

Lauver, C. L., K. Kindscher, D. Faber-Langendoen, and R. Schneider. (1999). A Classification of the Natural Vegetation of Kansas. *The Southwestern Naturalist* 44(4):421-443.

TABLE 1))The classification of the natural vegetation of Kansas. Community types are listed in bold text followed by a unique TNC code (Anderson et al., 1998). Types marked with an asterisk (*) are wetlands. Plant species occurring in the same stratum are separated by " - ", and species occurring in different strata are separated by the " / " symbol. Species listed in parentheses are typical of a majority of stands, but are not found consistently in the type. Species listed within the [] symbols are regionally significant but are not generally found in Kansas.

United States National

Vegetation Classification

Kansas community types

I. **FOREST** (61 to 100% tree cover; trees > 5m tall)

I.B. Deciduous forest (deciduous species contribute > 75% of total tree cover)

I.B.2. Cold-deciduous forest

I.B.2.N.a.Lowland and submontane cold-deciduous forest

I.B.2.N.a.ACER SACCHARUM - TILIA AMERICANA - (QUERCUS RUBRA)

FOREST ALLIANCE

I.B.2.N.a.**Acer saccharum** - [**Acer nigrum**] - **Tilia americana** - **Quercus rubra** /

Ostrya virginiana Forest (2061)

Common name: maple - basswood forest

Distribution: Glaciated Region (restricted to the eastern third of this region)

Other states: IA, MO, NE

Pattern: small-patch

Habitat: moderate to steep slopes on uplands and valley sides

Soils: well drained silts and loams, formed in loess or glacial till

Other species: Asimina triloba, Carya cordiformis, Celtis occidentalis,

Fraxinus americana, Gymnocladus dioica, Juglans nigra, Prunus serotina,

Quercus macrocarpa, Staphylea trifolia, Ulmus americana, Viburnum

prunifolium

Note: In general, Acer nigrum is not part of the Kansas community type but
is a regional co-dominant.

I.B.2.N.a. QUERCUS ALBA - (QUERCUS RUBRA, CARYA SP.) FOREST
ALLIANCE

I.B.2.N.a. **Quercus alba / Cornus florida Unglaciaded Forest** (2066)

Common names: oak - dogwood forest, Ozark forest

Distribution: Ozark Plateau

Other states: IL, IN, MO

Pattern: large-patch

Habitat: level to steep uplands

Soils: cherty, silty well drained soils, formed from cherty limestone

Other species: Carya cordiformis, Carya ovata, Danthonia spicata,
Euonymus atropurpureus, Ostrya virginiana, Sassafras albidum, Staphylea
trifolia, Vaccinium arboreum

I.B.2.N.a. **Quercus alba - (Quercus velutina) - Carya ovata / Ostrya virginiana**
Forest (2011)

Common name: oak - hickory forest

Distribution: Glaciaded Region, Osage Cuestas

Other States: IA, MO, NE, OK

Pattern: large-patch

Habitat: gentle to moderately steep slopes on uplands and valley sides

Soils: poorly drained to well drained silts and loams, formed in loess, glacial
till, or from shale or limestone

Other species: Carya cordiformis, Cercis canadensis, Fraxinus americana,
Prunus serotina, Quercus rubra, Ulmus americana, Viburnum rufidulum

I.B.2.N.a. QUERCUS STELLATA - QUERCUS MARILANDICA FOREST

ALLIANCE

I.B.2.N.a. **Quercus stellata - Quercus marilandica - [Carya texana]** Forest (2074)

Common names: post oak - blackjack oak forest, Cross Timbers forest

Distribution: Chautauqua Hills, Osage Cuestas

Other states: OK, TX

Pattern: large-patch

Habitat: ridgetops and nearly level to steep hillsides

Soils: shallow to moderately deep, sandy and loamy soils from sandstone

Other species: Carya cordiformis, Quercus prinoides, Quercus velutina,
Rhus copallina, Rhus glabra, Schizachyrium scoparium

I.B.2.N.d. Temporarily flooded cold-deciduous forest

I.B.2.N.d. CARYA ILLINOINENSIS - (CELTIS LAEVIGATA) TEMPORARILY
FLOODED FOREST ALLIANCE

I.B.2.N.d. * **Carya illinoensis - Celtis occidentalis** Forest (2087)

Common name: pecan - hackberry floodplain forest

Distribution: Cherokee Lowlands, Glaciated Region, Osage Cuestas

Other states: AR, MO (possible), OK, TX

Pattern: small-patch

Habitat: nearly level floodplains along major streams and rivers

Soils: deep, poorly drained to well drained, formed in silty and clayey recent
alluvium

Other species: Acer negundo, Carex grayi, Fraxinus pennsylvanica, Juglans
nigra, Parthenocissus quinquefolia, Platanus occidentalis, Toxicodendron
radicans, Ulmus americana

I.B.2.N.d. FRAXINUS PENNSYLVANICA - ULMUS AMERICANA - CELTIS

(OCCIDENTALIS, LAEVIGATA) TEMPORARILY FLOODED
FOREST ALLIANCE

I.B.2.N.d. * **Fraxinus pennsylvanica - Ulmus sp. - Celtis occidentalis Forest** (2014)

Common name: ash - elm - hackberry floodplain forest

Distribution: eastern half of Kansas

Other states: IA, IL, IN, MI, NE, OH

Pattern: large-patch

Habitat: nearly level bottoms and terraces along major streams and rivers

Soils: deep, poorly drained to well drained, formed in silty and clayey recent
alluvium

Other species: Juglans nigra, Parthenocissus quinquefolia, Populus deltoides,
Quercus palustris, Quercus shumardii, Toxicodendron radicans, Ulmus
americana, Ulmus rubra

I.B.2.N.d. POPULUS DELTOIDES TEMPORARILY FLOODED FOREST
ALLIANCE

I.B.2.N.d. * **Populus deltoides - Platanus occidentalis Forest** (2095)

Common name: cottonwood - sycamore floodplain forest

Distribution: Cherokee Lowlands, Flint Hills Uplands, Glaciated Region,
Osage Cuestas

Other states: MO (possible)

Pattern: large-patch

Habitat: nearly level and undulating soils on floodplains along major rivers
and streams

Soils: deep, poorly drained to well drained, formed in silty and clayey recent
alluvium

Other species: Acer negundo, Carya illinoensis, Celtis occidentalis, Salix

nigra

I.B.2.N.d. * **Populus deltoides - Salix nigra Forest** (2018)

Common name: cottonwood - black willow floodplain forest

Distribution: statewide

Other states: AR, IA, IL, KY, MN, MO, NE, OH, OK, TN, WI

Pattern: small-patch

Habitat: nearly level to undulating floodplains along the fronts and banks of
most major rivers and streams throughout the central and southern U.S.

Soils: deep, medium-textured, formed in alluvium

Other species: Acer negundo, Acer saccharinum, Aster simplex, Bidens sp.,
Carex sp., Fraxinus pennsylvanica, Leersia oryzoides, Platanus occidentalis,
Salix eriocephala, Ulmus americana

I.B.2.N.d. QUERCUS MACROCARPA - QUERCUS BICOLOR - (CARYA
LACINIOSA) TEMPORARILY FLOODED FOREST ALLIANCE

I.B.2.N.d. * **Quercus macrocarpa - Quercus shumardii - Carya cordiformis /
Chasmanthium latifolium Forest** (4544)

Common name: mixed oak floodplain forest

Distribution: Glaciated Region, Osage Cuestas

Other states: AR, MO, OK

Pattern: small-patch

Habitat: nearly level to undulating floodplains

Soils: deep, medium-textured, formed in alluvium

Other species: Acer negundo, Acer saccharinum, Carex sp., Fraxinus
pennsylvanica, Leersia oryzoides, Platanus occidentalis, Ulmus americana

II. **WOODLAND** (26 to 60% tree cover; trees > 5m tall)

II.B. Deciduous woodland (deciduous species contribute > 75% of total tree cover)

II.B.2. Cold-deciduous woodland

II.B.2.N.a. Cold-deciduous woodland

II.B.2.N.a. QUERCUS MACROCARPA WOODLAND ALLIANCE

II.B.2.N.a. **Quercus macrocarpa / Andropogon gerardii - Panicum virgatum Woodland** (2052)

Common name: mixed oak floodplain woodland

Distribution: Glaciated Region, Osage Cuestas

Other states: NE, OK

Pattern: small-patch

Habitat: nearly level to gently sloping soils on floodplains along major rivers and streams

Soils: deep, somewhat poorly drained, formed in silty and clayey recent alluvium

Other species: Carya illinoensis, Fraxinus sp., Salix nigra, Spartina pectinata

II.B.2.N.a. **Quercus macrocarpa / Andropogon gerardii - Stipa spartea Woodland** (2053)

Common name: oak floodplain woodland

Distribution: Glaciated Region, north half of Osage Cuestas

Other states: IA, MO, NE, SD (possible)

Pattern: small-patch

Habitat: floodplains of rivers and streams with gentle to steep slopes

Soils: silts or loams, formed from loess or glacial till

Other species: Fraxinus sp., Panicum virgatum, Quercus rubra, Schizachyrium scoparium, Sorghastrum nutans

II.B.2.N.a. QUERCUS MUEHLENBERGII WOODLAND ALLIANCE

II.B.2.N.a. Quercus muehlenbergii - Quercus macrocarpa / Andropogon gerardii
Ravine Woodland (2145)

Common name: mixed oak ravine woodland

Distribution: Flint Hills Uplands, Glaciated Region, Osage Cuestas

Other states: NE (possible)

Pattern: small-patch

Habitat: ravines and valleys of rivers and major streams

Soils: shallow to moderately deep, silty clay loams and cherty silt loams,
formed from shale and limestone

Other species: Cercis canadensis, Panicum virgatum, Schizachyrium
scoparium, Ulmus sp.

II.B.2.N.a. QUERCUS STELLATA - QUERCUS MARILANDICA WOODLAND
ALLIANCE

II.B.2.N.a. Quercus stellata - Quercus marilandica / Schizachyrium scoparium
Woodland (2147)

Common names: post oak - blackjack oak woodland, Cross Timbers
woodland

Distribution: Chautauqua Hills, Osage Cuestas

Other states: OK, TX

Pattern: large-patch

Habitat: ridgetops and gently sloping to steep hillsides

Soils: shallow to moderately deep, sandy and loamy, somewhat poorly
drained to well drained, from sandstone

Other species: Andropogon gerardii, Celtis tenuifolia, Quercus prinoides,
Sorghastrum nutans

II.B.2.N.b. Temporarily flooded cold-deciduous woodland

II.B.2.N.b. **POPULUS DELTOIDES TEMPORARILY FLOODED WOODLAND
ALLIANCE**

II.B.2.N.b. * **Populus deltoides - (Salix amygdaloides) / Salix exigua Woodland** (0659)

Common name: cottonwood - willow floodplain woodland

Distribution: Arkansas River Lowlands, High Plains, Red Hills, Smoky
Hills, Wellington-McPherson Lowlands

Other states: CO, ND, NE, NM, OK, SD, TX

Pattern: small-patch

Habitat: nearly level floodplains along major rivers and streams

Soils: deep loams, silts, and sands, somewhat poorly drained to well
drained, formed in sandy recent alluvium or in calcareous silty or loamy
recent alluvium

Other species: Amorpha fruticosa, Elymus virginicus, Muhlenbergia sp.

II.B.2.N.b. * **Populus deltoides - (Salix nigra) / Spartina pectinata - Carex sp.
Woodland** (2017)

Common name: cottonwood floodplain woodland

Distribution: eastern third of Kansas

Other states: MO, NE, SD

Pattern: small-patch

Habitat: floodplains near the lower Missouri River and its tributaries

Soils: deep sandy loam to sand, somewhat poorly drained, formed from
alluvium

Other species: Acer negundo, Andropogon gerardii, Fraxinus pennsylvanica,
Panicum virgatum, Quercus macrocarpa

II.B.2.N.b. * **Populus deltoides / Panicum virgatum - Schizachyrium scoparium**

Woodland (1454)

Common name: cottonwood - switchgrass floodplain woodland

Distribution: High Plains

Other states: CO, NE, OK, SD, TX

Pattern: small-patch

Habitat: swales and depressions along streams

Soils: poorly drained sands and clays

Other species: Chrysothamnus nauseosus, Pascopyrum smithii

III. **SHRUBLAND** (Shrubs or trees 0.5 to 5m tall forming > 25% canopy cover)

III.A. Evergreen shrubland (evergreen species contribute > 75% of total shrub and/or tree cover)

III.A.4. Microphyllous evergreen shrubland

III.A.4.N.a. Microphyllous evergreen shrubland

III.A.4.N.a. ARTEMISIA FILIFOLIA SHRUBLAND ALLIANCE

III.A.4.N.a. Artemisia filifolia / Andropogon hallii Shrubland (1459)

Common name: sandsage - sand bluestem shrubland

Distribution: Arkansas River Lowlands, High Plains, Red Hills, Smoky Hills

Other states: CO, NE, NM, OK, TX, WY

Pattern: matrix

Habitat: gentle to moderately sloping loamy soils and rolling to hummocky sandy soils on uplands

Soils: deep, well drained to excessively drained, formed in loamy or sandy eolian sediments

Other species: Asclepias arenaria, Calamovilfa gigantea, Cyperus schweinitzii, Eragrostis secundiflora, Eriogonum annuum, Paspalum setaceum, Prionopsis ciliata

III.A.4.N.a. **Artemisia filifolia / Schizachyrium scoparium - Andropogon hallii**

Shrubland (2178)

Common name: sandsage - little bluestem shrubland

Distribution: Arkansas River Lowlands, High Plains, Red Hills, Smoky Hills
(primarily located in the southern half of these regions)

Other states: OK, TX

Pattern: large-patch

Habitat: sandy, rolling hills

Soils: loamy fine sand to sandy soils, excessively drained, formed in loamy
or sandy eolian sediments

Other species: Bouteloua curtipendula, Calamovilfa gigantea, Cyperus
schweinitzii, Eriogonum annuum, Helianthus petiolaris, Paspalum setaceum,
Prionopsis ciliata, Yucca glauca

III.A.4.N.a. **Artemisia filifolia / Bouteloua (curtipendula, gracilis) Shrubland** (2176)

Common name: sandsage - grama shrubland

Distribution: Arkansas River Lowlands, High Plains, Red Hills, Smoky Hills
(primarily located in the southern half of these regions)

Other states: OK, TX

Pattern: large-patch

Habitat: sandy, rolling hills

Soils: loamy fine sand to sandy soils, excessively drained, formed in loamy
or sandy eolian sediments

Other species: Andropogon hallii, Cyperus schweinitzii, Eriogonum annuum,
Helianthus petiolaris, Paspalum setaceum, Prionopsis ciliata, Schizachyrium
scoparium

III.A.5. Extremely xeromorphic evergreen shrubland

III.A.5.N.b. Facultatively deciduous extremely xeromorphic subdesert shrubland

III.A.5.N.b. ATRIPLEX CANESCENS SHRUBLAND ALLIANCE

III.A.5.N.b. **Atriplex canescens / Bouteloua gracilis Shrubland** (1283)

Common name: saltbush - grama shrubland

Distribution: High Plains

Other states: AZ, CO, NM, TX

Pattern: small-patch

Habitat: dry barren flats, slopes, and bluffs

Soils: shallow, rocky, alkaline

Other species: Bouteloua curtipendula, Bouteloua hirsuta, Rhus aromatica,
Toxicodendron rydbergii, Yucca glauca

III.B. Deciduous shrubland (deciduous species contribute > 75% of total shrub
and/or tree cover)

III.B.2. Cold-deciduous shrubland

III.B.2.N.d. Temporarily flooded cold-deciduous shrubland

III.B.2.N.d. SALIX EXIGUA TEMPORARILY FLOODED SHRUBLAND ALLIANCE

III.B.2.N.d. * **Salix exigua / Mesic Graminoids Shrubland** (1203)

Common name: willow - grass shrubland

Distribution: High Plains, Red Hills, Smoky Hills

Other states: CO, NE, OK, UT, WY

Pattern: small-patch

Habitat: sandbars, islands, and shorelines of streams and rivers

Soils: poorly developed, composed of sand, clay, silt, or gravel, formed in
alluvium

Other species: Andropogon gerardii, Eleocharis sp., Scirpus sp.

III.B.2.N.f. Semipermanently flooded cold-deciduous shrubland

III.B.2.N.f. CEPHALANTHUS OCCIDENTALIS SEMIPERMANENTLY FLOODED
SHRUBLAND ALLIANCE

III.B.2.N.f. * **Cephalanthus occidentalis / Carex sp. Southern Shrubland** (2191)

Common name: buttonbush swamp

Distribution: Cherokee Lowlands, Osage Cuestas

Other states: AR, IL, IN, KY, MO, OK, SC, TN, TX

Pattern: small-patch

Habitat: inundated depressions, oxbow ponds, and sloughs of stream and river floodplains

Soils: deep, very poorly drained soils of peat or muck, formed in alluvium

Other species: Eleocharis sp., Leersia sp., Salix amygdaloides, Salix nigra, Scirpus sp.

V. **HERBACEOUS** (Graminoids and/or forbs form > 25% cover; woody cover < 25%)

V.A. Perennial vegetation graminoid

V.A.5. Temperate or subpolar grassland

V.A.5.N.a. Tall sod temperate grassland (includes mixed sod and bunch graminoids)

V.A.5.N.a. ANDROPOGON GERARDII - (SORGHASTRUM NUTANS)

HERBACEOUS ALLIANCE

V.A.5.N.a. **Andropogon gerardii - Panicum virgatum - Schizachyrium scoparium**

Dakota Sandstone Herbaceous Vegetation (5231)

Common name: Dakota Hills tallgrass prairie

Distribution: Smoky Hills

Other states: NE

Pattern: large-patch

Habitat: moderately sloping to steep side slopes and ridgetops on uplands; hills and mounds with numerous sandstone outcrops are common

Soils: shallow, somewhat excessively drained to moderately deep, well
drained loamy soils, formed in material weathered from sandstone and sandy
shale

Other species: Bouteloua curtipendula, Clematis fremontii, Schizachyrium
scoparium, Sorghastrum nutans, Tradescantia occidentalis, Tradescantia
tharpii

Comments: In Kansas, this type is limited to soils underlain by the Dakota
(sandstone) Formation in the north-central part of the state.

V.A.5.N.a. **Andropogon gerardii - Sorghastrum nutans - Schizachyrium scoparium**
Flint Hills Herbaceous Vegetation (2201)

Common name: Flint Hills tallgrass prairie

Distribution: Flint Hills Uplands

Other states: OK

Pattern: matrix

Habitat: nearly level to steep slopes on uplands

Soils: shallow to deep, somewhat poorly to somewhat excessively drained,
loams, clays, and silts, formed in shale or limestone, or interbedded
limestone and clayey shale

Other species: Amorpha canescens, Aster ericoides, Bouteloua curtipendula,
Panicum virgatum, Psoralidium tenuiflorum, Sporobolus asper

V.A.5.N.a. **Andropogon gerardii - Sorghastrum nutans - (Sporobolus heterolepis) -**
Liatris sp. - Ratibida pinnata Herbaceous Vegetation (2203)

Common names: glaciated tallgrass prairie, northeastern (KS) tallgrass
prairie

Distribution: Glaciated Region

Other states: IA, IL, IN, MI, MN, MO, NE, OH, WI

Pattern: matrix

Habitat: nearly level to steep slopes on uplands

Soils: deep, somewhat poorly drained to well drained, silty and loamy soils
from loess, glacial till, or clayey colluvium

Other species: Amorpha canescens, Dalea candida, Dalea purpurea, Salix
humilis

V.A.5.N.a. **Andropogon gerardii - Sorghastrum nutans Unglaciaded Herbaceous
Vegetation** (2204)

Common names: unglaciaded tallgrass prairie, southeastern (KS) tallgrass
prairie

Distribution: Chautauqua Hills, Cherokee Lowlands, Osage Cuestas, Smoky
Hills (eastern quarter), Wellington-McPherson Lowlands

Other states: AR, MO, OK

Pattern: matrix

Habitat: nearly level to moderately steep slopes on uplands

Soils: moderately deep to deep, somewhat poorly drained to well drained
silts and loams, formed in clayey, old alluvium or from shale, limestone, or
sandstone

Other species: Amorpha canescens, Dalea candida, Dalea purpurea,
Psoralidium tenuiflorum, Schizachyrium scoparium, Scleria triglomerata

V.A.5.N.a. **Andropogon gerardii - Sorghastrum nutans - Stipa spartea Loess Hills
Herbaceous Vegetation** (2025)

Common names: loess hills tallgrass prairie, hill prairie

Distribution: Glaciated Region (primarily in the eastern third of this region)

Other states: IA, MO, NE, SD

Pattern: small-patch

Habitat: bluff tops along larger streams or rivers and moderately steep to very steep exposed slopes, typically with S- or W-facing aspects, of dissected hills or plains

Soils: deep, well drained silty loams, formed in loess or glacial till

Other species: Amorpha canescens, Bouteloua curtipendula, Dalea candida, Psoralidium tenuiflorum, Schizachyrium scoparium

Comments: In Kansas, this type is limited to the loess hills along the bluffs of the Missouri and Kansas Rivers and the glacial drift / till hills in the northeast.

V.A.5.N.a. **Andropogon gerardii - Sorghastrum nutans Western Great Plains
Herbaceous Vegetation** (1464)

Common names: western tallgrass prairie, subirrigated tallgrass prairie

Distribution: High Plains

Other states: CO, OK

Pattern: small-patch

Habitat: valley bottoms and terraces along larger streams or rivers

Soils: deep, somewhat poorly drained loam to sandy loam, formed in loamy and sandy alluvium

Other species: Desmanthus illinoensis, Glycyrrhiza lepidota, Panicum virgatum, Pascopyrum smithii, Schoenoplectus pungens, Sporobolus cryptandrus

V.A.5.N.a. ANDROPOGON HALLII HERBACEOUS ALLIANCE

V.A.5.N.a. **Andropogon hallii - Calamovilfa longifolia Herbaceous Vegetation** (1467)

Common name: sand prairie

Distribution: Arkansas River Lowlands, Red Hills, Smoky Hills, Wellington-McPherson Lowlands

Other states: MT, ND, NE, SD

Pattern: matrix

Habitat: undulating to hummocky sandy soils; nearly level to moderately-sloping loamy soils

Soils: deep, well drained to excessively drained, sand, loamy sand and sandy loams formed in sandy eolian sediments or in loamy alluvium

Other species: Calamovilfa gigantea (southern part of range), Helianthus petiolaris, Monarda punctata, Oenothera rhombipetala, Panicum virgatum, Prunus angustifolia, Schizachyrium scoparium

V.A.5.N.a. SCHIZACHYRIUM SCOPARIUM - SORGHASTRUM NUTANS
HERBACEOUS ALLIANCE

V.A.5.N.a. **Schizachyrium scoparium - Sorghastrum nutans - Andropogon ternarius - Coreopsis grandiflora Sandstone - Shale Herbaceous Vegetation** (2212)

Common name: sandstone prairie

Distribution: Chautauqua Hills, Osage Cuestas

Other states: MO

Pattern: small-patch

Habitat: level to nearly level plains and terraces on uplands

Soils: impermeable to semi-permeable clay and loamy soils, from shale or sandstone

Other species: Bouteloua curtipendula, Liatris pycnostachya, Panicum virgatum, Sabatia campestris, Viola sagittata

V.A.5.N.c. Medium-tall sod temperate or subpolar grassland (includes mixed sod and bunch graminoids)

V.A.5.N.c. PASCOPYRUM (AGROPYRON) SMITHII HERBACEOUS ALLIANCE

V.A.5.N.c. **Pascopyrum smithii - Bouteloua gracilis Herbaceous Vegetation** (1578)

Common name: wheatgrass - grama prairie

Distribution: High Plains

Other states: CO, NM

Pattern: small-patch

Habitat: nearly level ground or shallow depressions on uplands

Soils: silty clay loam with a impermeable or slowly permeable clay pan
subsoil layer

Other species: Bouteloua curtipendula, Buchloë dactyloides, Ratibida
columnifera

V.A.5.N.c. SCHIZACHYRIUM SCOPARIUM - BOUTELOUA CURTIPENDULA
HERBACEOUS ALLIANCE

V.A.5.N.c. **Schizachyrium scoparium - Bouteloua curtipendula - Bouteloua gracilis**
Central Plains Herbaceous Vegetation (2246)

Common name: mixed prairie

Distribution: High Plains, Smoky Hills

Other states: OK

Pattern: matrix

Habitat: level to moderately sloping uplands and steep ravine slopes

Soils: shallow to moderately deep, well drained loam, clay loam, silty loam,
or silt formed from limestone

Other species: Ambrosia psilostachya, Andropogon gerardii, Astragalus
crassicaupus var. crassicaupus, Bouteloua hirsuta, Buchloë dactyloides,
Calylophus serrulatus, Dalea enneandra, Liatris punctata, Sorghastrum nutans

V.A.5.N.c. **Schizachyrium scoparium - Bouteloua curtipendula Chalkflat Herbaceous**
Vegetation (2247)

Common name: chalkflat mixed prairie

Distribution: Smoky Hills (restricted to the valleys of Hackberry Creek and the Smoky Hill River)

Pattern: large-patch

Habitat: nearly level to gently sloping terraces below chalk or limestone outcrops

Soils: strongly calcareous silt or loam, moderately deep to deep, well drained, formed from chalky shale and soft limestone

Other species: Andropogon gerardii, Bouteloua gracilis, Bouteloua hirsuta, Buchloë dactyloides, Distichlis spicata, Eriogonum effusum, Gutierrezia sarothrae, Oenothera macrocarpa, Stanleya pinnata

V.A.5.N.c. **Schizachyrium scoparium - Bouteloua curtipendula Red Hills Herbaceous Vegetation** (2248)

Common name: Red Hills mixed prairie

Distribution: Red Hills

Other states: OK

Pattern: large-patch

Habitat: gently sloping to strongly dissected steep hills and escarpments on uplands

Soils: shallow to deep, well drained, silty, loamy and clayey soils formed from red silty shale, red silty sandstone, red sandstone, or clayey shale

Other species: Andropogon gerardii, Aster ericoides, Bouteloua gracilis, Bouteloua hirsuta, Callirhoe involucrata, Gutierrezia sarothrae, Sporobolus cryptandrus

Comments: Woody vegetation is scattered across the landscape, including Juniperus virginiana and groves of small deciduous trees and shrubs (Celtis occidentalis, Prunus angustifolia, Rhus glabra, Sapindus saponaria, Symphoricarpos occidentalis) on north-facing slopes and in valleys.

V.A.5.N.c. **Schizachyrium scoparium - Bouteloua curtipendula Loess Mixedgrass Herbaceous Vegetation** (2036)

Common name: loess mixed prairie

Distribution: High Plains (primarily in the northern third of this region)

Other states: CO, ND, NE, SD

Pattern: large-patch

Habitat: loess deposits on level to steep uplands

Soils: deep loam or silt loam formed in loess material

Other species: Andropogon gerardii, Artemisia dracunculus, Asclepias pumila, Bouteloua gracilis, Lygodesmia juncea, Panicum virgatum, Pascopyrum smithii, Ratibida columnifera, Solidago missouriensis

V.A.5.N.c. **Schizachyrium scoparium - Bouteloua curtipendula - Agrostis hyemalis - Eleocharis sp. Hardpan Herbaceous Vegetation** (2249)

Common name: hardpan prairie

Distribution: Cherokee Lowlands, Osage Cuestas

Other states: MO

Pattern: small-patch

Habitat: level to gently sloping ground on upland plains, ridges, and terraces

Soils: silty loam, with an impermeable or slowly permeable silty clay subsoil layer

Other species: Andropogon gerardii, Camassia scilloides, Carex sp., Cicuta maculata, Desmanthus illinoensis, Panicum virgatum, Polygala verticillata, Sporobolus vaginiflorus

V.A.5.N.c. STIPA COMATA - BOUTELOUA GRACILIS HERBACEOUS ALLIANCE

V.A.5.N.c. **Stipa comata - Bouteloua gracilis - [Carex filifolia] Herbaceous Vegetation** (2037)

Common name: northern mixed prairie

Distribution: High Plains, Smoky Hills (northern half of these regions)

Other states: CO, MT, ND, NE, SD, WY

Pattern: large-patch

Habitat: rolling hills and plains

Soils: deep loess, well drained

Other species: Buchloë dactyloides, Pascopyrum smithii, Psoralea
argophylla, Ratibida columnifera, Yucca glauca

V.A.5.N.d. Medium-tall bunch temperate or subpolar grassland

V.A.5.N.d. SPOROBOLUS AIROIDES HERBACEOUS ALLIANCE

V.A.5.N.d. **Sporobolus airoides Herbaceous Vegetation** (1685)

Common name: alkali sacaton lowland prairie

Distribution: High Plains, Smoky Hills (restricted to salty flats)

Other states: CO, MT, NM, TX

Pattern: small-patch

Habitat: nearly level bottomland and terraces

Soils: shallow, moderately-well to poorly drained silty clays, formed in
alluvium

Other species: Aster subulatus, Buchloë dactyloides, Distichlis spicata,
Hordeum jubatum, Pascopyrum smithii

V.A.5.N.e. Short sod temperate or subpolar grassland

V.A.5.N.e. BOUTELOUA GRACILIS HERBACEOUS ALLIANCE

V.A.5.N.e. **Bouteloua gracilis - Buchloë dactyloides Herbaceous Vegetation** (1756)

Common name: shortgrass prairie

Distribution: High Plains

Other states: CO, NE, NM, OK, TX, WY

Pattern: matrix

Habitat: nearly level to moderately steep slopes on rolling plains and uplands

Soils: deep loams and silts, well drained, formed in loess or in loamy, eolian
sediments

Other species: Aristida purpurea, Gutierrezia sarothrae, Psoraleidium
tenuiflorum, Ratibida columnifera

V.A.5.N.i Intermittently flooded temperate grassland

V.A.5.N.i. PASCOPYRUM SMITHII INTERMITTENTLY FLOODED HERBACEOUS
ALLIANCE

V.A.5.N.i. **Pascopyrum smithii - Buchloë dactyloides - (Phyla cuneifolia, Oenothera
canescens) Herbaceous Vegetation** (2038)

Common name: grass playa lake

Distribution: High Plains (restricted to upland depressional basins)

Other states: NE, OK, TX

Pattern: small-patch

Habitat: depressional features in plains (playas)

Soils: dense clays, poorly drained

Other species: Ambrosia grayi, Eleocharis macrostachya, Hordeum jubatum,
Rorippa sinuata

V.A.5.N.j. Temporarily flooded temperate or subpolar grassland

V.A.5.N.j. DISTICHLIS SPICATA - (HORDEUM JUBATUM) TEMPORARILY
FLOODED HERBACEOUS ALLIANCE

V.A.5.N.j. * **Distichlis spicata - (Hordeum jubatum, Poa arida, Sporobolus
airoides) Herbaceous Vegetation** (2042)

Common names: saltflat mixed prairie, saline playa lake

Distribution: High Plains (restricted to the shallow Scott-Finney depression,
Scott and Finney Counties)

Other states: NE, OK, TX

Pattern: large-patch

Habitat: nearly level to gently sloping areas on uplands in or adjacent to
broad depressions

Soils: deep, somewhat poorly to well drained, saline and saline-alkali loams
and silts, formed in loess or alluvium

Other species: Bouteloua curtipendula, Pascopyrum smithii

V.A.5.N.j. * **Distichlis spicata - Scirpus maritimus - Salicornia rubra Herbaceous
Vegetation** (2043)

Common name: salt marsh

Distribution: Arkansas River Lowlands, Smoky Hills

Other states: MO, NE, OK

Pattern: small-patch

Habitat: swales and depressions of floodplains and their terraces, and valley
basins

Soils: deep, very poorly drained, consisting of peat, muck, or mineral
materials, formed in alluvium or loess

Other species: Scirpus sp., Suaeda depressa

Comments: Distinguished from the freshwater marsh community by its
restriction to salty seepage areas that often contain brackish or stagnant water.

V.A.5.N.j. **ELEOCHARIS MACROSTACHYA TEMPORARILY FLOODED
HERBACEOUS ALLIANCE**

V.A.5.N.j. * **Eleocharis macrostachya - (Eleocharis compressa) - Leptochloa
fascicularis Herbaceous Vegetation** (2259)

Common name: spikerush playa lake

Distribution: High Plains, Smoky Hills (restricted to upland depressional basins)

Other states: OK

Pattern: small-patch

Habitat: depressional features in plains (playas)

Soils: dense clays, poorly drained

Other species: Ambrosia grayi, Aster subulatus, Hordeum jubatum,
Polygonum bicomne

V.A.5.N.j. POLYGONUM SP. - ECHINOCHLOA SP. TEMPORARILY FLOODED
HERBACEOUS ALLIANCE

V.A.5.N.j. * **Polygonum sp. - Echinochloa sp. - Distichlis spicata Playa Lake**
Herbaceous Vegetation (2039)

Common name: playa lake

Distribution: High Plains, Smoky Hills (restricted to upland depressional basins)

Other states: NE, OK

Pattern: small-patch

Habitat: nearly level to gently sloping shallow depressions or saucer-shaped basins

Soils: deep to moderately deep loams and clay loams, usually containing a dense clay subsoil layer

Other species: Ambrosia grayi, Aster subulatus, Chenopodium berlandieri,
Hordeum jubatum

Comments: For all playa lake communities, shallow ponds often form after large rainfall events due to poor drainage and are subject to natural drawdown and replenishment cycles during the year.

V.A.5.N.j. SPARTINA PECTINATA TEMPORARILY FLOODED HERBACEOUS ALLIANCE

V.A.5.N.j. * **Spartina pectinata - Eleocharis sp. - Carex sp. Herbaceous Vegetation** (2223)

Common names: low prairie, wet prairie

Distribution: eastern third of Kansas

Other states: OK

Pattern: small-patch

Habitat: nearly level soils on floodplains along rivers, streams, and creeks

Soils: deep, poorly drained, formed in alluvium

Other species: Asclepias incarnata, Aster lanceolatus, Baptisia lactea, Helianthus grosseserratus, Scirpus atrovirens

Comments: These communities are nearly always saturated with water, or are temporarily inundated with surface water during the winter and/or spring seasons. Short-term flooding of 1 to 3 days at depths less than 0.6 m occurs periodically (2 to 12 times) through the year.

V.A.5.N.j. * **Calamagrostis canadensis - Juncus sp. - Carex sp. Sandhills Herbaceous Vegetation** (2028)

Common name: sandhills wet prairie

Distribution: Arkansas River Lowlands, High Plains

Other states: ND, NE

Pattern: small-patch

Habitat: interdunal sandhill valleys on terraces and floodplains

Soils: poorly drained silty loams and sandy soils

Other species: Amorpha fruticosa, Eleocharis atropurpurea, Panicum virgatum, Salix exigua

V.A.5.N.k. Seasonally flooded temperate or subpolar grassland

V.A.5.N.k. TYPHA SP. - (SCIRPUS SP., JUNCUS SP.) SEASONALLY FLOODED
HERBACEOUS ALLIANCE

V.A.5.N.k. * **Scirpus validus - Typha sp. - (Sparganium sp., Juncus sp.)**

Herbaceous Vegetation (2026)

Common names: freshwater marsh, bulrush - cattail marsh

Distribution: Chautauqua Hills, Cherokee Lowlands, Flint Hills Uplands,
Glaciated Region, Osage Cuestas

Other states: IA, IL, IN, MO, ND, NE, OH, OK, SD, WI

Pattern: small-patch

Habitat: swales and depressions associated with river systems

Soils: deep, very poorly drained, consisting of peat, muck, or mineral
materials, formed in alluvium

Other species: Carex sp., Typha latifolia

V.A.5.N.l. Semipermanently flooded temperate or subpolar grassland

V.A.5.N.l. SCIRPUS PUNGENS SEMIPERMANENTLY FLOODED HERBACEOUS
ALLIANCE

V.A.5.N.l. * **Scirpus pungens - Suaeda depressa Alkaline Herbaceous**

Vegetation (2040)

Common name: alkaline marsh

Distribution: Arkansas River Lowlands, High Plains, Smoky Hills

Other states: NE

Pattern: small-patch

Habitat: depressional basins on uplands and along stream terraces

Soils: poorly drained clays to loams

Other species: Coreopsis tinctoria, Polygonum bicornis, Sagittaria longiloba,
Schoenoplectus acutus, Schoenoplectus tabernaemontani, Typha angustifolia

V.A.5.N.1. * **Scirpus pungens - (Eleocharis sp.) Herbaceous Vegetation** (1587)

Common name: bulrush - spikerush marsh

Distribution: statewide

Other states: MT, NV, UT

Pattern: small-patch

Habitat: basins, oxbows, and lowlands along stream courses

Soils: silty clays, poorly drained

Other species: Bolboschoenus maritimus, Lemna minor, Sagittaria latifolia,
Typha sp.

V.A.5.N.1. TYPHA (ANGUSTIFOLIA, LATIFOLIA) - (SCIRPUS SP.)

SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE

V.A.5.N.1. * **Typha (angustifolia, domingensis, latifolia) - [Scirpus americanus]**
Herbaceous Vegetation (2032)

Common name: cattail - bulrush marsh

Distribution: eastern half of Kansas

Other states: OK, TX

Pattern: small-patch

Habitat: oxbows and low areas along creeks and streams

Soils: poorly drained clays and silty clays

Other species: Carex hyalinolepis, Eleocharis sp., Lemna minor, Sagittaria
latifolia

Note: Scirpus americanus is very rare in Kansas, but is a regional co-
dominant.

V.A.5.N.1. * **Typha sp. Great Plains Herbaceous Vegetation** (2389)

Common name: western cattail marsh

Distribution: western two-thirds of Kansas

Other states: ND, NE, OK, SD

Pattern: small-patch

Habitat: oxbows and low areas along creeks and streams

Soils: poorly drained clays and silty clays

Other species: Eleocharis sp., Sagittaria latifolia

V.A.5.N.1. * **Typha sp. Midwest Herbaceous Vegetation** (2233)

Common name: eastern cattail marsh

Distribution: eastern third of Kansas

Other states: IA, IL, IN, MI, MN, MO, ND, NE, OH, SD, WI

Pattern: small-patch

Habitat: basins and low areas

Soils: poorly drained clays and silty clays

Other species: Eleocharis sp., Scirpus pungens

V.A.5.N.m. Saturated temperate or subpolar grassland

V.A.5.N.m. CAREX LANUGINOSA - (CAREX NEBRASCENSIS) - SCIRPUS SP.

SATURATED HERBACEOUS ALLIANCE

V.A.5.N.m. * **Carex lanuginosa - Carex sp. - Scirpus sp. Plains Fen Herbaceous
Vegetation** (2041)

Common name: fen

Distribution: Glaciated Region

Other states: IA, MO, NE

Pattern: small-patch

Habitat: moderately sloping to steep hillsides in narrow valleys, bases of
river bluffs, and floodplain terraces

Soils: deep, saturated mucky peat, formed in gravelly alluvium or colluvium
over limestone bedrock

Other species: Eleocharis sp., Eupatorium maculatum, Scirpus validus, Typha latifolia

Comments: A calcareous groundwater seepage community where subsurface recharge may occur through localized artesian conditions.

Note: Carex nebrascensis is very rare in Kansas, but is a regional co-dominant.

V.A.5.N.m. CAREX SP. - TYPHA SP. SATURATED HERBACEOUS ALLIANCE

V.A.5.N.m. * **Typha sp. - Equisetum hyemale - Carex sp. Seep Herbaceous**

Vegetation (2033)

Common name: neutral seep

Distribution: Glaciated Region, Osage Cuestas

Other states: IA, MO, NE, SD

Pattern: small-patch

Habitat: hillsides and bluffs in river valleys

Soils: shallow to deep (varying with degree of slope), formed from loess or shale

Other species: Equisetum sp., Typha angustifolia, Typha latifolia

Comments: A circumneutral community where the pH of the groundwater and its mineral content are caused by rainwater permeating loess or glacial till and contacting an impervious shale layer. Groundwater flows outward where the loess-shale interface is exposed on hillsides and bluffs.

V.A.5.N.m. * **Typha sp. - Carex sp. Acid Seep Herbaceous Vegetation** (2235)

Common name: acid seep

Distribution: Cherokee Lowlands, Osage Cuestas, Ozark Plateau

Other states: MO

Pattern: small-patch

Habitat: bases of gentle to moderately steep slopes in river valleys and
canyons

Soils: shallow to deep with deposits of peat or muck, formed in sandstone
or sandy colluvium

Other species: Lindera benzoin, Sassafras albidum, Sphagnum sp.,
Vaccinium arboreum

Comments: The soils are constantly saturated by acidic groundwater that
flows from gravelly or sandy substrates.

V.A.6. Temperate or subpolar grassland with a sparse tree layer

V.A.6.N.q. Bedrock temperate or subpolar grassland with a sparse tree layer

V.A.6.N.q. (QUERCUS STELLATA - QUERCUS MARILANDICA) /
SCHIZACHYRIUM SCOPARIUM WOODED HERBACEOUS ALLIANCE

V.A.6.N.q. **Schizachyrium scoparium - Aristida dichotoma - Croton willdenowii /**
Lichens Wooded Herbaceous Vegetation (2242)

Common name: Ozark sandstone glade / prairie

Distribution: Chautauqua Hills, Cherokee Lowlands, Osage Cuestas, Ozark
Plateau

Other states: AR, MO

Pattern: small-patch

Habitat: gently rolling plains, gentle to moderately-sloping hills and knobs,
and steep upper slopes of south-facing escarpments

Soils: shallow, sandy, rapidly drained with vernaly inundated depressions,
formed from sandstone

Other species: Chaetopappa asteroides, Isoetes butleri, Saxifraga texana,
Sedum nuttallianum, Sedum pulchellum, Talinum parviflorum

Comments: Often contains large areas of exposed bedrock with stunted
xerophytic trees and shrubs.

V.A.6.N.q. (JUNIPERUS VIRGINIANA) / SCHIZACHYRIUM SCOPARIUM - (BOUTELOUA CURTIPENDULA) WOODED HERBACEOUS ALLIANCE

V.A.6.N.q. **Schizachyrium scoparium - Bouteloua curtipendula - [Rudbeckia missouriensis] - Mentzelia oligosperma Wooded Herbaceous Vegetation** (2251)

Common name: Ozark limestone glade

Distribution: Cherokee Lowlands, Osage Cuestas, Ozark Plateau

Other states: MO

Pattern: small-patch

Habitat: nearly level to steep upland south- or west-facing slopes and bluffs of dissected hills and valleys

Soils: shallow, rocky, well drained and usually clayey, formed from limestone

Other species: Heliotropium tenellum, Isoetes butleri, Ophioglossum engelmannii, Sedum pulchellum, Talinum parviflorum

Comments: In general, Rudbeckia missouriensis is not part of the Kansas community type but is a co-dominant in Missouri. Exposed horizontal layers of limestone (outcrops) are common to abundant.

V.A.8. Temperate or subpolar grassland with a sparse dwarf-shrub layer

V.A.8.N.a. Short temperate or subpolar lowland grassland with a sparse needle-leaved or microphyllous dwarf-shrub layer

V.A.8.N.a. KRASCHENINNIKOVIA (CERATOIDES) LANATA DWARF-SHRUB HERBACEOUS ALLIANCE

V.A.8.N.a. **Krascheninnikovia lanata / Bouteloua gracilis Dwarf-Shrub Herbaceous Vegetation** (1321)

Common name: winterfat - blue grama prairie

Distribution: High Plains (primarily in the north half of this region)

Other states: AZ, CO, NM

Pattern: small-patch

Habitat: areas with sparse vegetation on uplands and flats

Soils: shallow, rocky, alkaline

Other species: Buchloë dactyloides, Echinacea angustifolia, Liatris punctata,
Stanleya pinnata

V.C. Hydromorphic rooted vegetation (non-emergent graminoids and forbs
structurally supported by water and rooted in substrate)

V.C.2. Temperate or subpolar hydromorphic rooted vegetation

V.C.2.N.a. Permanently flooded temperate or subpolar hydromorphic rooted vegetation

V.C.2.N.a. HETERANTHERA LIMOSA PERMANENTLY FLOODED
HERBACEOUS ALLIANCE

V.C.2.N.a. * **Heteranthera limosa - Bacopa rotundifolia - Sagittaria latifolia**
Herbaceous Vegetation (2279)

Common name: forb playa lake

Distribution: High Plains (restricted to upland depressional basins)

Other states: OK, TX

Pattern: small-patch

Habitat: depressional features in plains (playas)

Soils: dense clays, poorly drained

Other species: Eleocharis macrostachya, Hordeum jubatum, Polygonum
bicorne, Rorippa sinuata

V.C.2.N.a. POTAMOGETON SP. - CERATOPHYLLUM SP. - ELODEA SP.
PERMANENTLY FLOODED HERBACEOUS ALLIANCE

V.C.2.N.a. * **Potamogeton sp. - Ceratophyllum demersum Great Plains Herbaceous**

Vegetation (2044)

Common name: pondweed aquatic wetland

Distribution: Arkansas River Lowlands, Smoky Hills, Wellington-McPherson
Lowlands

Other states: ND, NE, SD

Pattern: small-patch

Habitat: interdunal swales and depressions along streams

Soils: poorly drained sands and clays

Other species: Schoenoplectus sp., Scirpus sp., Typha sp.

VII. **SPARSE VEGETATION** (vegetation scattered or nearly absent; total
vegetation cover less than 10%)

VII.A. Consolidated rock sparse vegetation

VII.A.1. Sparsely vegetated cliffs

VII.A.1.N.a. Cliffs with sparse vascular vegetation

VII.A.1.N.a. OPEN BLUFF / CLIFF SPARSELY VEGETATED ALLIANCE

VII.A.1.N.a. **Chert Ozark Moist Cliff Sparse Vegetation** (2288)

VII.A.1.N.a. **Limestone / Dolostone Midwest Dry Cliff Sparse Vegetation** (2291)

VII.A.1.N.a. **Limestone / Dolostone Midwest Moist Cliff Sparse Vegetation** (2292)

VII.A.1.N.a. **Sandstone Dry Cliff Sparse Vegetation** (2045)

VII.A.1.N.a. **Sandstone Moist Cliff Sparse Vegetation** (2287)

VII.A.1.N.a. ROCK OUTCROP / BUTTE SPARSELY VEGETATED ALLIANCE

VII.A.1.N.a. **Limestone Caprock Butte Sparse Vegetation** (2296)

VII.A.1.N.a. **Sandstone Caprock Butte Sparse Vegetation** (2297)

VII.C. Unconsolidated material sparse vegetation

VII.C.2. Sparsely vegetated sand flats

VII.C.2.N.c. Temporarily flooded sand flats

VII.C.2.N.c. SAND FLATS TEMPORARILY FLOODED SPARSELY VEGETATED

Lauver, C. L., K. Kindscher, D. Faber-Langendoen, and R. Schneider. (1999). A
Classification of the Natural Vegetation of Kansas. *The Southwestern Naturalist*
44(4):421-443.

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ALLIANCE

VII.C.2.N.c. **Riverine Sand Flats - Bars Sparse Vegetation** (2049)
