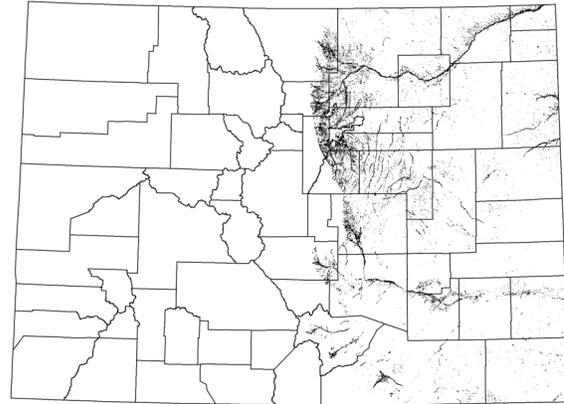


WESTERN GREAT PLAINS RIPARIAN WOODLAND, SHRUBLAND AND HERBACEOUS



S. Kettler



extent exaggerated for display

- ARTEMISIA CANA TEMPORARILY FLOODED SHRUBLAND ALLIANCE
Artemisia cana / *Pascopyrum smithii* Shrubland
- POPULUS DELTOIDES TEMPORARILY FLOODED WOODLAND ALLIANCE
Populus deltoides - (*Salix amygdaloides*) / *Salix (exigua, interior)* Woodland
Populus deltoides - (*Salix nigra*) / *Spartina pectinata* - *Carex* spp. Woodland
Populus deltoides / *Carex pellita* Woodland
Populus deltoides / *Muhlenbergia asperifolia* Forest
Populus deltoides / *Panicum virgatum* - *Schizachyrium scoparium* Woodland
Populus deltoides / *Sporobolus airoides* Woodland
Populus deltoides / *Sporobolus cryptandrus* Woodland
Populus deltoides / *Symphoricarpos occidentalis* Woodland
- SYMPHORICARPOS OCCIDENTALIS TEMPORARILY FLOODED SHRUBLAND ALLIANCE
Symphoricarpos occidentalis Shrubland
- SALIX (EXIGUA, INTERIOR) TEMPORARILY FLOODED SHRUBLAND ALLIANCE
Salix exigua / Mesic Graminoids Shrubland
Salix exigua / Barren Shrubland
- ANDROPOGON GERARDII - (SORGHASTRUM NUTANS) HERBACEOUS ALLIANCE
Andropogon gerardii - *Sorghastrum nutans* Western Great Plains Herbaceous Vegetation
- CAREX NEBRASCENSIS SEASONALLY FLOODED HERBACEOUS ALLIANCE
Carex nebrascensis Herbaceous Vegetation
- CAREX PELLITA SEASONALLY FLOODED HERBACEOUS ALLIANCE
Carex pellita Herbaceous Vegetation
- ELEOCHARIS PALUSTRIS SEASONALLY FLOODED HERBACEOUS ALLIANCE
Eleocharis palustris Herbaceous Vegetation
- MUHLENBERGIA ASPERIFOLIA INTERMITTENTLY FLOODED HERBACEOUS ALLIANCE
Muhlenbergia asperifolia Herbaceous Vegetation
- SCHOENOPECTUS ACUTUS - (SCHOENOPECTUS TABERNAEMONTANI) SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE
Scirpus acutus - *Scirpus tabernaemontani* Herbaceous Vegetation
- SCHOENOPECTUS PUNGENS SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE
Schoenoplectus pungens Herbaceous Vegetation
- SPARTINA PECTINATA TEMPORARILY FLOODED HERBACEOUS ALLIANCE
Spartina pectinata Western Herbaceous Vegetation
- SPOROBOLUS AIROIDES HERBACEOUS ALLIANCE
Sporobolus airoides Southern Plains Herbaceous Vegetation
- TYPHA (ANGUSTIFOLIA, LATIFOLIA) - (SCHOENOPECTUS SPP.) SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE
Typha (latifolia, angustifolia) Western Herbaceous Vegetation

Overview: This system is found in the riparian areas of medium and small rivers and streams throughout the Western Great Plains. It is likely most common in the Central Shortgrass Prairie and Northern Great Plains Steppe, but extends west into the Wyoming Basins. In Colorado it is found throughout the eastern plains. Dominant vegetation overlaps broadly with portions of large river floodplain systems, but the overall abundance of vegetation is generally lower. Vegetation may be a mosaic of communities that are not always tree or shrub dominated. Communities within this system range from riparian forests and shrublands to tallgrass wet meadows and gravel/sand flats.

Characteristic species: Dominant species include *Populus deltoides*, *Salix* spp., *Artemisia cana* ssp. *cana*, *Pascopyrum smithii*, *Sporobolus cryptandrus*, *Schizachyrium scoparium*, *Andropogon gerardii*, and

Sorghastrum nutans. Plant associations of the North American Arid West Emergent Marsh ecological system may occur along or adjacent to portions of this system.

Native prairie fishes and amphibians (e.g., leopard frogs) are indicators of a healthy riparian shrubland and woodland system.

Environment: This system is composed of associations found on alluvial soils in highly variable landscape settings, from deep cut ravines to wide, braided streambeds. Hydrologically, the associated rivers tend to be more flashy with less developed floodplain than on larger rivers, and typically dry down completely for some portion of the year.

Dynamics: These areas are often subjected to heavy grazing and/or agriculture and can be heavily degraded. *Tamarix* spp. and less desirable grasses and forbs can invade degraded examples up through central Colorado. Furthermore, groundwater depletion and lack of fire have created additional species changes.



G. Kittel

Rank:	A	B	C	D
① CONDITION				
Natural hydrologic regime	Intact, including an unaltered floodplain. No or little evidence of alteration due to drainage, flood control, irrigation canals, livestock grazing, digging, burning, vehicle use, etc.	intact or slightly altered by local drainage, flood control, irrigation canals, livestock grazing, digging, vehicle use, roads, etc. Alteration is easily restorable by ceasing such activities.	Natural hydrologic regime altered by upstream dams, local drainage, diking, filling, digging, or dredging. Alteration is extensive but potentially restorable over several decades.	Not restorable. System remains fundamentally compromised despite restoration of some processes.
Community Structure	Community is composed primarily of native species and has a diverse physiognomic structure.	Although species composition is primarily of native species, the physiognomic structure is less diverse than in A-ranked occurrences.	Noticably altered by disturbance.	
Non-native species (e.g., <i>Tamarix ramosissima</i> , <i>Elaeagnus angustifolia</i>)	If non-native species are present they are less than 3% canopy cover; and have little potential for expansion.	There are few exotic species, and low potential for their expansion if restoration occurs.	May be widespread but potentially manageable with restoration of most natural processes.	May be dominant over significant portions of area, with little potential for control.
Disturbance excessive grazing or other human caused actions e.g. channeling, road construction, vehicle use, etc.	Stream banks are not overly steepened and have not been stripped of vegetation.	Stream banks may show some local deleterious effects.	Stream banks may be severely altered. Disturbance is extensive and significant enough to have notable impact on species composition and soil compaction, causing excessive erosion.	
② LANDSCAPE CONTEXT				
Area hydrology	No evidence of human-caused alteration of hydrology, especially upstream of occurrence and within the watershed. Groundwater pumping is not pervasive in the area, or has not had a detectable impact on hydrologic patterns. Water quality is excellent and supports expected aquatic invertebrates.	Little evidence of human-caused alteration of hydrology, especially upstream of occurrence and within the watershed. Groundwater pumping may be contributing to changes in water availability.	Local or moderate human-caused alteration of hydrology may be present, for example small dams, irrigation ditches, and gravel mines. Groundwater pumping has produced noticeable changes from historic hydrologic patterns.	Major human-caused alteration of hydrology. Large dams and numerous diversions are within watershed. Gravel mining may be extensive.
Surrounding land	Uplands surrounding occurrence and within the watershed are largely unaltered by urban or agricultural uses (>90% natural), and distance to nearest cropped, mowed, or developed land is greater than 1 mile.	Uplands surrounding occurrence and within the watershed are largely unaltered by urban or agricultural uses (60 to 90% natural), and retain much connectivity, or uplands are not intensively cropped with center-pivot irrigation, dryland farming, or numerous roads.	Uplands surrounding occurrence or upstream watershed are fragmented by urban or agricultural alteration (20 to 60% natural).	Uplands surrounding occurrence mostly converted to agricultural or urban uses. Riparian occurrence may be reduced to narrow strip with much edge effect.
Connectivity & natural processes	Connectivity to habitats allows natural processes and species migration to occur. No unnatural barriers present.		Limited connectivity. Some barriers are present, and natural processes few.	Connectivity and natural processes are nonexistent.
③ SIZE				
Linear miles	>1.5	1-1.5	0.5-1	< 0.5