HUC 1111

Lower Arkansas Sub-basin

The Lower Arkansas sub-basin (4-digit hydrologic unit 1111) is situated in the central eastern portion of the state. It originates in the western portion of Creek and Tulsa Counties, continues eastward through portions of Okmulgee, Wagoner, Muskogee, McIntosh, Cherokee, Delaware, Haskell, and Latimer Counties, and terminates in the eastern parts of Adair, Sequoyah, and LeFlore Counties. Major cities and County seats located within the basin include Sand Springs, Tulsa, Broken Arrow, Sapulpa, Jenks, Glenpool, Bixby, Coweta, Muskogee, Tahlequah, Stillwell, Sallisaw, Wilburton, and Poteau. Minor cities of note include Kellyville, Haskell, Checotah, Warner, Gore, Roland, Heavener, and Spiro.

The basin is subdivided into five 8-digit hydrologic units (HUC) within the state. These HUC's are the Polecat–Snake (11110101), the Dirty–Greenleaf (11110102), the Illinois (11110103), the Robert S. Kerr Reservoir (11110104), and the Poteau (11110105). The major surface water in the basin is the lower Arkansas River (McClellan-Kerr Navigational System). Major tributaries include the Illinois River, the Poteau River, Polecat Creek, Bayou Manard, Greenleaf Creek, Sager Creek, Flint Creek, Barren Fork, Caney Creek, Dirty Creek, Sallisaw Creek, Big Skin Bayou, Lee Creek, Cache Creek, San Bois Creek, Brazil Creek, Fourche-Maline Creek, Caston Creek, Black Fork, and James Fork. Five major lakes are located in the basin—Heyburn Lake formed by Polecat Creek, Webbers Falls Reservoir formed by the Arkansas River and Greenleaf Creek, Tenkiller Ferry Lake formed by the Illinois River and Caney Creek, Robert S. Kerr Reservoir formed by the Arkansas River and several tributaries, and Wister Lake formed by the Poteau River and Fourche-Maline Creek. Sixteen active permanent monitoring stations are located in the basin. One inactive water quality-monitoring station (Arkansas River, US 69, Muskogee) is located in the sub-basin. This station was last assessed in the 2000 BUMP Report.

The basin is characterized by five ecoregions. The Central Irregular Plains begins in eastern Okmulgee County, covers the majority of Muskogee County, and continues through parts of McIntosh, Delaware, Sequoyah and eastern Cherokee Counties. The Ozark Highlands begins in Delaware County, continuing through the northern one-half (½) of Adair County, and is also in northern Cherokee County. The Boston Mountains begin in eastern Cherokee County, continue through the southern one-half (½) of Adair County, and end in northern Sequoyah County. The Arkansas Valley covers the southern three-quarters (¾) of Sequoyah County, southeast Muskogee County, Haskell County, the northern one-half (½) of Latimer County, and the northern one-third of LeFlore County. The Ouachita Mountains cover the southern one-half (½) of Latimer County and the southern two-thirds of LeFlore County. The primary land uses in the sub-basin are forestland (post oak–blackjack oak, hickory–oak, bottomland hardwoods, and shortleaf pine) and pastureland (brushy and mixed). Forestland is prevalent throughout the sub-basin with concentrations in the central, northeast and southeast portions. Pastureland is prevalent in the northwest and central eastern portions. Rangeland (post – blackjack oak scrub and open grasslands) is the secondary land use. It is prevalent in the western portion of the sub-basin and is interspersed throughout the central and eastern portions. The tertiary land use is cropland in the northern portion of the sub-basin. Other land uses of note are farmsteads, major urban areas, wetlands, and confined animal feeding operations.

STATION NAME	FWP	PBCR	PPWS	AG	AES
Arkansas River, US 64, Moffett	S	NS (8)	S	NS(10)	NT
Arkansas River, SH 104, Haskell	S	S	N/A	S	NT
Arkansas River, SH 97, Sand Springs	NS (5)	S	N/A	S	NT
Arkansas River, US 62, Muskogee	S	NS (8)	N/A	NS (10, 11)	NT
Arkansas River, US 64, Bixby	NS (5)	N/A	N/A	S	NT
Barren Fork, SH 51, Eldon	S	S	S	S	NS (14, 18)
Caney Creek, off SH 100, Barber	S	S	S	S	S
Flint Creek, US 412, Flint	S	NS (8)	S	S	NS (14)
Fourche-Maline Creek, off US 270, Red Oak	NS (1, 3)	NS (8)	S	S	S
Illinois River, US 59, Watts	NS (5)	NS (8)	S	S	NS (14)
Illinois River, US 62, Tahlequah	S	S	S	S	NS (14)
Lee Creek, SH 101, Short	NS(3)	S	S	S	S
Little Lee Creek, SH 101, Nicut	NEI	NEI	NEI	S	NEI
Poteau River, off SH 112, Pocola	NS (3, 5)	NS (8)	S	S	NT
Poteau River, US 59, Heavener	NS(3)	S	S	S	NT
Sager Creek, off US 412, West Siloam Springs	S	NS (8)	NS (15)	S	T (13, 15)

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