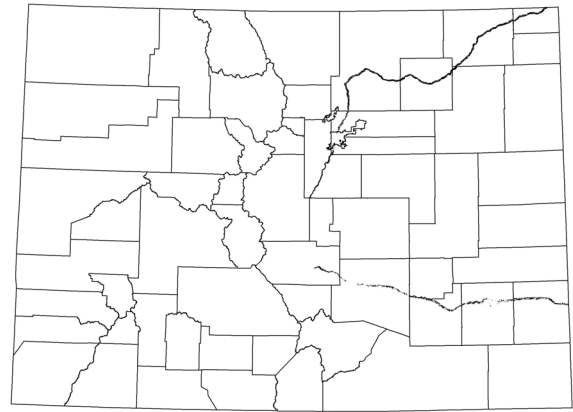


# WESTERN GREAT PLAINS BIG RIVER FLOODPLAIN



G. Kittel



extent exaggerated for display

- CAREX NEBRASCENSIS SEASONALLY FLOODED HERBACEOUS ALLIANCE
  - Carex nebrascensis* Herbaceous Vegetation
- COBBLE/GRAVEL SHORE SPARSELY VEGETATED ALLIANCE
  - Riverine Gravel Flats Great Plains Sparse Vegetation
- POPULUS DELTOIDES TEMPORARILY FLOODED WOODLAND ALLIANCE
  - Populus deltoides* - (*Salix amygdaloides*) / *Salix (exigua, interior)* Woodland
  - Populus deltoides* / *Carex pellita* Woodland
  - Populus deltoides* / *Distichlis spicata* Woodland
  - Populus deltoides* / *Muhlenbergia asperifolia* Forest
  - Populus deltoides* / *Panicum virgatum* - *Schizachyrium scoparium* Woodland
  - Populus deltoides* / *Sporobolus airoides* Woodland
  - Populus deltoides* / *Sporobolus cryptandrus* Woodland
- SALIX (EXIGUA, INTERIOR) TEMPORARILY FLOODED SHRUBLAND ALLIANCE
  - Salix exigua* / Barren Shrubland
  - Salix exigua* / Mesic Graminoids Shrubland
- SAND FLATS TEMPORARILY FLOODED SPARSELY VEGETATED ALLIANCE
  - Riverine Sand Flats - Bars Sparse Vegetation
- SPOROBOLUS AIROIDES HERBACEOUS ALLIANCE
  - Sporobolus airoides* Southern Plains Herbaceous Vegetation
- SYMPHORICARPOS OCCIDENTALIS TEMPORARILY FLOODED SHRUBLAND ALLIANCE
  - Symphoricarpos occidentalis* Shrubland
- TYPHA (ANGUSTIFOLIA, LATIFOLIA) - (SCHOENOPECTUS SPP.) SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE
  - Schoenoplectus acutus* - *Typha latifolia* - (*Schoenoplectus tabernaemontani*) Sandhills Herbaceous Vegetation
  - Typha (angustifolia, domingensis, latifolia)* - *Schoenoplectus americanus* Herbaceous Vegetation
  - Typha latifolia* Western Herbaceous Vegetation

**Overview:** This system is found in the floodplains of medium and large rivers of the Western Great Plains. In Colorado, this system is more-or-less limited to the South Platte and the Arkansas Rivers. These are the perennial big rivers of the region with hydrological dynamics largely driven by snowmelt, instead of local precipitation events. Dominant communities within this system range from floodplain forests to wet meadows to gravel/sand flats; however, they are linked by underlying soils and the flooding regime.

**Characteristic species:** Dominant woody species occurring within this system include *Populus deltoides* and *Salix* spp. Understory species constitute an important component of this system and include a mixture of tallgrass prairie species such as *Panicum virgatum* and *Andropogon gerardii*. Sparsely vegetated gravel and sand flats are also included within this system.

*Tamarix* spp. and less desirable grasses and forbs can invade degraded areas within the floodplains, especially in the western portion of the Great Plains.

**Environment:** This system is found primarily along floodplains of medium and large rivers. Soils are primarily alluvial and range from sand to dense clays.

**Dynamics:** Periodic flooding (i.e., every 5-25 years) constitutes the major process influencing this system. Excessive grazing or conversion to tilled/irrigated agriculture can significantly impact this system and can lead to the degradation or extirpation of the majority of prairie and wet meadow communities from this system. Groundwater depletion and lack of fire can create additional species changes. In many areas, the wet meadow and prairie communities are extremely degraded or may be extirpated from the system.



L. Spears

Rank:	A	B	C	D
<b>① CONDITION</b>				
<b>Natural hydrologic regime</b>	Intact, including an unaltered floodplain. No or little evidence of alteration due to dams, 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.
<b>Community Structure</b>	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.	
<b>Non-native species</b> (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.
<b>Disturbance</b> 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.	
<b>② LANDSCAPE CONTEXT</b>				
<b>Area hydrology</b>	No evidence of human-caused alteration of hydrology, especially upstream of occurrence and within the watershed. Periodic flooding is able to occur naturally. 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.	Local or moderate human-caused alteration of hydrology may be present, for example small dams, irrigation ditches, and gravel mines.	Major human-caused alteration of hydrology. Large dams and numerous diversions are within watershed. Gravel mining may be extensive.
<b>Surrounding land</b>	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), but retaining 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.
<b>Connectivity &amp; natural processes</b>	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.
<b>③ SIZE</b>				
<b>Linear miles</b>	>20	10-20	5-10	< 5