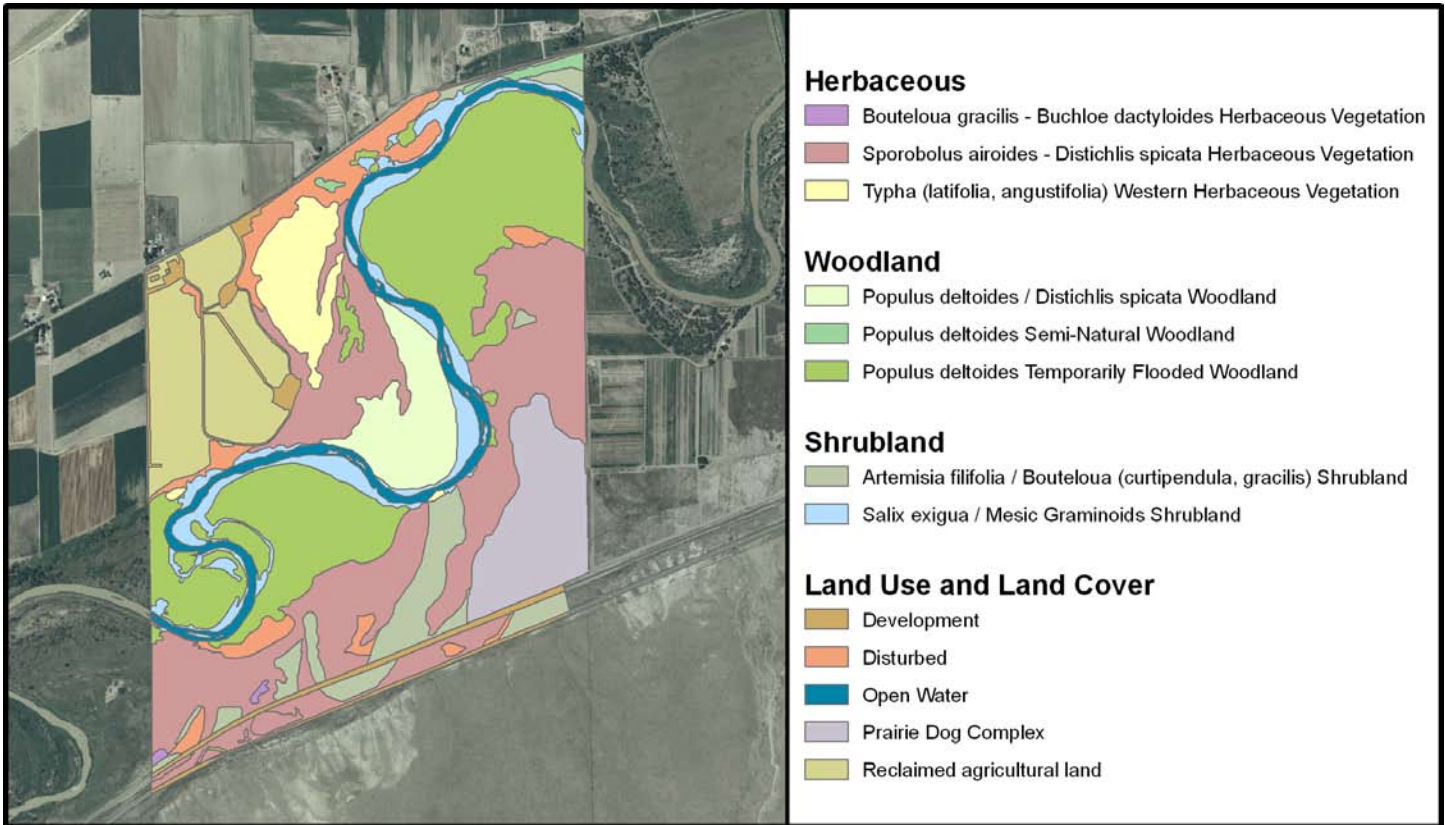




Vegetation Types

QUICK REFERENCE



Vegetation Associations and Alliances

NatureServe maintains a treatment of floristic units (alliances and associations), which are used as classification and mapping units by the vegetation mapping program whenever feasible. Vegetation sample plots and observational points were used to classify the vegetation of this park to these association/alliance levels. NatureServe Explorer®, an on-line database, can be found on the Internet at: <http://www.natureserve.org/explorer>.

Woodlands

Populus deltoides Semi-Natural Woodland (Plains Cottonwood Semi-Natural Woodland)

This type occurs along roads on the north side of the Arkansas River.

Populus deltoides Temporarily Flooded Woodland Alliance (Plains Cottonwood Temporarily Flooded

Woodland Alliance), includes

Populus deltoides / *Distichlis spicata* Woodland (Plains Cottonwood / Inland Saltgrass Woodland)

This type is a riparian woodland alliance that occurs inside the bend of the Arkansas River, forming a mosaic with *Populus deltoides* / *Sporobolus airoides* Woodland. Polygons were identified as areas with minimally 25% cover of *P. deltoides* in any strata. Following the multiple disturbances experienced at the site, root-suckering is prevalent in many areas. The graminoid understory is strongly dominated by *Distichlis spicata*. Common graminoid species include *Sporobolus airoides*, *Panicum obtusum*, *Pascopyrum smithii*, *Elymus canadensis*, and *Sporobolus cryptandrus*; these can occur in locally dense patches, although *Distichlis spicata* is generally present and dominant in the vicinity. Forbs are generally sparse and have low abundance. Common species include *Physalis virginiana*, *Ambrosia psilostachya*, *Asclepias subverticillata*, *Ratibida tagetes*, *Glycyrrhiza lepidota*, and *Helianthus petiolaris*, among others. Weed management activities and sub-



sequent natural disturbances have left disturbed patches often dominated by *Kochia scoparia* or bare ground.

Shrublands

Artemisia filifolia / *Bouteloua gracilis* Shrubland (Sand Sagebrush / Blue Grama Shrubland)

This type occurs in small, isolated areas on the south side of the Arkansas River on gently undulating ground surface between river terraces and the railroad, forming a mosaic with grassland swards. It also occurs on road and railroad rights-of-way and between the railroad and highway 50. *Atriplex canescens* is an occasional associate of *Artemisia filifolia* in the shrub layer. The herbaceous layer is characterized by graminoids, especially *Bouteloua gracilis*, *Sporobolus cryptandrus* and *Oryzopsis hymenoides*. Forbs are generally sparse, although *Eriogonum effusum*, *Helianthus petiolaris*, *Ratibida tagetes*, and *Asclepias subverticillatus* are present. *Salsola australis* is a common weedy species in these areas.

Salix exigua / Mesic Graminoids Shrubland (Coyote Willow / Mesic Graminoids Shrubland)

This riparian shrubland primarily occurs along the Arkansas River on the riverbanks, in old oxbow channels, and on sand bars. *Salix exigua* strongly dominates this association, forming dense stands that are 1.5-2 m in height. The dense shrub layer often shades out the understory, which tends to be sparse and variable. Where present, the understory can contain *Apocynum cannabinum*, *Glycyrrhiza lepidota*, *Euthamia* spp., *Ambrosia psilostachya*, and *Carex* spp. Along the river edge, emergent vegetation tends to occur, like *Typha angustifolia*, *Phragmites australis*, *Phalaris arundinacea*, and *Carex prae-gracilis*. Weedy species occur sporadically in the association, often in locally dense patches, including *Cardaria chalapensis*, *Dipsacus fullonum*, and *Kochia scoparia*. *Salsola australis* tumbleweeds can form dense tangles depending on recent flood events.

Herbaceous Vegetation

Bouteloua gracilis - *Buchloe dactyloides* Herbaceous Vegetation (Blue Grama - Buffalograss Shortgrass Prairie)

This shortgrass grassland type occurs in small patches on the south side of the Arkansas River, in a mosaic with other grasslands and *Artemisia filifolia* shrublands. *Bouteloua gracilis*, *Buchloe dactyloides*, and *Sporobolus cryptandrus* form a mixed mosaic where any one of the species is dominant in a given patch. *Bouteloua gracilis* is constant and abundant while *Buchloe dactyloides* is codominant, forming large

swards where it is dominant. Common, but less frequent, associated species include *Aristida purpurea*, *Pascopyrum smithii*, and *Hilaria jamesii*. Weedy species are ubiquitously present, sometimes forming relatively large patches, including *Convolvulus arvensis*, *Salsola australis*, *Kochia scoparia*, and *Bromus tectorum*.

Sporobolus airoides - *Distichlis spicata* Herbaceous Vegetation (Alkali Sacaton - Inland Saltgrass Herbaceous Vegetation)

This type occurs behind the cottonwood gallery on the floodplain as you proceed away from the river. It is a mosaic of dense hummocks of the nominal graminoid species. *Sporobolus airoides* often has greater cover at the ecotone with other plant associations. Associated species characteristic of this grassland commonly include *Muhlenbergia asperifolia* and *Panicum obtusum*, with incidents of *Elymus canadensis*, *Pascopyrum smithii*, and *Bouteloua gracilis*. Forbs tend to be absent or sparse, but can form local patches of *Asclepias subverticillata*, *Helianthus petiolaris*, *Ambrosia psilostachya*, *Astragalus bisulcatus*, *Bassia sieversiana*, *Physalis virginiana*, *Sphaeralcea coccinea*, *Ratibida tagetes*, *Sophora nuttalliana*, *Symphotrichum* spp., and *Machaeranthera phytocephala*. Local wet spots within the grassland support inclusions of *Spartina pectinata* or *Bothriochloa laguroides*.

Typha (latifolia, angustifolia) Western Herbaceous Vegetation (Broadleaf Cattail Marsh)

This type occurs in saturated to permanently flooded jurisdictional wetlands on the site and was mapped from aerial photo signatures and field observations. There is a large marsh in the north-central portion of the site and a smaller man-made pool on the north side of the river. Infrequent associates include *Schoenoplectus acutus*, *Schoenoplectus pungens*, and *Schoenoplectus lacustris*. On drier edges of the wetlands, native species like *Gaura parvifolia*, *Solidago gigantea*, *Asclepias subverticillata*, and *Glycyrrhiza lepidota* are often abundant, as are weedy species like *Cirsium canadensis*, *Asclepias speciosa*, *Dipsacus fullonum*, *Cardaria chalapensis*, and *Salsola australis*.

Land Use and Land Cover

PARK SPECIAL

Disturbed

This map class is variable in composition but comprises areas dominated by various proportions of non-native species. Disturbed areas include dense stands of *Bassia* (= *Kochia*) *scoparia*, *Cardaria draba* and *Salsola australis*, as well as bare ground following tamarisk removal.

PARK SPECIAL

Black-tailed Prairie Dog Town

This type occupies an abandoned agricultural field adjacent to the railroad tracks and the road on the east boundary of the site. The majority of the prairie dog town is strongly dominated by *Convolvulus arvensis*. In this area there is more diverse vegetation including *Buchloe dactyloides*, *Sporobolus cryptandrus*, and limited *Sporobolus airoides*.

PARK SPECIAL

Reclaimed Agricultural Land

This type occurs primarily in the northwest corner near the park headquarters buildings. This map unit reflects formerly plowed fields that have been reseeded with native grasses (*Buchloe dactyloides*, *Bouteloua gracilis*, *Bouteloua curtipendula*, and *Pascopyrum smithii*). *Asclepias subverticillata*, *Convolvulus arvensis*, and *Physalis* sp. are associated species.