HUC 1106

Upper Arkansas Sub-basin

The Upper Arkansas sub-basin (4-digit hydrologic unit 1106) is situated in the north central portion of the state. It originates in the northeast portion of Woods County, continues eastward through portions of Alfalfa, Grant, Garfield, Kay, Noble, and Payne Counties and terminates in the western part of Osage County and northern one-half (½) of Pawnee County. Major cities and County seats located within the sub-basin include Alva, Ponca City, Perry, Pawnee, Tonkawa, Blackwell, and Cleveland. Minor cities of note include Cherokee, Medford, and Ralston.

The sub-basin is subdivided into six 8-digit hydrologic units (HUC) within the state. These HUC's are the Kaw Lake (11060001), the Upper Salt Fork of the Arkansas (11060002), the Medicine Lodge (11060003), the Lower Salt Fork of the Arkansas (11060004), the Chickaskia (11060005), and the Black Bear–Red Rock (11060006). The major surface water in the sub-basin is the upper Arkansas River. Major tributaries include the Salt Fork of the Arkansas River, the Chickaskia River, Black Bear Creek, Beaver Creek, Salt Creek, Sand Creek, Pond Creek, Deer Creek, Bois d'Arc Creek, and Red Rock Creek. Three major lakes are located in the sub-basin—the Great Salt Plains Lake formed by the Salt Fork of the Arkansas River, Kaw Lake formed by the Arkansas River and Beaver Creek, Sooner Lake formed by Greasy Creek, and the Arkansas River arm of Keystone Lake. Five active permanent water quality-monitoring stations are located in the sub-basin. Two inactive water quality-monitoring stations (Salt Fork of the Arkansas river, US 177, White Eagle and Arkansas River, off US 277, Newkirk) are located in the sub-basin. These stations were last assessed in the 2001 and 2003 BUMP reports, respectively.

The sub-basin is characterized by four ecoregions. The Central Great Plains is the primary ecoregion beginning in the far western portion and continuing through the east part of the sub-basin. The Central Oklahoma/Texas Plains represent the eastern quarter (¼) of the sub-basin. The Flint Hills characterize the northeast portion of Kay County and part of Osage County. The Southwestern Tablelands typify portions of Woods County. The primary land usage in the sub-basin is cropland. It dominates the central part of the sub-basin from eastern Woods County to the east central parts of Kay and Noble Counties. Cropland is further interspersed through the far western and eastern portions. The secondary land use is rangeland (open grasslands, sand sagebrush, upland shrubs, eastern red cedar, and post oak–blackjack oak). Rangeland dominates the far western and eastern portions of the sub-basin as well the northeastern portion of Alfalfa County and the southern portion of Payne and Pawnee Counties. It is further interspersed throughout the sub-basin. The tertiary land use is forestland (bottomland hardwoods and post oak–blackjack oak) that dominates the eastern portion of Payne County and the north and eastern portions of Pawnee County. Forestland is also present in portions of Kay and Osage Counties. Other land uses of note are pastureland, woodlands, farmsteads, major urban areas, wetlands, and confined animal feeding operations.

STATION NAME	FWP	PBCR	PPWS	AG	AES
Arkansas River, SH 18, Ralston	NS (5)	NS (8)	S	S	NT
Black Bear Creek, SH 18, Pawnee	NS (5)	NS (6, 8)	S	S	NT
Chickaskia River, US 177, Blackwell	NS (5)	NS (6, 8)	S	S	NT
Salt Fork of the Arkansas, SH 58, Ingersoll	NS (5, 16, 18)	NS (6, 7, 8)	S	NS(12)	NS(18)
Salt Fork of the Arkansas, US 77, Tonkawa	NS (5)	NS (8)	S	S	S

ASSIGNED OWQS BENEFICIAL USES

FWP = Fish & Wildlife Propagation	PBCR = Primary Body Contact Recreation
PPWS = Public and Private Water Supply	AG = Agriculture
AES = Aesthetics	

SUPPORT CODES

S—Fully Supporting	NS—Not Supporting	T-Threatened (Nutrients)
NT-Not Threatened (Nutrients)	NEI—Not Enough Information	N/A—Not Applicable

WATER QUALITY VARIABLES

1—Dissolved Oxygen	2—Metals (Acute)	3—Metals (Chronic)
4—pH	5—Turbidity	6—Fecal Coliform
7— *Escherichia coli*	8— Enterococci	9—Metals
10— Total Dissolved Solids	11— Chlorides	12— Sulfates
13— Total Phosphorus (TP)	14—TP Ok Scenic River Criterion	15— Nitrite + Nitrate
16—Biocriteria	17—Sestonic Chlorophylll-a (TSI)	18—Sedimintation