty	1.00	Droughty	1.00
		Leaching limitation	0.45	Salinity	0.00	Salinity	0.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Garden County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ipage-----	40	Depth to saturated zone	0.84	Depth to saturated zone	0.84	Depth to saturated zone	0.84
		Leaching limitation	0.45	Salinity	0.00	Salinity	0.00
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Droughty Leaching limitation	0.62 0.45	Droughty	0.62	Droughty	0.62

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed. The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (USDA, 1999) and "Keys to Soil Taxonomy" (USDA, 1998) and in the "Soil Survey Manual" (USDA, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 1996).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units in the Hydric Soil Interpretations table meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 1996).

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

These map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

HYDRIC SOIL INTERPRETATIONS
 HYDRIC SOILS LIST
 Garden County, Nebraska

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
Ao: ALLIANCE LOAM, 0 TO 1 PERCENT SLOPES	ALLIANCE	No	plain	---	---	---	---
	LODGEPOLE	Yes	playa	2A	YES	NO	NO
AoB: ALLIANCE LOAM, 1 TO 3 PERCENT SLOPES	ALLIANCE	No	plain	---	---	---	---
	LODGEPOLE	Yes	playa	2A	YES	NO	NO
Ar: ALMERIA FINE SANDY LOAM, CHANNELED, 0 TO 2 PERCENT SLOPES	ALMERIA	Yes	flood plain	2B3	YES	NO	NO
	FLUVAQUENTS	Yes	flood plain	2B1,3	YES	NO	YES
AsF: ASHOLLOW-TASSEL COMPLEX, 9 TO 30 PERCENT SLOPES	ASHOLLOW	No	hillslope	---	---	---	---
	TASSEL	No	hillslope	---	---	---	---
Bh: BAYARD FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	BAYARD	No	stream terrace	---	---	---	---
BhB: BAYARD FINE SANDY LOAM, 1 TO 3 PERCENT SLOPES	BAYARD	No	stream terrace	---	---	---	---
	PERCHED WT	Yes	swale	2A	YES	NO	NO
BhC: BAYARD FINE SANDY LOAM, 3 TO 6 PERCENT SLOPES	BAYARD	No	hillslope	---	---	---	---
BmB: BAYARD VERY FINE SANDY LOAM, 1 TO 3 PERCENT SLOPES	BAYARD	No	stream terrace	---	---	---	---
Bn: BAYARD LOAM, 0 TO 1 PERCENT SLOPES	BAYARD	No	stream terrace	---	---	---	---
BpB: BLANCHE LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	BLANCHE	No	plain	---	---	---	---
BrF: BLUERIDGE COARSE SAND, 6 TO 30 PERCENT SLOPES	BLUERIDGE	No	hillslope	---	---	---	---
Bw: BROADWATER LOAMY SAND, CHANNELED, 0 TO 2 PERCENT SLOPES	BROADWATER	No	flood plain	---	---	---	---
BxD: BUSHER-TASSEL COMPLEX, 3 TO 9 PERCENT SLOPES	BUSHER	No	hillslope	---	---	---	---
	TASSEL	No	hillslope	---	---	---	---
BxE: BUSHER-TASSEL COMPLEX, 9 TO 20 PERCENT SLOPES	BUSHER	No	hillslope	---	---	---	---
	TASSEL	No	hillslope	---	---	---	---
Cw: CROWTHER LOAM, 0 TO 1 PERCENT SLOPES	CROWTHER	Yes	interdune	2B3	YES	NO	NO
	MARLAKE	Yes	depression	2B2,3	YES	NO	YES
Cx: CROWTHER LOAM, WET, 0 TO 1 PERCENT SLOPES	CROWTHER	Yes	interdune	2B3,3	YES	NO	YES
	MARLAKE	Yes	depression	2B2,3	YES	NO	YES
DbB: DAILEY LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	DAILEY	No	interdune	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B2	YES	NO	NO
DdC: DANKWORTH LOAMY SAND, 3 TO 6 PERCENT SLOPES	DANKWORTH	No	hillslope	---	---	---	---
Dw: DUROC LOAM, 0 TO 1 PERCENT SLOPES	DUROC	No	swale	---	---	---	---
Eh: ELS FINE SAND, CALCAREOUS, 0 TO 2 PERCENT SLOPES	ELS	No	interdune	---	---	---	---
	HOFFLAND	Yes	swale	2B2	YES	NO	NO

HYDRIC SOIL INTERPRETATIONS
 HYDRIC SOILS LIST
 Garden County, Nebraska

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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
EuG: EPPING-ROCK OUTCROP COMPLEX, 30 TO 60 PERCENT SLOPES	EPPING	No	hillslope	---	---	---	---
	ROCK OUTCROP	Unranked	hillslope	---	---	---	---
Fu: FLUVAQUENTS, SANDY, 0 TO 1 PERCENT SLOPES	FLUVAQUENTS	Yes	flood plain	2B1,3,4	YES	YES	YES
	GOTHENBURG	Yes	flood plain	2B2	YES	NO	NO
GP: GRAVEL PIT	PITS	Unranked	flood plain	---	---	---	---
Gt: GOTHENBURG LOAMY SAND, 0 TO 2 PERCENT SLOPES	GOTHENBURG	Yes	flood plain	2B2	YES	NO	NO
Hh: HOFFLAND FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	HOFFLAND	Yes	interdune	2B3	YES	NO	NO
	MARLAKE	Yes	interdune	2B2,3	YES	NO	YES
Ho: HOFFLAND FINE SANDY LOAM, WET, 0 TO 1 PERCENT SLOPES	HOFFLAND	Yes	interdune	2B3,3	YES	NO	YES
	MARLAKE	Yes	depression	2B2,3	YES	NO	YES
INT: AQUOLLS	AQUOLLS	Yes	depression	3,2B3	YES	NO	YES
IsB: IPAGE FINE SAND, CALCAREOUS, 0 TO 3 PERCENT SLOPES	IPAGE	No	interdune	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B2	YES	NO	NO
Ja: JANKOSH LOAM, 0 TO 2 PERCENT SLOPES	JANKOSH	No	flood plain	---	---	---	---
JeB: JAYEM LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	JAYEM	No	plain	---	---	---	---
	PERCHED WT	Yes	depression	2A	YES	NO	NO
JeC: JAYEM LOAMY FINE SAND, 3 TO 6 PERCENT SLOPES	JAYEM	No	hillslope	---	---	---	---
Jg: JAYEM FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	JAYEM	No	plain	---	---	---	---
	PERCHED WT	Yes	depression	2A	YES	NO	NO
JgC: JAYEM FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES	JAYEM	No	hillslope	---	---	---	---
	PERCHED WT	Yes	depression	2A	YES	NO	NO
KeB: KEITH LOAM, 1 TO 3 PERCENT SLOPES	KEITH	No	plain	---	---	---	---
KeC: KEITH LOAM, 3 TO 6 PERCENT SLOPES	KEITH	No	hillslope	---	---	---	---
	LODGEPOLE	Yes	playa	2A	YES	NO	NO
Ku: KUMA LOAM, 0 TO 1 PERCENT SLOPES	KUMA	No	plain	---	---	---	---
	LODGEPOLE	Yes	playa	2A	YES	NO	NO
La: LEMOYNE SAND, 0 TO 2 PERCENT SLOPES	LEMOYNE	No	flood plain	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B2	YES	NO	NO
Lb: LEWELLEN LOAM, 0 TO 2 PERCENT SLOPES	LEWELLEN	No	flood plain	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B3	YES	NO	NO
Lc: LEWELLEN-MCCULIGAN COMPLEX, 0 TO 2 PERCENT SLOPES	LEWELLEN	No	flood plain	---	---	---	---
	MCCULIGAN	Yes	flood plain	2B3	YES	NO	NO
	FLUVAQUENTS	Yes	flood plain	2B1,3	YES	NO	YES
Lf: LODGEPOLE SILT LOAM, 0 TO 1 PERCENT SLOPES	LODGEPOLE	Yes	depression	2A	YES	NO	NO
	PONDED SOILS	Yes	playa	2B3,3	YES	NO	YES
M-W: MISCELLANEOUS WATER (SEWAGE LAGOONS)	MISCELLANEOUS WATER	---	---	---	---	---	---

HYDRIC SOIL INTERPRETATIONS
HYDRIC SOILS LIST
Garden County, Nebraska

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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
Ma: MARLAKE FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	MARLAKE	Yes	interdune	2B3,3	YES	NO	YES
Mc: MARLAKE MUCKY PEAT, 0 TO 1 PERCENT SLOPES	MARLAKE	Yes	interdune	2B3,3	YES	NO	YES
MtC: MITCHELL VERY FINE SANDY LOAM, 3 TO 6 PERCENT SLOPES	MITCHELL	No	hillslope	---	---	---	---
MtD: MITCHELL VERY FINE SANDY LOAM, 6 TO 9 PERCENT SLOPES	MITCHELL	No	hillslope	---	---	---	---
MxF: MITCHELL-EPPING COMPLEX, 9 TO 30 PERCENT SLOPES	MITCHELL	No	hillslope	---	---	---	---
	EPPING	No	hillslope	---	---	---	---
Ru: RUSHCREEK LOAM, 0 TO 2 PERCENT SLOPES	RUSHCREEK	No	flood plain	---	---	---	---
SaB: SARBEN LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	SARBEN	No	hillslope	---	---	---	---
SaC: SARBEN LOAMY FINE SAND, 3 TO 6 PERCENT SLOPES	SARBEN	No	hillslope	---	---	---	---
SaD: SARBEN LOAMY FINE SAND, 6 TO 9 PERCENT SLOPES	SARBEN	No	hillslope	---	---	---	---
SaE: SARBEN LOAMY FINE SAND, 9 TO 20 PERCENT SLOPES	SARBEN	No	hillslope	---	---	---	---
Sc: SCOVILLE LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES	SCOVILLE	No	stream terrace	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2A	YES	NO	NO
SnC: SIDNEY LOAM, 3 TO 6 PERCENT SLOPES	SIDNEY	No	hillslope	---	---	---	---
	LODGEPOLE	Yes	playa	2A	YES	NO	NO
StD: SIDNEY-CANYON COMPLEX, 6 TO 9 PERCENT SLOPES	SIDNEY	No	hillslope	---	---	---	---
	CANYON	No	hillslope	---	---	---	---
SuG: SULCO LOAM, 30 TO 60 PERCENT SLOPES	SULCO	No	hillslope	---	---	---	---
SxC2: SULCO-MCCONAUGHY COMPLEX, 3 TO 6 PERCENT SLOPES, ERODED	SULCO	No	hillslope	---	---	---	---
	MCCONAUGHY LODGEPOLE	No Yes	hillslope playa	---	---	---	---
SxD2: SULCO-MCCONAUGHY COMPLEX, 6 TO 9 PERCENT SLOPES, ERODED	SULCO	No	hillslope	---	---	---	---
	MCCONAUGHY	No	hillslope	---	---	---	---
SxE2: SULCO-MCCONAUGHY COMPLEX, 9 TO 20 PERCENT SLOPES, ERODED	SULCO	No	hillslope	---	---	---	---
	MCCONAUGHY LODGEPOLE	No Yes	hillslope playa	---	---	---	---
SxF: SULCO-MCCONAUGHY COMPLEX, 9 TO 30 PERCENT SLOPES	SULCO	No	hillslope	---	---	---	---
	MCCONAUGHY	No	hillslope	---	---	---	---

HYDRIC SOIL INTERPRETATIONS
 HYDRIC SOILS LIST
 Garden County, Nebraska

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
TkG: TASSEL-ASHOLLOW-ROCK OUTCROP COMPLEX, 20 TO 60 PERCENT SLOPES	TASSEL	No	hillslope	---	---	---	---
	ASHOLLOW ROCK OUTCROP	No Unranked	hillslope hillslope	---	---	---	---
VaD: VALENTINE FINE SAND, 3 TO 9 PERCENT SLOPES	VALENTINE	No	dune	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B2	YES	NO	NO
VaE: VALENTINE FINE SAND, ROLLING	VALENTINE	No	dune	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B2	YES	NO	NO
VaF: VALENTINE COMPLEX, ROLLING AND HILLY	VALENTINE	No	dune	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B2	YES	NO	NO
VdB: VALENTINE LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	VALENTINE	No	dune	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B2	YES	NO	NO
Vt: VETAL FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	VETAL	No	interdune	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2A	YES	NO	NO
W: WATER	WATER	Unranked	---	---	---	---	---
WeB: WILDHORSE FINE SAND, 0 TO 3 PERCENT SLOPES	WILDHORSE	No	interdune	---	---	---	---
	HOFFFLAND	Yes	swale	2B2	YES	NO	NO
WhB: WILDHORSE-HOFFFLAND COMPLEX, 0 TO 3 PERCENT SLOPES	WILDHORSE	No	interdune	---	---	---	---
	HOFFFLAND MARLAKE	Yes Yes	interdune depression	2B3 2B2,3	YES YES	NO NO	NO YES
WkB: WILDHORSE-IPAGE, CALCAREOUS COMPLEX, 0 TO 3 PERCENT SLOPES	WILDHORSE	No	interdune	---	---	---	---
	IPAGE HOFFFLAND	No Yes	interdune swale	---	---	---	---

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria

FOOTNOTE: There may be small areas of included soils or miscellaneous areas that are significant to use and management of the soil; yet are too small to delineate on the soil map at the map's original scale. These may be designated as spot symbols and are defined in the published Soil Survey Report or the USDA-NRCS Technical Guide, Part II.

Areas mapped as water or any map unit that contains one of the following conventional symbols is considered a hydric soil map unit: marshes or swamps; wet spots; depressions; streams, lakes and ponds.

1. All Histosols except Folists, or
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Aquisalids, Pachic subgroups, or Cumulic subgroups that are:
 - a. Somewhat poorly drained with a water table equal to 0.0 foot (ft) from the surface during the growing season, or
 - b. poorly drained or very poorly drained and have either:
 - (1) water table equal to 0.0 ft during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches (in), or for other soils
 - (2) water table at less than or equal to 0.5 ft from the surface during the growing season if permeability is equal to or greater than 6.0 in/hour (h) in all layers within 20 in, or
 - (3) water table at less than or equal to 1.0 ft from the surface during the growing season if permeability is less than 6.0 in/h in any layer within 20 in, or
3. Soils that are frequently ponded for long duration or very long duration during the growing season, or
4. Soils that are frequently flooded for long duration or very long duration during the growing season.

HIGHLY ERODIBLE LANDS REPORT

Survey Area- GARDEN COUNTY, NEBRASKA

Map Symbol	Soil Mapunit Name	HEL Classifications		
		C=50	R=75	wnd wat mu
Ao	ALLIANCE LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
AoB	ALLIANCE LOAM, 1 TO 3 PERCENT SLOPES	3	3	3
Ar	ALMERIA FINE SANDY LOAM, CHANNELED, 0 TO 2 PERCENT SLOPES	1	3	1
AsF	ASHOLLOW-TASSEL COMPLEX, 9 TO 30 PERCENT SLOPES	1	1	1
Bh	BAYARD FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	1	3	1
BhB	BAYARD FINE SANDY LOAM, 1 TO 3 PERCENT SLOPES	1	3	1
BhC	BAYARD FINE SANDY LOAM, 3 TO 6 PERCENT SLOPES	1	3	1
BmB	BAYARD VERY FINE SANDY LOAM, 1 TO 3 PERCENT SLOPES	1	3	1
Bn	BAYARD LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
BpB	BLANCHE LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	1	3	1
BrF	BLUERIDGE COARSE SAND, 6 TO 30 PERCENT SLOPES	1	2	1
Bw	BROADWATER LOAMY SAND, CHANNELED, 0 TO 2 PERCENT SLOPES	1	3	1
BxD	BUSHER-TASSEL COMPLEX, 3 TO 9 PERCENT SLOPES	1	1	1
BxE	BUSHER-TASSEL COMPLEX, 9 TO 20 PERCENT SLOPES	1	1	1
Cw	CROWTHER LOAM, 0 TO 1 PERCENT SLOPES	1	3	1
Cx	CROWTHER LOAM, WET, 0 TO 1 PERCENT SLOPES	1	3	1
DbB	DAILEY LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	1	3	1
DdC	DANKWORTH LOAMY SAND, 3 TO 6 PERCENT SLOPES	1	3	1
Dw	DUROC LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
Eh	ELS FINE SAND, CALCAREOUS, 0 TO 2 PERCENT SLOPES	1	3	1
EuG	EPPING-ROCK OUTCROP COMPLEX, 30 TO 60 PERCENT SLOPES	1	1	1
Fu	FLUVAQUENTS, SANDY, 0 TO 1 PERCENT SLOPES	3	3	3
Gt	GOTHENBURG LOAMY SAND, 0 TO 2 PERCENT SLOPES	1	3	1
Hh	HOFFLAND FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	1	3	1
Ho	HOFFLAND FINE SANDY LOAM, WET, 0 TO 1 PERCENT SLOPES	1	3	1
IsB	IPAGE FINE SAND, CALCAREOUS, 0 TO 3 PERCENT SLOPES	1	3	1
Ja	JANKOSH LOAM, 0 TO 2 PERCENT SLOPES	1	3	1
JeB	JAYEM LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	1	3	1
JeC	JAYEM LOAMY FINE SAND, 3 TO 6 PERCENT SLOPES	1	3	1
Jg	JAYEM FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	1	3	1
JgC	JAYEM FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES	1	3	1
KeB	KEITH LOAM, 1 TO 3 PERCENT SLOPES	3	3	3
KeC	KEITH LOAM, 3 TO 6 PERCENT SLOPES	3	3	3
Ku	KUMA LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
La	LEMOYNE SAND, 0 TO 2 PERCENT SLOPES	1	3	1
Lb	LEWELLEN LOAM, 0 TO 2 PERCENT SLOPES	1	3	1
Lc	LEWELLEN-MCCULIGAN COMPLEX, 0 TO 2 PERCENT SLOPES	1	3	1
Lf	LODGEPOLE SILT LOAM, 0 TO 1 PERCENT SLOPES	1	3	1
Ma	MARLAKE FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
Mc	MARLAKE MUCKY PEAT, 0 TO 1 PERCENT SLOPES	3	3	3
MtC	MITCHELL VERY FINE SANDY LOAM, 3 TO 6 PERCENT SLOPES	1	3	1
MtD	MITCHELL VERY FINE SANDY LOAM, 6 TO 9 PERCENT SLOPES	1	1	1
MxF	MITCHELL-EPPING COMPLEX, 9 TO 30 PERCENT SLOPES	1	1	1
Pg	PITS, SAND AND GRAVEL	3	3	3
Ru	RUSHCREEK LOAM, 0 TO 2 PERCENT SLOPES	1	3	1
SaB	SARBEN LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	1	3	1
SaC	SARBEN LOAMY FINE SAND, 3 TO 6 PERCENT SLOPES	1	3	1
SaD	SARBEN LOAMY FINE SAND, 6 TO 9 PERCENT SLOPES	1	3	1
SaE	SARBEN LOAMY FINE SAND, 9 TO 20 PERCENT SLOPES	1	1	1
Sc	SCOVILLE LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES	1	3	1
SnC	SIDNEY LOAM, 3 TO 6 PERCENT SLOPES	3	3	3
StD	SIDNEY-CANYON COMPLEX, 6 TO 9 PERCENT SLOPES	1	2	1
SuG	SULCO LOAM, 30 TO 60 PERCENT SLOPES	1	1	1
SxC2	SULCO-MCCONAUGHY COMPLEX, 3 TO 6 PERCENT SLOPES,	2	3	1

SxD2	ERODED SULCO-MCCONAUGHY COMPLEX, 6 TO 9 PERCENT SLOPES, ERODED	2	3	1
SxE2	SULCO-MCCONAUGHY COMPLEX, 9 TO 20 PERCENT SLOPES, ERODED	2	2	2
SxF	SULCO-MCCONAUGHY COMPLEX, 9 TO 30 PERCENT SLOPES	2	2	2
TkG	TASSEL-ASHOLLOW-ROCK OUTCROP COMPLEX, 20 TO 60 PERCENT SLOPES	1	1	1
VaD	VALENT FINE SAND, 3 TO 9 PERCENT SLOPES	1	3	1
VaE	VALENT FINE SAND, ROLLING	1	3	1
VaF	VALENT COMPLEX, ROLLING AND HILLY	1	3	1
VdB	VALENT LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	1	3	1
Vt	VETAL FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	1	3	1
WeB	WILDHORSE FINE SAND, 0 TO 3 PERCENT SLOPES	1	3	1
WhB	WILDHORSE-HOFFLAND COMPLEX, 0 TO 3 PERCENT SLOPES	1	3	1
WkB	WILDHORSE-IPAGE, CALCAREOUS COMPLEX, 0 TO 3 PERCENT SLOPES	1	3	1