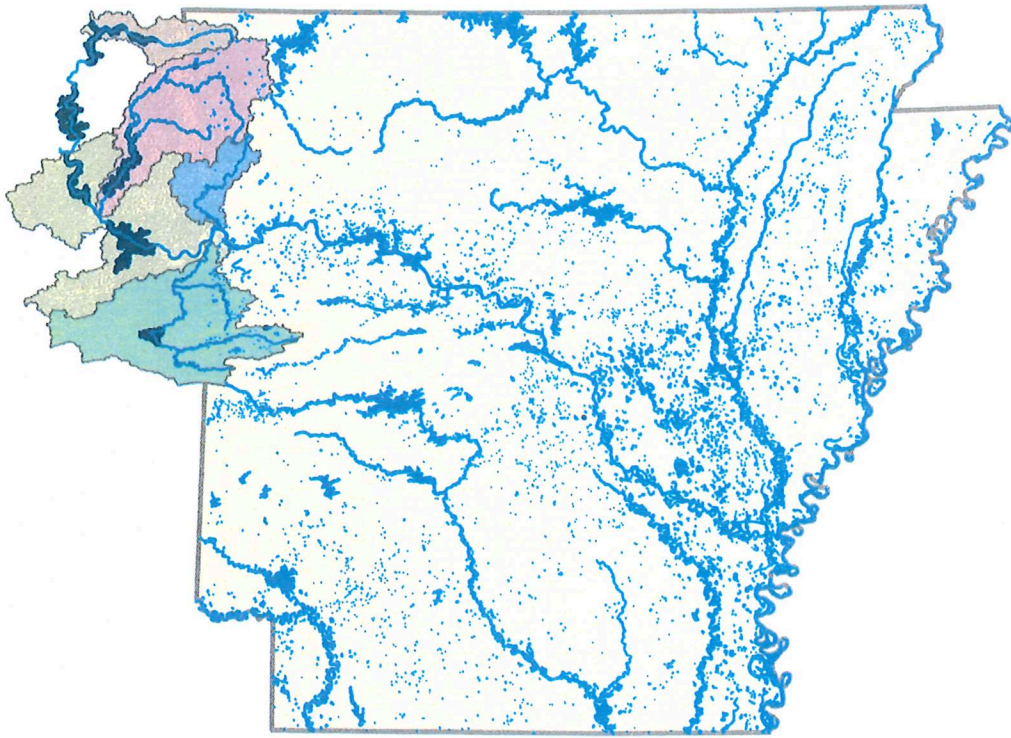


Arkansas-Oklahoma Arkansas River Compact Commission

State of Arkansas Environmental Committee Report



September 28, 2023

Table of Content

TAB	CONTENT
	2022 CLIMATE SUMMARY ILLINOIS RIVER WATERSHED
	Figure 1 – Illinois River Basin, water quality monitoring stations, and climate recording stations
	Table 1 – 2022 Climate Data
	Figure 2 – 2022 Recorded Monthly High and Low Temperature Versus Historical Monthly High and Low Temperatures
	Figure 3 - 2022 Monthly Precipitation Versus Historical Monthly Precipitation
	Table 2 – 2022 Top Six Daily Flows for Monitored Streams
	Water Quality Monitoring Report Illinois River Basin
	Table 3 – Arkansas 1980-2022 Five Year Rolling Average Total Phosphorus Loadings
	Table 4 – Arkansas 2013-2022 Five Year Rolling Average Total Phosphorus Loadings
	Monitoring Station: Flint Creek Northwest of Siloam Springs, Oklahoma
	Table 5 – Five Year Rolling Average Total Phosphorus Loading
	Figure 4 - Five-year Average Total Phosphorus Loading Bar Chart
	Table 6 – Annual Total Phosphorus Loading
	Figure 5 - Total Phosphorus Versus 3-Month Geometric Mean from 2000 through 2022
	Figure 6 – Total Phosphorus Versus 3-Month Geometric Mean from 2018 through 2022
	Monitoring Station: Sager Creek Near West Siloam Springs, Arkansas
	Table 7 – Arkansas 5-Year Rolling Average Total Phosphorus Loadings
	Figure 7 - Five-year Average Phosphorus Loading Bar Char
	Table 8 – Annual Total Phosphorus Loading
	Figure 8 - Total Phosphorus Versus 3-Month Geometric Mean from 2000 through 2022
	Figure 9 - Total Phosphorus Versus 3-Month Geometric Mean from 2018 through 2022
	Monitoring Station: Illinois River South of Siloam Springs, Arkansas
	Table 9 – Arkansas 5-Year Rolling Average Total Phosphorus Loadings
	Figure 10 - Five-year Average Phosphorus Loading Bar Char
	Table 10 – Annual Total Phosphorus Loading
	Figure 11 - Total Phosphorus Versus 3-Month Geometric Mean from 2000 through 2022
	Figure 12 - Total Phosphorus Versus 3-Month Geometric Mean from 2018 through 2022
	Monitoring Station: Baron Fork at Dutch Mills, Arkansas
	Table 11 – Arkansas 5-Year Rolling Average Total Phosphorus Loadings
	Figure 13 - Five-year Average Phosphorus Loading Bar Char
	Table 12 – Annual Total Phosphorus Loading
	Figure 14 - Total Phosphorus Versus 3-Month Geometric Mean from 2000 through 2022
Figure 15 - Total Phosphorus Versus 3-Month Geometric Mean from 2018 through 2022	
	Arkansas 303 (d) List
	Public Hearing Notice
	Table 13 – 2020 303 (d) Category 5 List (Draft) Illinois River
	Figure 16 – 2020 303 (d) Category 5 List (Draft) Illinois River Watershed
	Table 14 – 2020 303 (d) Category 5 Alternate List (Draft) Illinois River Watershed
	Figure 17 – 2020 303 (d) Category 5 Alternate List (Draft) Illinois River Watershed

Table 15 – 2020 303 (d) Category 5 List (Draft) Lee Creek Watershed

Figure 18 – 2020 303 (d) Category 5 (Draft) Lee Creek Watershed

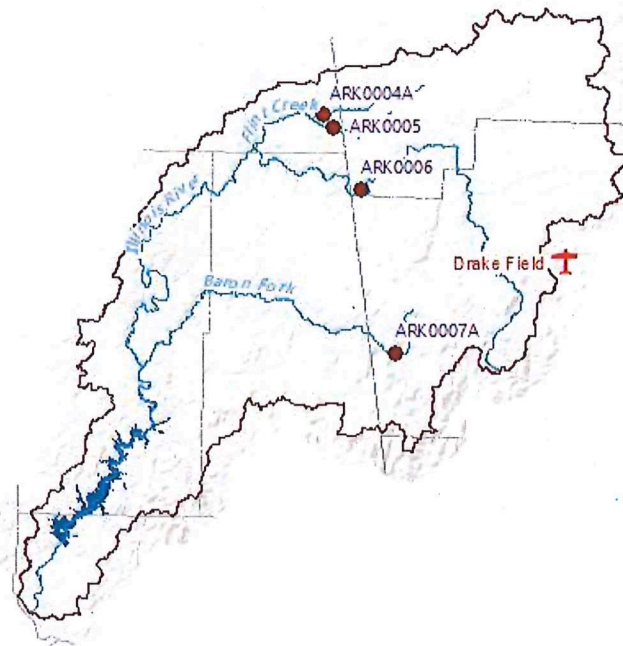
Table 16 – 2020 303 (d) Category 5 and Category 4a List (Draft) Poteau River Watershed



Climatic Summary Illinois River Watershed

Climate data is presented to identify climate factors such as temperature and precipitation which impact monitoring results within the Illinois River Watershed. Drake Field located in Fayetteville, Arkansas, is the monitoring station utilized for records representing climate conditions for the Illinois River watershed. The dataset for station USW00093993, Drake Field, Fayetteville, Arkansas, is available at NOAA's National Centers for Environmental Information – Climate Data Online. The following URL directs to the datasets: <https://www.ncdc.noaa.gov/cdo-web/datasets>. Figure 1 below illustrates the spatial relationship of the monitoring stations to the watershed.

Figure 1-Illinois River Basin, water quality monitoring stations, and climate recording station



The recorded data for average maximum temperature, average minimum temperature, precipitation, and outliers are in Table 1. The average maximum temperature was 3.2° Fahrenheit greater than normal. The average minimum temperature was 0.9° Fahrenheit greater than normal. The precipitation total for the year was 1.35 inches greater than normal.

The historical normals are derived using data collected during 1980 to 2010. Figure 2 illustrates the monthly average maximum temperature and monthly average minimum temperature compared to the monthly averages.

Table 1 - 2022 Climate Data

Average Max Temperature 2022 (F°)	71.8	Normal	68.6 °	Difference	3.2°
Average Min Temperature 2022 (F°)	46.7	Normal	45.8 °	Difference	0.9°
Total Precipitation (In) 2022	49.9	Normal	48.5 "	Difference	1.4"
Extreme Maximum Temp 2022 (F°)	104	<i>Recorded July 26, 2022</i>			
Extreme Minimum Temp 2022 (F°)	-3.0	<i>Recorded December 22, 2022</i>			
Extreme Precipitation (in) 2022	2.67	<i>24-hour total for May 4, 2022</i>			

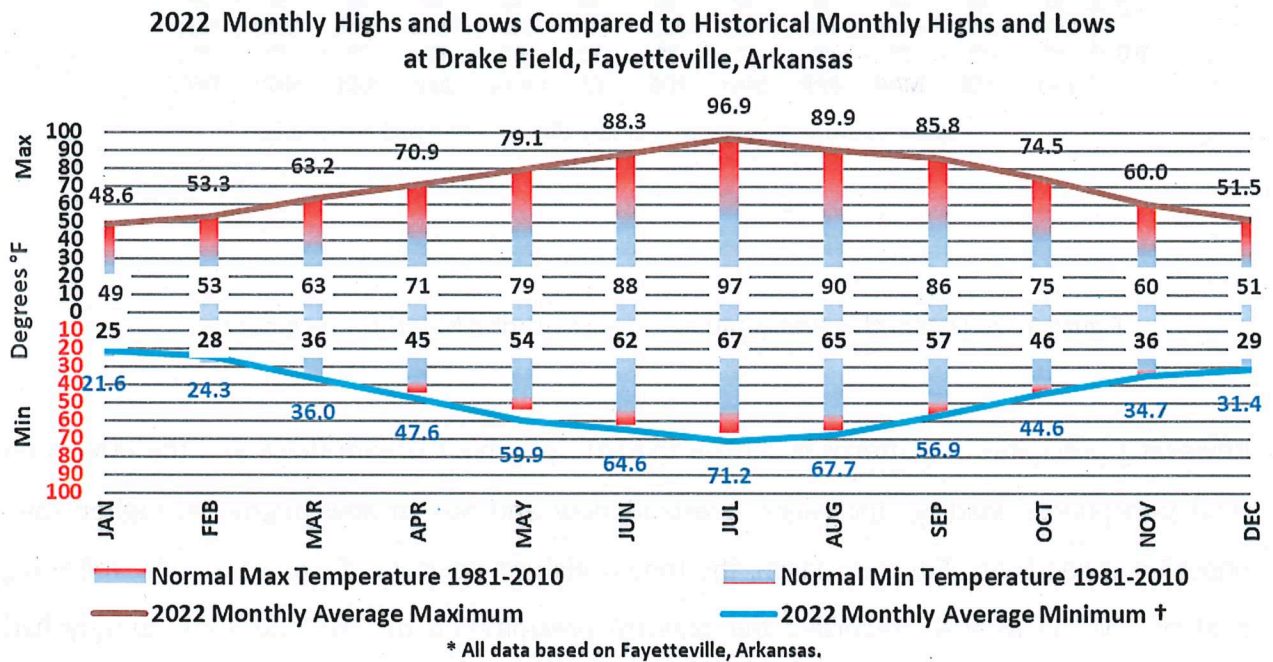


Figure 2 – 2022 Recorded Monthly High and Low Temperatures Versus Historical Monthly High and Low Temperatures

Precipitation for calendar year 2022 registered 6.75 inches less than normal. Recorded monthly average precipitation compared to historical monthly averages are illustrated in Figure 3. Precipitation deficits were observed in 70% of months with only February, August, November and December above normal.

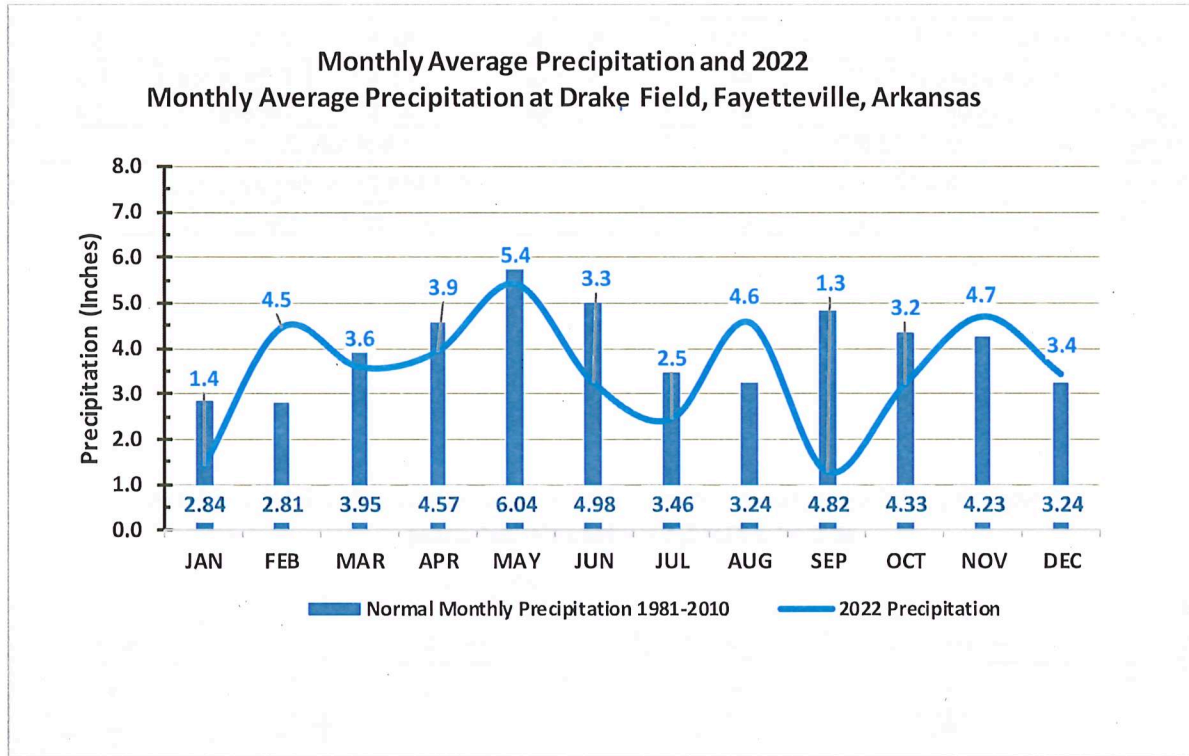


Figure 3 - 2022 Monthly Precipitation Versus Historical Monthly Precipitation

Reviewing precipitation patterns is central to identifying high stream flows and the effects on total phosphorus loading. Increased overland flow and streamflow augments higher total phosphorus readings. For this reason, the top six highest flows are discounted in the following analysis. While May 4th recorded the greatest precipitation of 2.67" and subsequently had majority of high flow events across all Compact Stations in the watershed during May 4-7th (Table 2). Additional high flow events were observed on April 13-14, and April 25th.

Table 2 – 2022 Top Six Daily Flows for Each Monitored Stream

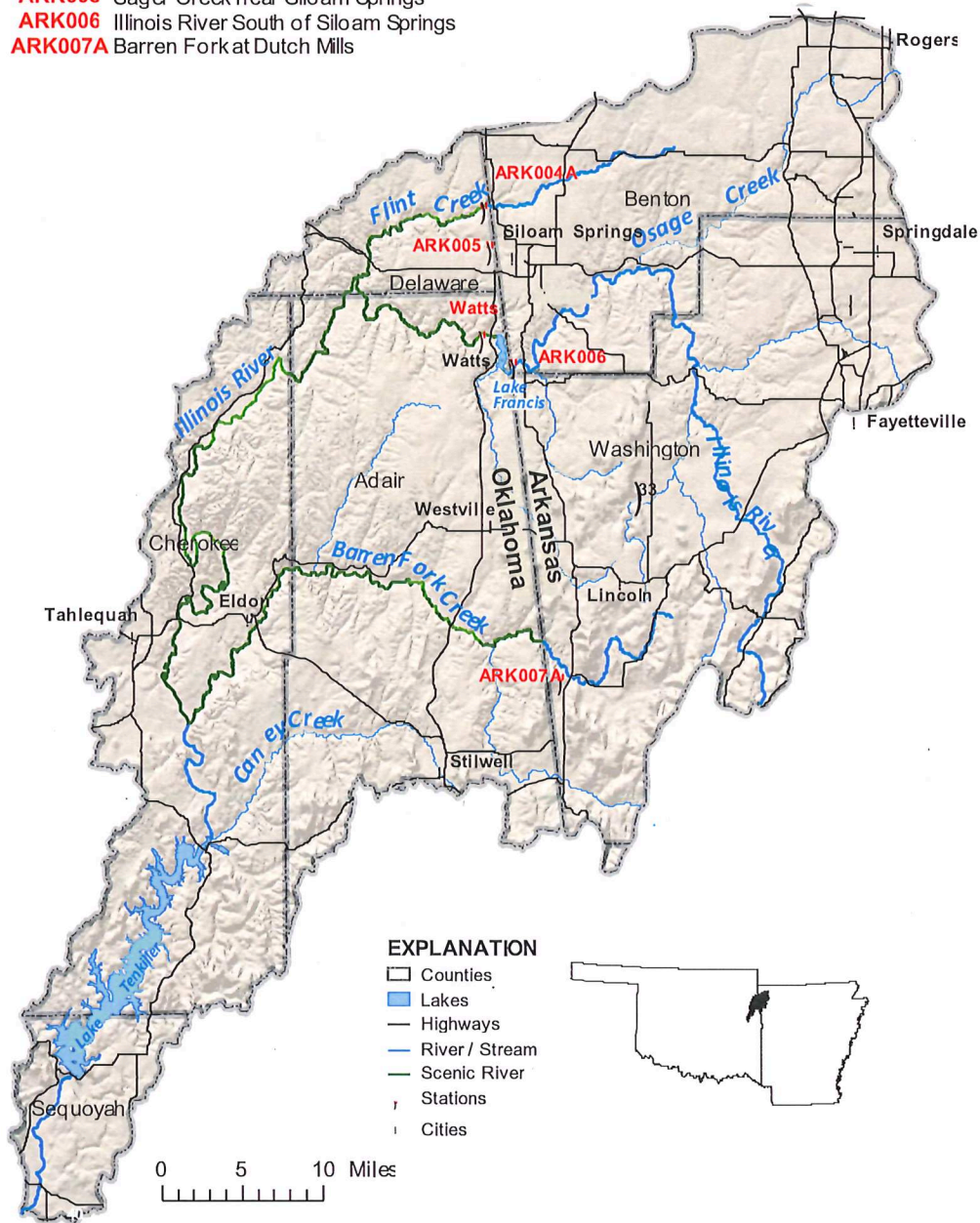
Flint Creek USGS 07195855		Sager Creek USGS 07195865		Illinois River USGS 071954430		Baron Fork USGS 07196900	
Date	Flow (cfs)	Date	Flow (cfs)	Date	Flow (cfs)	Date	Flow (cfs)
5/25/2022	2,304	5/5/2022	1,462	5/5/2022	49,117	5/5/2022	2,849
5/4/2022	1,205	5/4/2022	1,000	5/6/2022	13,255	6/8/2022	1,003
4/13/2022	941	4/13/2022	843	4/25/2022	9,664	4/25/2022	766
5/6/2022	675	5/6/2022	351	5/3/2022	7,121	3/30/2022	756
4/14/2022	366	3/22/2022	331	4/14/2022	6,145	5/28/2022	716
5/7/2022	360	5/3/2022	303	4/13/2022	5,697	4/24/2022	599

Water Quality Monitoring Report

Illinois River Basin

Arkansas-Oklahoma Compact
State Of Arkansas Monitoring Stations

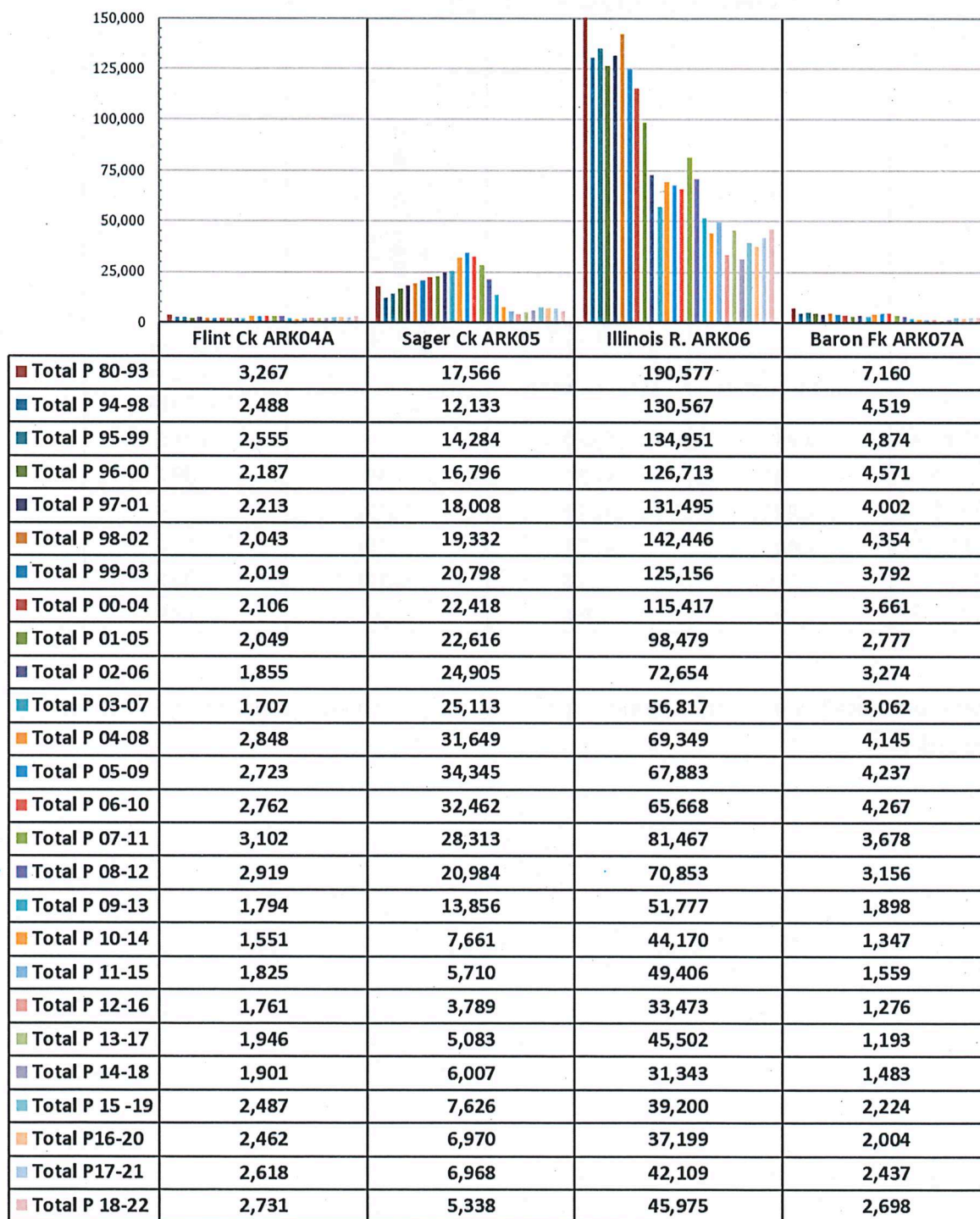
- ARK004A** Flint Creek near West Siloam Springs
- ARK005** Sager Creek near Siloam Springs
- ARK006** Illinois River South of Siloam Springs
- ARK007A** Barren Fork at Dutch Mills



CY 2022

Table 3. Arkansas five year rolling total phosphorus average since 1980 through 2022 for the Arkansas-Oklahoma Arkansas River Compact Commission water quality monitoring locations.

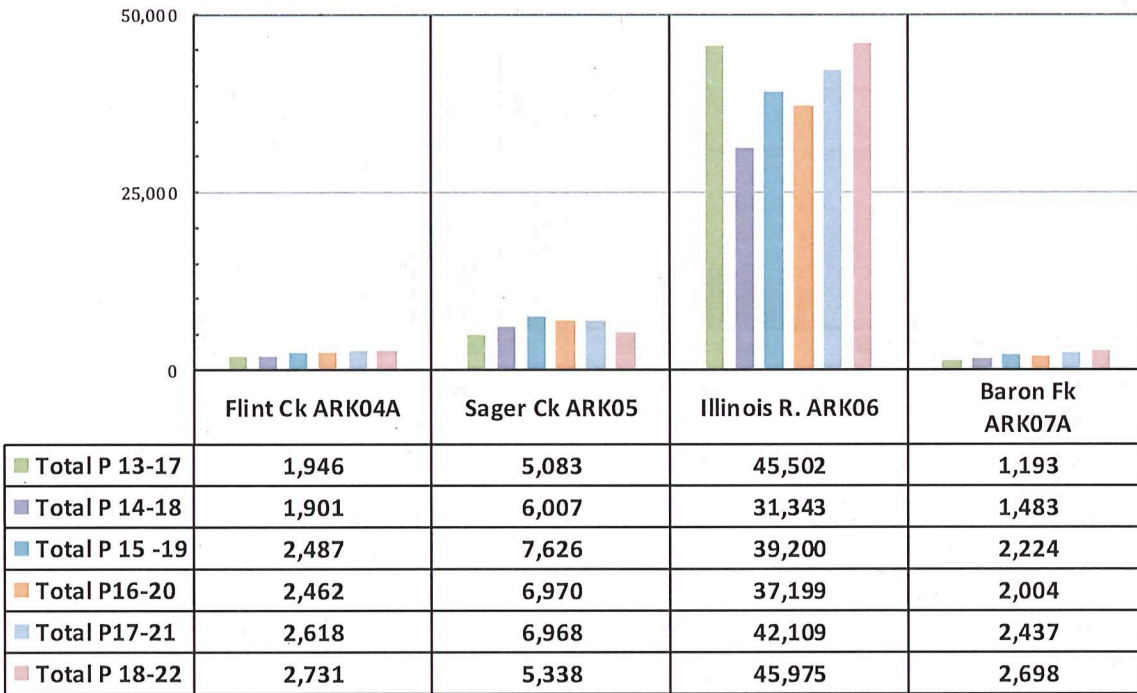
Arkansas
1980-2022 Five Year Rolling Average Total Phosphorus Loading
(excluding targeted high flows)



Values represent all available data routinely collected. Targeted high flows excluded beginning 2016.

Table 4. Arkansas five year rolling total phosphorus average since 2014 through 2022 for the Arkansas-Oklahoma Arkansas River Compact Commission water quality monitoring locations.

Arkansas
2013-2022 Five Year Rolling Average Total Phosphorus Loading
(excluding targeted high flows)



Values represent all available data routinely collected. Targeted high flows excluded beginning 2016.

**Monitoring Station: Flint Creek
Northwest of West Siloam Springs, Oklahoma**

Table 5 - Five-Year Rolling Average Phosphorus Loading

Year	91-95	92-96	93-97	94-98	95-99	96-00	97-01	98-02	99-03	00-04	01-05	02-06	03-07	04-08	05-09	06-10	07-11	08-12	09-13	10-14	11-15	12-16	13-17	14-18	15-19	16-20	17-21	18-22
TP (mg/l)	0.054	0.054	0.059	0.061	0.060	0.053	0.052	0.046	0.050	0.052	0.054	0.056	0.058	0.073	0.072	0.073	0.070	0.067	0.047	0.046	0.046	0.048	0.048	0.047	0.047	0.048	0.048	0.047
Flow (cfs)	62.0	58.4	54.7	45.6	47.7	46.6	47.7	49.2	44.9	45.1	42.6	37.2	32.8	43.9	42.1	42.4	49.5	48.9	42.5	37.6	44.4	41.1	45.3	45.4	59.1	58.4	62	65.0
TP (kg/yr)	3014	2797	2875	2488	2555	2187	2213	2043	2019	2106	2049	1855	1707	2848	2723	2762	3102	2919	1794	1551	1825	1761	1946	1901	2487	2462	2618	2731
% Decrease	8%	14%	12%	24%	22%	33%	32%	37%	38%	36%	37%	43%	48%	13%	17%	15%	5%	11%	45%	53%	44%	46%	40%	42%	24%	25%	19%	16%

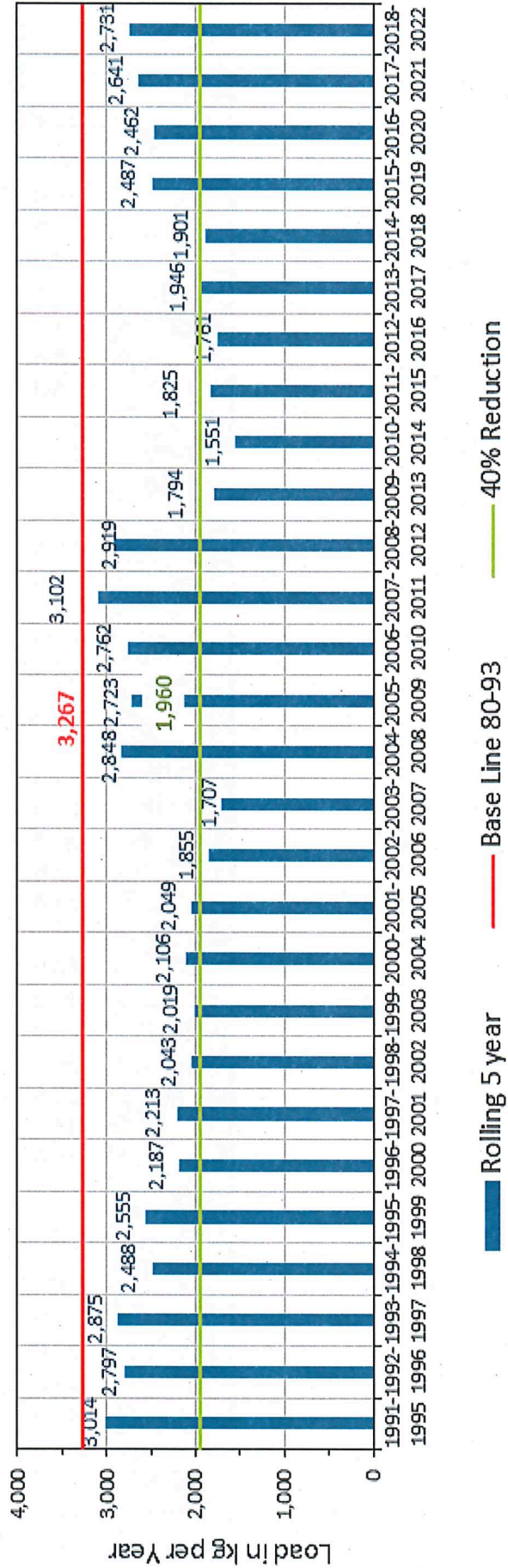


Figure 4 – Five-Year Rolling Average Phosphorus Loading Bar Chart

Table 6-Annual Total Phosphorus Loading

Flint Creek NW of West Siloam Springs (ARK0004A) - Loadings			
Year	Flow (cfs)	Total P (mg/L)	Total P (kg/yr)
1981	19.8	0.149	2,635
1982	29.9	0.171	4,566
1983	19.0	0.073	1,239
1984	53.5	0.112	5,351
1985	91.3	0.063	5,137
1986	78.4	0.067	4,691
1987	58.3	0.049	2,551
1988	41.8	0.031	1,157
1989	38.0	0.050	1,697
1990	71.3	0.060	3,821
1991	51.6	0.054	2,489
1992	56.1	0.047	2,355
1993	88.2	0.045	3,545
1994	53.0	0.051	2,414
1995	61.3	0.075	4,106
1996	33.5	0.050	1,496
1997	37.3	0.074	2,448
1998	42.9	0.056	2,142
1999	63.5	0.045	2,578
2000	55.6	0.038	1,893
2001	39.4	0.047	1,636
2002	44.6	0.047	1,850
2003	21.4	0.075	1,438
2004	64.6	0.055	3,173
2005	43.0	0.046	1,772
2006	12.6	0.056	630
2007	22.4	0.059	1,180
2008	76.9	0.147	10,096
2009	55.6	0.054	2,681
2010	44.3	0.049	1,939
2011	48.5	0.042	1,798
2012	19.2	0.043	732
2013	45.1	0.049	1,973
2014	30.7	0.049	1,343
2015	103.8	0.048	4,449
2016	32.2	0.051	1,467
2017	39.9	0.044	1,554
2018	45.6	0.043	1,750
2019	99.3	0.050	4,433
2020	75.1	0.048	3,243
2021	50.8	0.053	2,403
2022	54.1	0.041	1,981
Avg.	50.3	0.061	2,733

Total Phosphorus (TP) and Scenic River Criterion Implementation (2000 - 2022)

Station ID: ARK0004A

Flint Creek Northwest of West Siloam Springs, Oklahoma

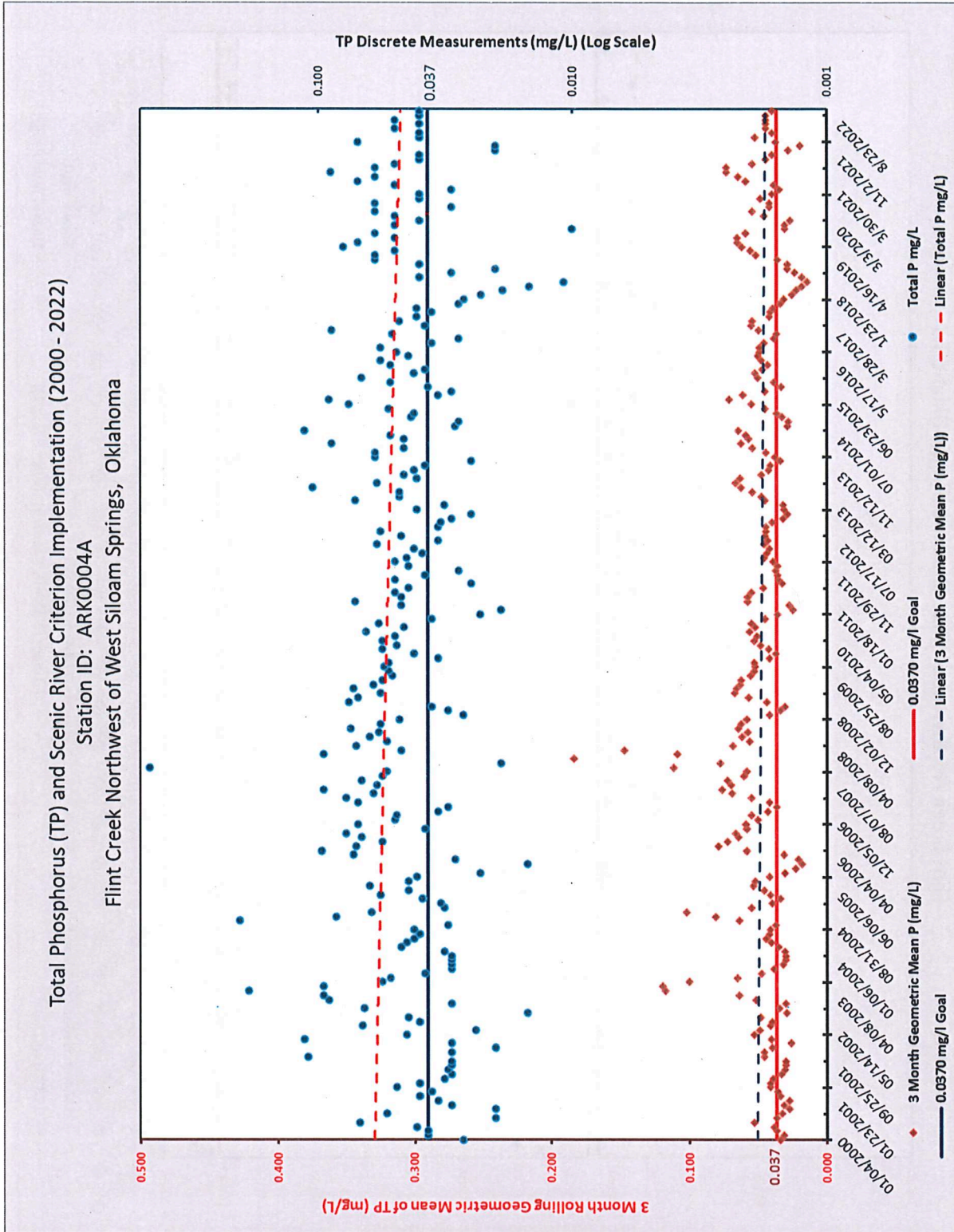


Figure 5 - Total Phosphorus Versus 3-Month Geometric Mean from 2000 through 2022

Total Phosphorus (TP) and Scenic River Criterion Implementation (2018 - 2022)
 Station ID: ARK0004A
 Flint Creek Northwest of West Siloam Springs, Oklahoma

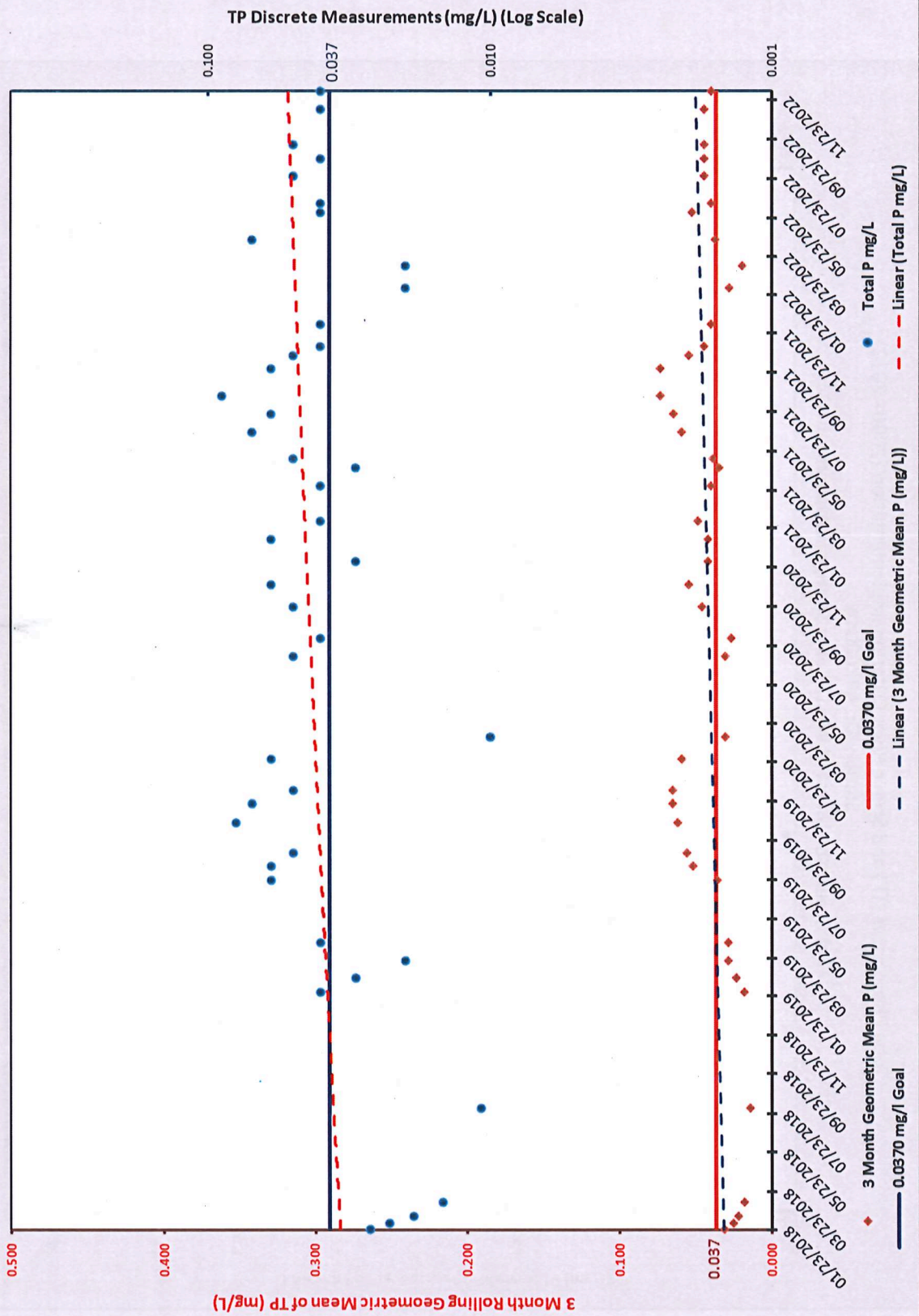


Figure 6 - Total Phosphorus Versus 3-Month Geometric Mean from 2018 through 2022

Table 7 – Five-Year Rolling Average Phosphorus Loading

**Monitoring Station: Sager Creek
Near West Siloam Springs, Arkansas**

Year	94-95	92-96	93-97	94-98	95-99	96-00	97-01	98-02	99-03	00-04	01-05	02-06	03-07	04-08	05-09	06-10	07-11	08-12	09-13	10-14	11-15	12-16	13-17	14-18	15-19	16-20	17-21	18-22
TP (mg/l)	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.9	1.1	1.0	1.2	1.4	1.4	1.3	1.4	1.2	1.0	0.8	0.6	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.207
Flow (cfs)	18.0	17.1	17.4	16.1	17.8	20.4	22.5	23.3	22.0	24.0	21.6	20.3	20.1	27.6	28.3	29.2	31.7	29.7	24.0	20.0	23.3	21.0	23.1	23.5	29.1	26.7	28	28.8
TP (kg/yr)	13689	15021	12426	12133	14284	17966	20798	20798	2248	2266	24905	2518	31649	34345	32462	28313	20984	13856	7661	7661	570	3789	5083	6007	7626	6970	6968	5338
%Decrease	22%	26%	29%	3%	9%	4%	-3%	-0%	-6%	-28%	-29%	-42%	-43%	-80%	-96%	-85%	-6%	-9%	2%	56%	67%	78%	7%	66%	57%	60%	60%	70%

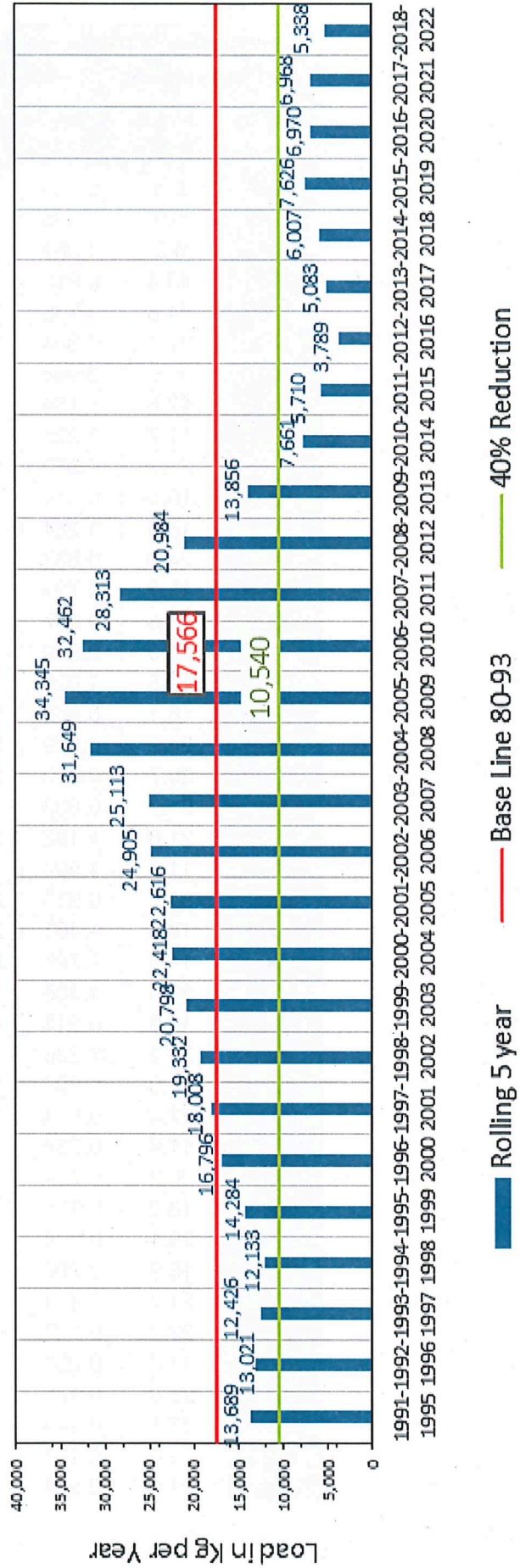
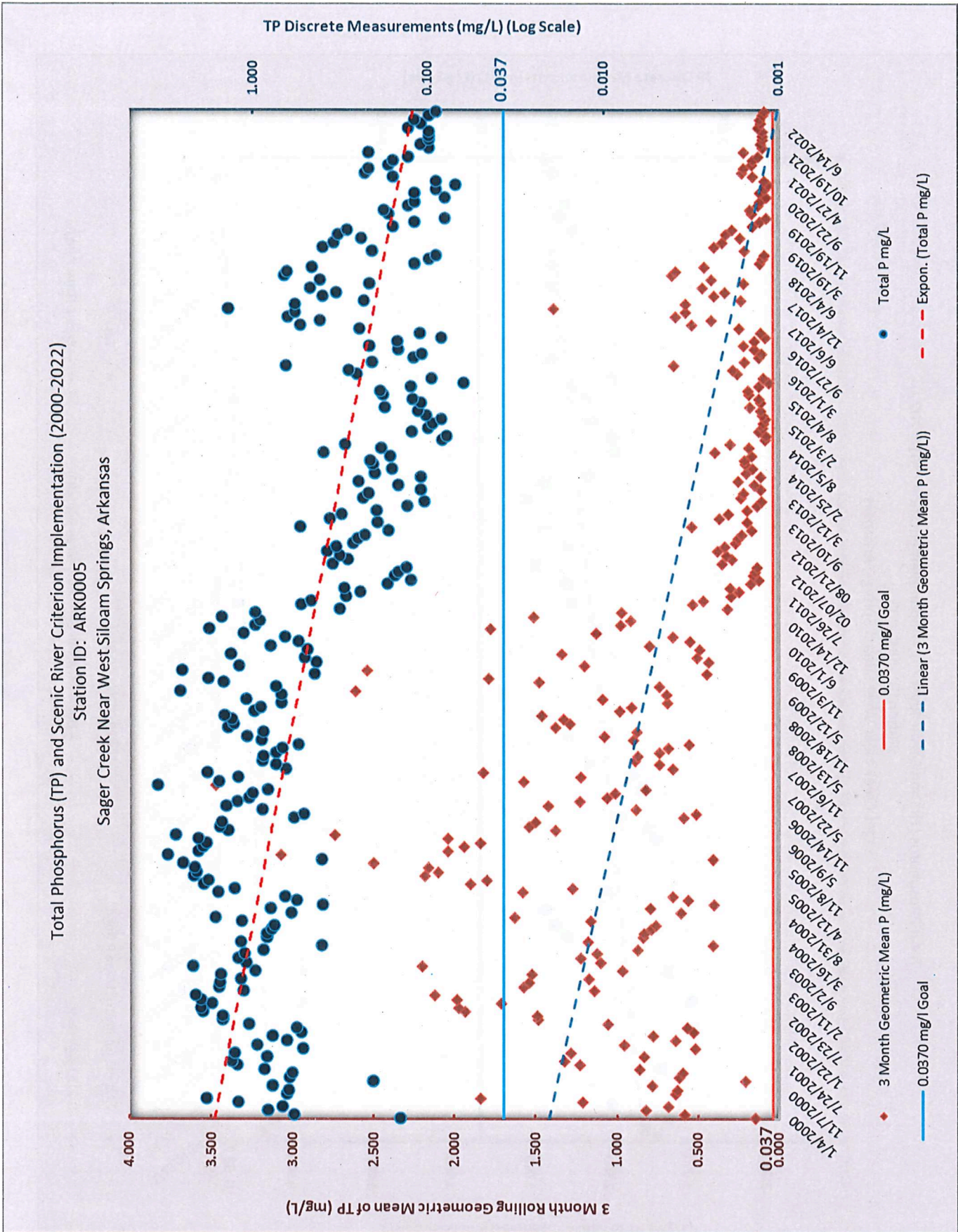


Figure 7 – Five-Year Rolling Average Phosphorus Loading Chart

Table 8 – Annual Total Phosphorus Loading for Sager Creek near West Siloam Springs.

Sager Creek NR West Siloam Springs (ARK0005) - Loadings			
ARK05 Year	Flow (cfs)	Total P (mg/L)	Total P (kg/yr)
1981	6.5	2.125	12336
1982	9.0	2.025	16277
1983	6.3	1.964	11050
1984	15.4	0.950	13066
1985	24.8	1.736	38450
1986	21.1	0.834	15716
1987	16.7	0.948	14136
1988	12.6	1.154	12986
1989	11.7	1.227	12821
1990	20.2	0.860	15515
1991	15.5	0.914	12653
1992	16.5	1.284	18921
1993	24.6	0.637	13995
1994	15.7	0.721	10110
1995	17.8	0.697	11080
1996	11.0	0.919	9028
1997	17.8	1.029	16354
1998	18.1	0.858	13876
1999	24.5	0.979	21429
2000	30.7	0.820	22469
2001	21.2	0.803	15201
2002	21.8	1.192	23231
2003	11.7	1.503	15700
2004	34.5	0.916	28224
2005	18.5	1.461	24200
2006	14.9	1.799	23940
2007	21.0	1.306	24494
2008	48.9	0.945	41271
2009	38.1	1.286	43759
2010	22.9	0.897	18335
2011	27.4	0.573	14027
2012	11.4	0.250	2540
2013	20.2	0.228	4105
2014	18.2	0.196	3193
2015	39.1	0.128	4470
2016	16.3	0.207	3013
2017	21.7	0.473	9179
2018	22.2	0.427	8454
2019	46.4	0.230	9531
2020	26.8	0.126	3010
2021	22.1	0.146	2878
2022	26.8	0.107	2565
Avg.	21.0	0.921	17293



Water Quality Monitoring

Sager Creek

Figure 8 – Sager Creek Total Phosphorus Versus 3-Month Geometric Mean from 2000 through 2022

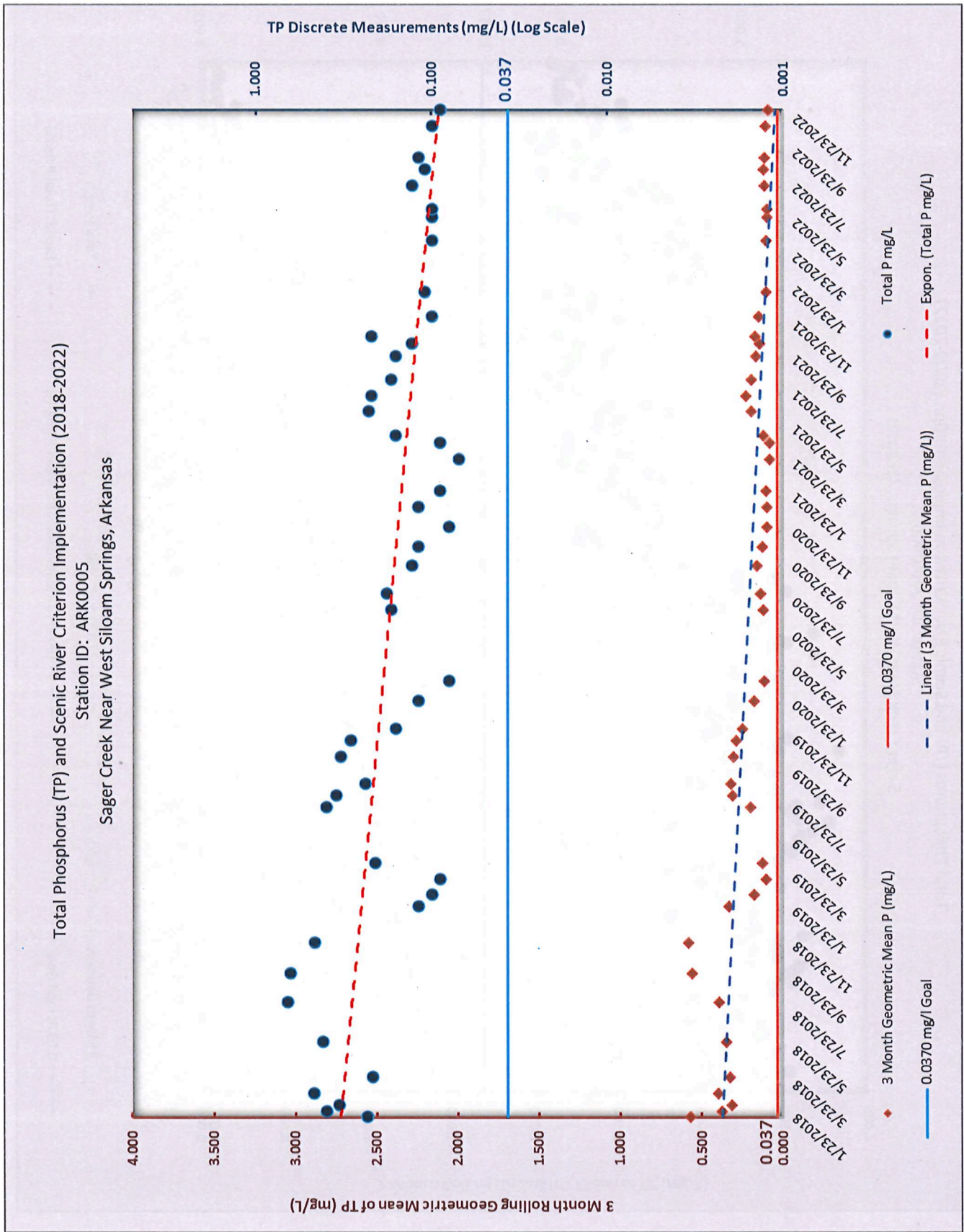


Figure 9 – Sager Creek Total Phosphorus Versus 3-Month Geometric Mean from 2018 through 2022

Table 9 - Five-Year Rolling Average Phosphorus Loading for Illinois River South of Siloam Springs.

**Monitoring Station: Illinois River
South of Siloam Springs, Arkansas**

Year	91-95	92-96	93-97	94-98	95-99	96-00	97-01	98-02	99-03	00-04	01-05	02-06	03-07	04-08	05-09	06-10	07-11	08-12	09-13	10-14	11-15	12-17	13-18	14-19	15-20	16-21	17-22	18-22
TP (mg/l)	0.210	0.211	0.209	0.222	0.225	0.224	0.238	0.252	0.246	0.236	0.214	0.179	0.149	0.136	0.122	0.110	0.110	0.098	0.081	0.080	0.081	0.068	0.077	0.061	0.060	0.058	0.060	0.063
Flow (cfs)	821	809	757	668	670	633	619	634	569	548	516	465	428	569	624	668	830	811	78	621	686	551	591	734	721	783	819.7	
TP (kg/yr)	63,942	62,527	41,386	60,557	64,951	126,778	61,495	142,446	125,166	16,417	98,479	72,654	56,817	69,349	67,883	65,668	81,467	70,853	51,777	44,170	49,406	33,473	40,805	31,343	39,200	37,99	42,09	45,975
% Decrease	19%	20%	26%	3%	29%	34%	3%	25%	34%	39%	48%	62%	70%	64%	64%	66%	57%	63%	73%	77%	74%	82%	79%	84%	79%	80%	78%	76%

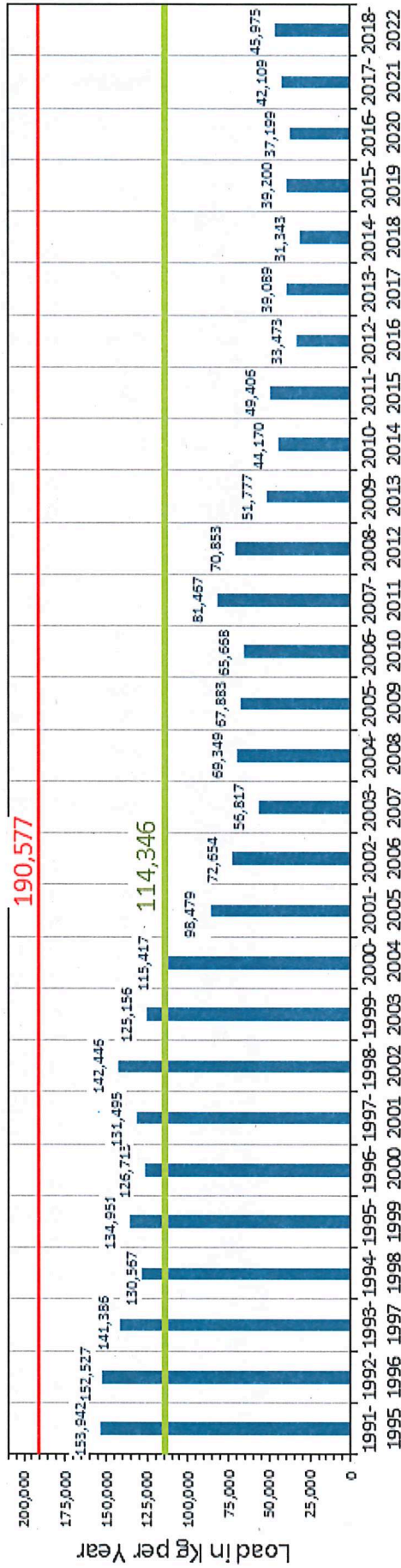


Figure 10 - Five-Year Rolling Average Phosphorus Loading Chart for Illinois River South of Siloam Springs.

Table 10 - Annual Total Phosphorus Loading for Illinois River South of Siloam Springs.

Illinois River S of Siloam Springs (ARK0006) - Loadings			
Year	Flow (cfs)	Total P (mg/L)	Total P (kg/yr)
1981	197	0.420	73,895
1982	591	0.370	195,294
1983	352	0.386	121,347
1984	706	0.442	278,693
1985	947	0.289	244,426
1986	879	0.305	239,436
1987	815	0.294	213,996
1988	531	0.253	119,982
1989	558	0.291	145,020
1990	1127	0.204	205,331
1991	724	0.220	142,253
1992	760	0.222	150,684
1993	1163	0.181	188,000
1994	674	0.190	114,370
1995	783	0.237	165,733
1996	667	0.225	134,032
1997	497	0.213	94,504
1998	668	0.246	146,960
1999	737	0.206	135,413
2000	597	0.230	122,831
2001	598	0.293	156,581
2002	570	0.282	143,700
2003	344	0.219	67,422
2004	633	0.153	86,496
2005	436	0.120	46,785
2006	290	0.120	31,048
2007	436	0.131	51,022
2008	1051	0.158	148,306
2009	907	0.080	64,782
2010	659	0.061	35,885
2011	1097	0.120	117,154
2012	343	0.070	21,547
2013	583	0.073	37,984
2014	426	0.074	28,014
2015	1334	0.066	78,651
2016	418	0.057	21,264
2017	547	0.043	21,003
2018	521	0.063	29,333
2019	1200	0.070	75,030
2020	917	0.056	45,860
2021	731	0.069	45,027
2022	729	0.056	36,482
Avg.	675	0.190	114,676

Total Phosphorus (TP) and Scenic River Criterion Implementation (2000 - 2022)
 Station ID: ARK0006
 Illinois River South of Siloam Springs, Arkansas

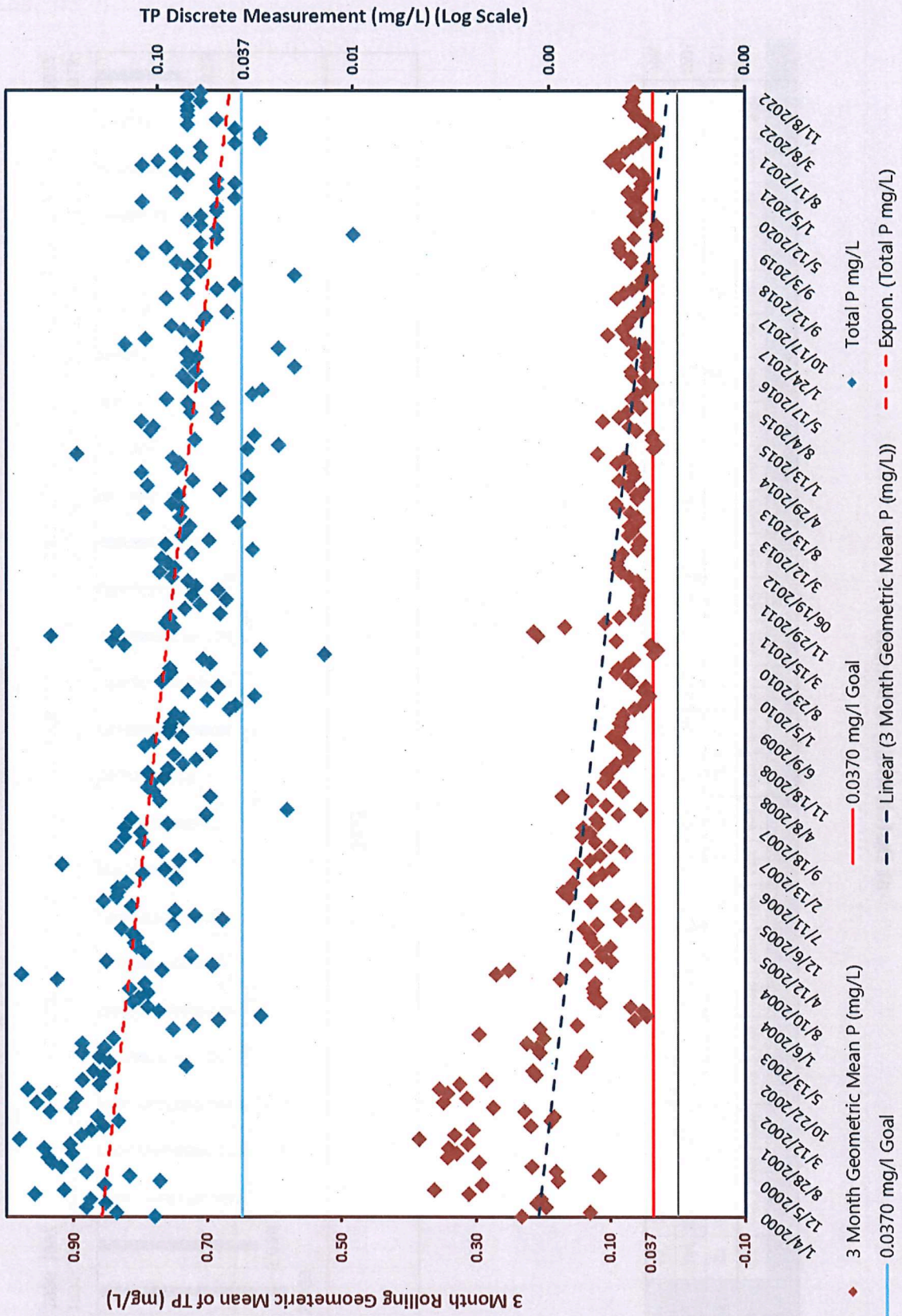


Figure 11 – Illinois River Total Phosphorus versus 3 Month Geometric Mean from 2000 to 2022

Table 11 - Five-Year Rolling Average Phosphorus Loading for Baron Fork at Dutch Mills

**Monitoring Station: Baron Fork
at Dutch Mills, Arkansas**

Year	94-96	92-96	93-97	94-98	95-99	96-00	97-01	98-02	99-03	00-04	01-05	02-06	03-07	04-08	05-09	06-10	07-11	08-12	09-13	10-14	11-15	12-16	13-17	14-18	15-20	17-21	18-22	
TP (mg/l)	0.20	0.21	0.209	0.222	0.225	0.224	0.238	0.252	0.246	0.236	0.214	0.179	0.149	0.165	0.122	0.10	0.10	0.098	0.081	0.080	0.081	0.068	0.077	0.061	0.060	0.058	0.063	
Flow (cfs)	821	809	757	688	670	633	619	634	569	548	516	455	428	569	624	668	830	811	718	621	686	551	591	579	734	721	783	819.7
TP (kg/yr)	63,942	62,527	41,386	30,367	34,951	26,718	31,495	42,446	25,566	16,477	98,479	72,654	58,817	69,349	67,883	65,668	81,467	70,853	51,777	44,170	49,406	33,473	40,805	31,343	39,200	37,99	42,09	45,975
% Decrease	6%	20%	26%	31%	29%	34%	31%	25%	34%	39%	48%	62%	70%	64%	64%	66%	57%	63%	73%	77%	74%	82%	79%	84%	79%	80%	76%	76%

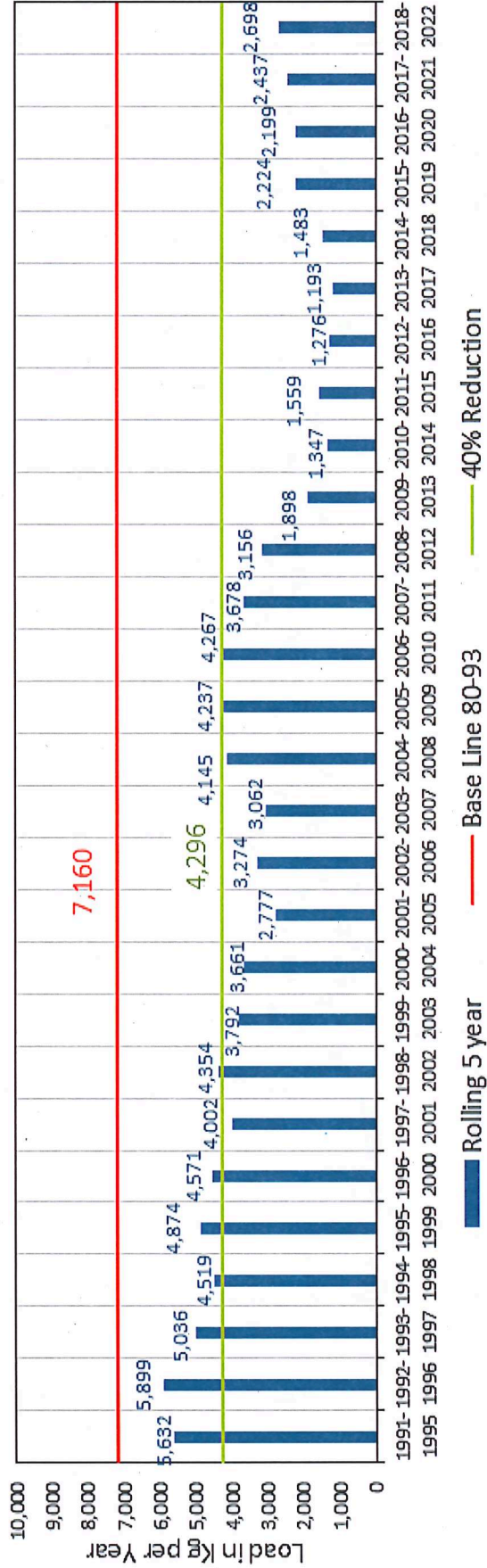


Figure 12 - Five-Year Rolling Average Phosphorus Loading Chart

Table 12 – Annual Total Phosphorus Loading for Baron Fork at Dutch Mills.

Baron Fork at Dutch Mills (ARK0007A) - Loadings			
Year	Flow (cfs)	Total P (mg/L)	Total P (kg/yr)
1981	18.4	0.135	2,218
1982	37.4	0.484	16,167
1983	27.2	0.125	3,037
1984	51.8	0.183	8,466
1985	79.4	0.211	14,962
1986	64.0	0.147	8,402
1987	63.2	0.134	7,563
1988	31.8	0.097	2,755
1989	50.2	0.124	5,559
1990	102.0	0.109	9,929
1991	49.4	0.086	3,794
1992	47.9	0.127	5,433
1993	104.0	0.083	7,709
1994	37.0	0.081	2,677
1995	54.2	0.162	7,842
1996	64.4	0.084	4,831
1997	35.9	0.067	2,151
1998	61.1	0.107	5,822
1999	45.8	0.102	4,176
2000	52.6	0.133	6,230
2001	41.4	0.065	2,387
2002	38.0	0.104	3,536
2003	20.1	0.133	2,386
2004	44.5	0.087	3,458
2005	26.1	0.069	1,595
2006	62.0	0.088	4,873
2007	32.3	0.087	2,510
2008	86.0	0.132	10,138
2009	62.3	0.066	3,672
2010	37.1	0.054	1,789
2011	40.2	0.060	2,161
2012	19.7	0.048	845
2013	26.3	0.058	1,364
2014	17.8	0.049	778
2015	101.8	0.050	4,546
2016	22.1	0.050	987
2017	36.9	0.039	1,290
2018	39.8	0.123	4,374
2019	94.2	0.069	5,804
2020	55.6	0.080	3,969
2021	53.5	0.044	2,103
2022	57.9	0.032	1,654
Avg.	49.6	0.104	4,610

Water Quality Monitoring

Baron Creek

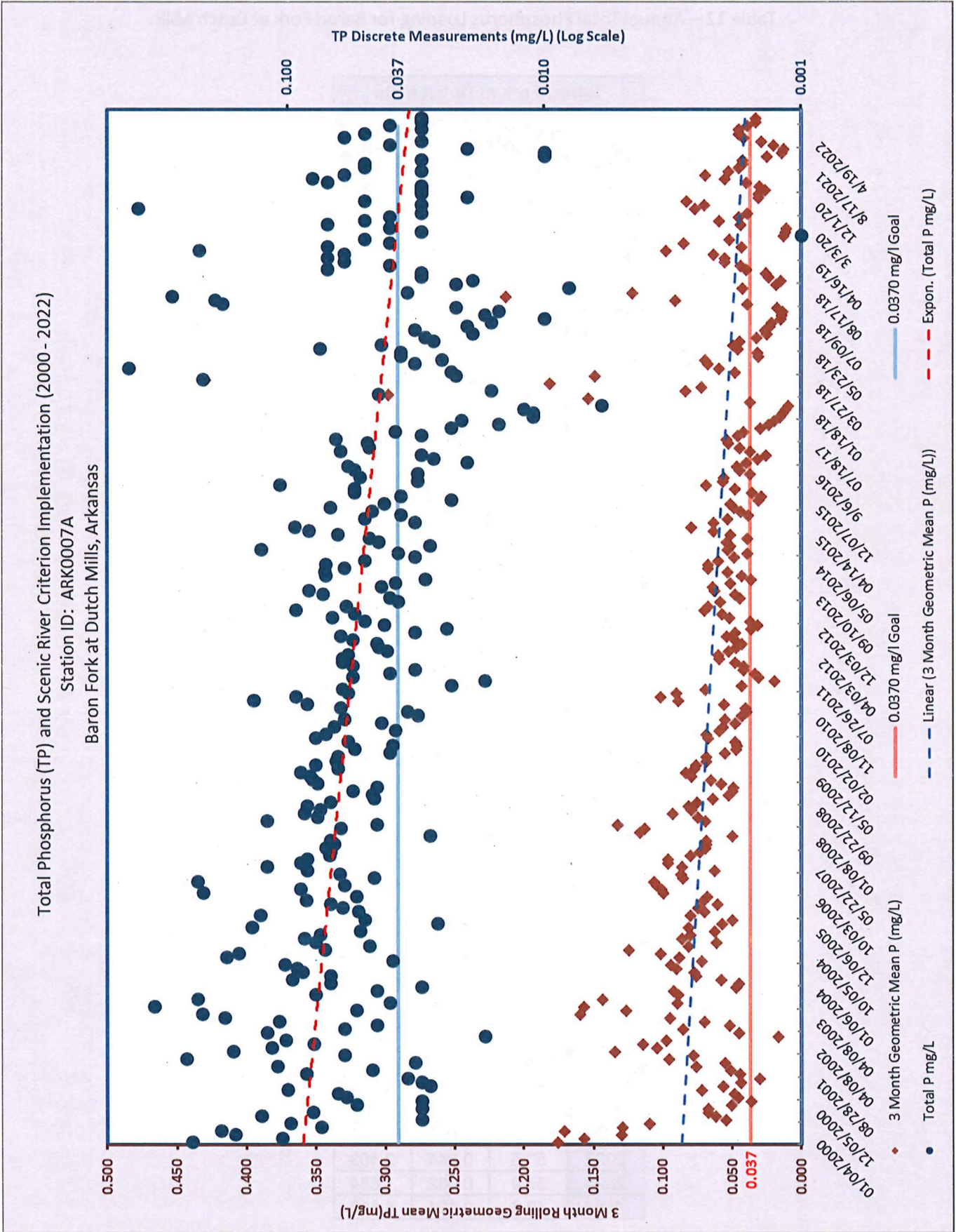


Figure 13 – Baron Fork Total Phosphorus versus 3 Month Geometric Mean 2000 through 2018

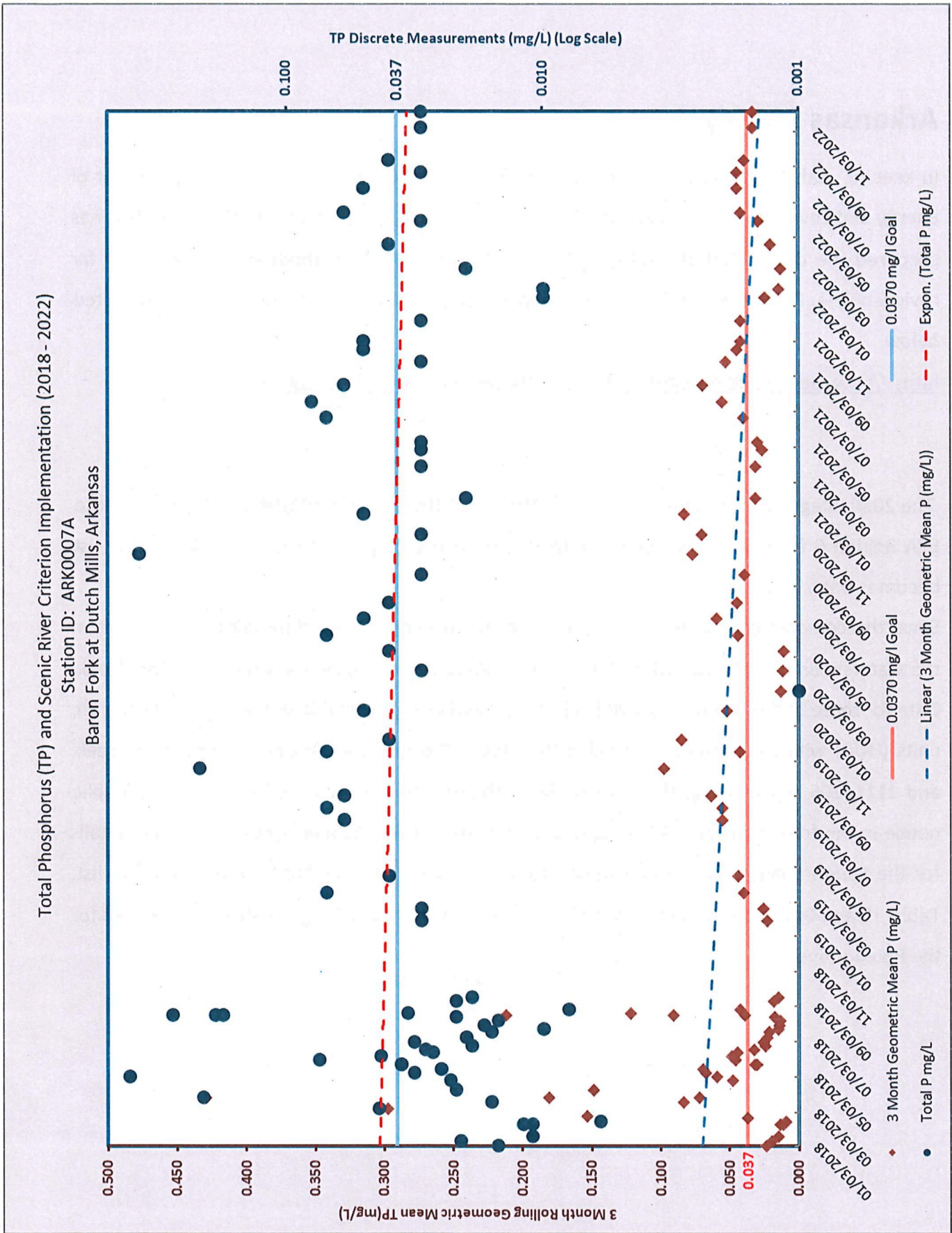


Figure 14 – Baron Fork Total Phosphorus versus 3 Month Geometric Mean 2018 through 2022

Arkansas 303 (d) List

In keeping with the two-year rotation for producing the 303 (d) list, Arkansas Department of Energy and Environment – Division of Environmental Quality (DEQ), Office of Water Quality, has prepared the draft 2020 303 (d) list. The “2020 Assessment Methodology” is available for review online. Documents and documentation for the program is available at the website listed below

<https://www.adeq.state.ar.us/water/planning/integrated/303d/list.aspx> .

The 2020 Integrated Report including the 2020 303(d) List of Impaired Waterbodies was sent to EPA Region 6 for review and approval. DEQ is waiting for approval from EPA before the list becomes final.

Since the compact covers five watersheds, the information reviewed includes waterbodies in the watersheds for Arkansas River, Illinois River, Poteau River, Spavinaw Creek, and Lee Creek. Data for three of the five watersheds is presented and was gathered based on 8-digit hydrologic units (HUC) with 11110103 representing the Illinois River, 11110104 representing Lee Creek, and 11110105 representing the Poteau River. The details are presented following the public notice in the form of a spreadsheet and locator map. Table 13 and Figure 15 include details for the Illinois River, Table 14 and Figure 16 include details for the Illinois River alternate list. Table 15 and Figure 17 include details for Lee Creek. Table 16 and Figure 18 include details for the Poteau River.

Table 13 – 2020 303 (d) Category 5 List (Draft) Illinois River Watershed

Map Reference	Planning Segment	Assessment Unit	Stream Names	Parameter	Descriptor	Miles	Designated Use(s) Not Supported	Source of Contamination	Priority
1-A	3J	AR_11110103_733	Unnamed Trib. to Brush	Dissolved Oxygen	Primary season	3.5	AL	UN	Medium
1-E	3J	AR_11110103_813	Baron Fork	Dissolved Oxygen	Critical season	7.3	AL	UN	Low
1-D	3J	AR_11110103_020	Illinois River	Sulfates	Site specific	1.6	AL	UN	Medium
1-B	3J	AR_11110103_024	Illinois River	Sulfates	Site specific	2.8	AL	UN	Medium
1-F	3J	AR_11110103_027	Illinois River	Sulfates		7.1	AL	UN	Medium
1-G	3J	AR_11110103_026	Moore's Creek	Sulfates		4.8	AL	UN	Medium
1-C	3J	AR_11110103_932	Sager Creek	Ammonia-N	Chronic - Early Life	12.3	AL	UN	Low
1-H	3J	AR_11110103_4080	Fayetteville	pH	Short-term	171 acres	OU	UN	Medium

KEY	
OU	Other Uses
AL	Aquatic Life
ORW	Outstanding Resource Waterbody
DW	Drinking Water
PC	Primary Contact
A&I	Agriculture and Industry
FC	Fish Consumption*
UN	Unknown
UR	Urban Runoff
IP	Industrial Pollution
AG	Agriculture
MP	Municipal Pollution
SE	Surface Erosion
RE	Resource Extraction
NA	Not available/Not applicable

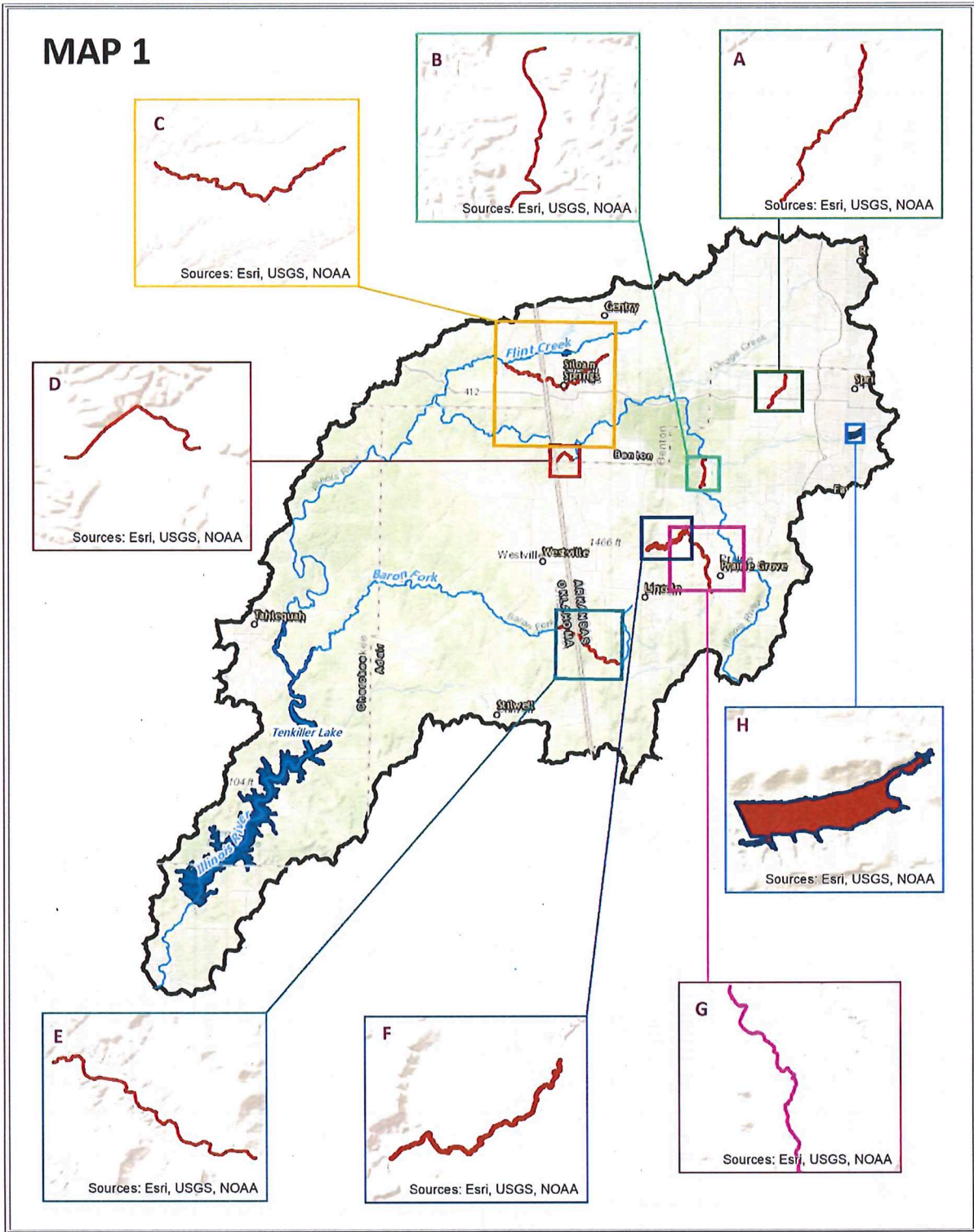


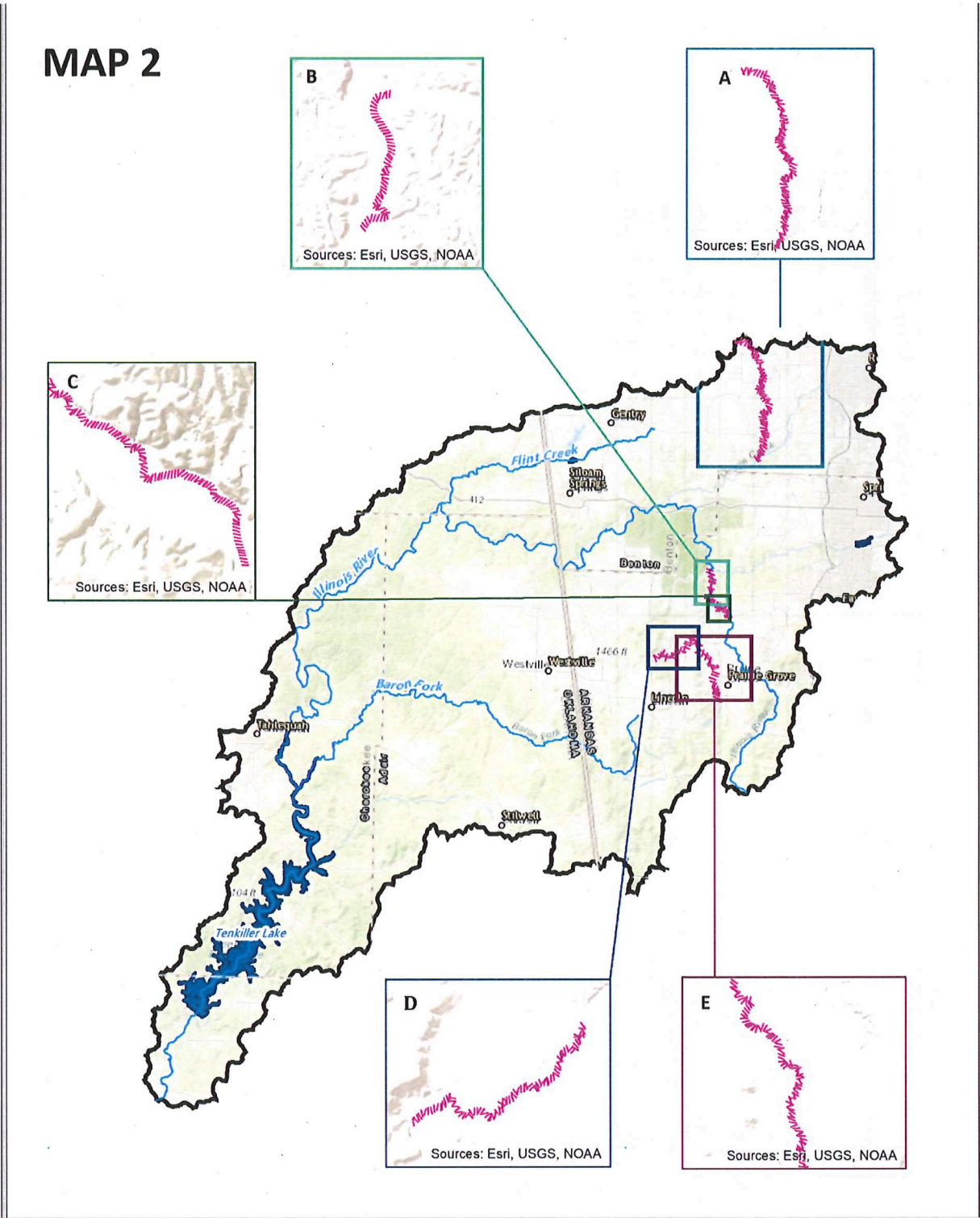
Figure 15 – 2020 303 (d) Category 5 List (Draft) Illinois River Watershed

Table 14 – 2020 303 (d) Category 5 Alternate List (Draft) Illinois River Watershed

Map Reference	Assessment Unit	Stream Names	Parameter	Descriptor	Miles	Designated Use(s) / Not Supported	Source of Contamination	Priority
2 - C	AR_11110103_024	Illinois River	Turbidity	Base Flows	2.8	OU	UN	Low
2 - C	AR_11110103_028	Illinois River US of Goose Creek	E. coli	Primary Contact	2.9	PC	IP, MP, SE, AG	Low
2 - E	AR_11110103_027	Illinois River, Muddy Fork	E. coli		7.1	PC	IP, MP, SE, AG	Low
2 - A	AR_11110103_933	Little Osage Creek near Healing Springs	E. coli	Primary Contact	4.3	PC	IP, MP, SE, AG	Low
2 - A	AR_11110103_630	Little Osage Creek S of Centerton	E. coli	Primary Contact	7.2	PC	IP, MP, SE, AG	Low
2 - D	AR_11110103_026	Moore's Creek	E. coli		4.8	PC	IP, MP, SE, AG	Low

KEY	
OU	Other Uses
AL	Aquatic Life
ORW	Outstanding Resource Waterbody
DW	Drinking Water
PC	Primary Contact
A&I	Agriculture and Industry
FC	Fish Consumption*
UN	Unknown
UR	Urban Runoff
IP	Industrial Pollution
AG	Agriculture
MP	Municipal Pollution
SE	Surface Erosion
RE	Resource Extraction
NA	Not available/Not applicable

MAP 2



2020 Draft 303(d) List Category 5 Alt.- Illinois River Watershed
10 Digit HUC - 11110103

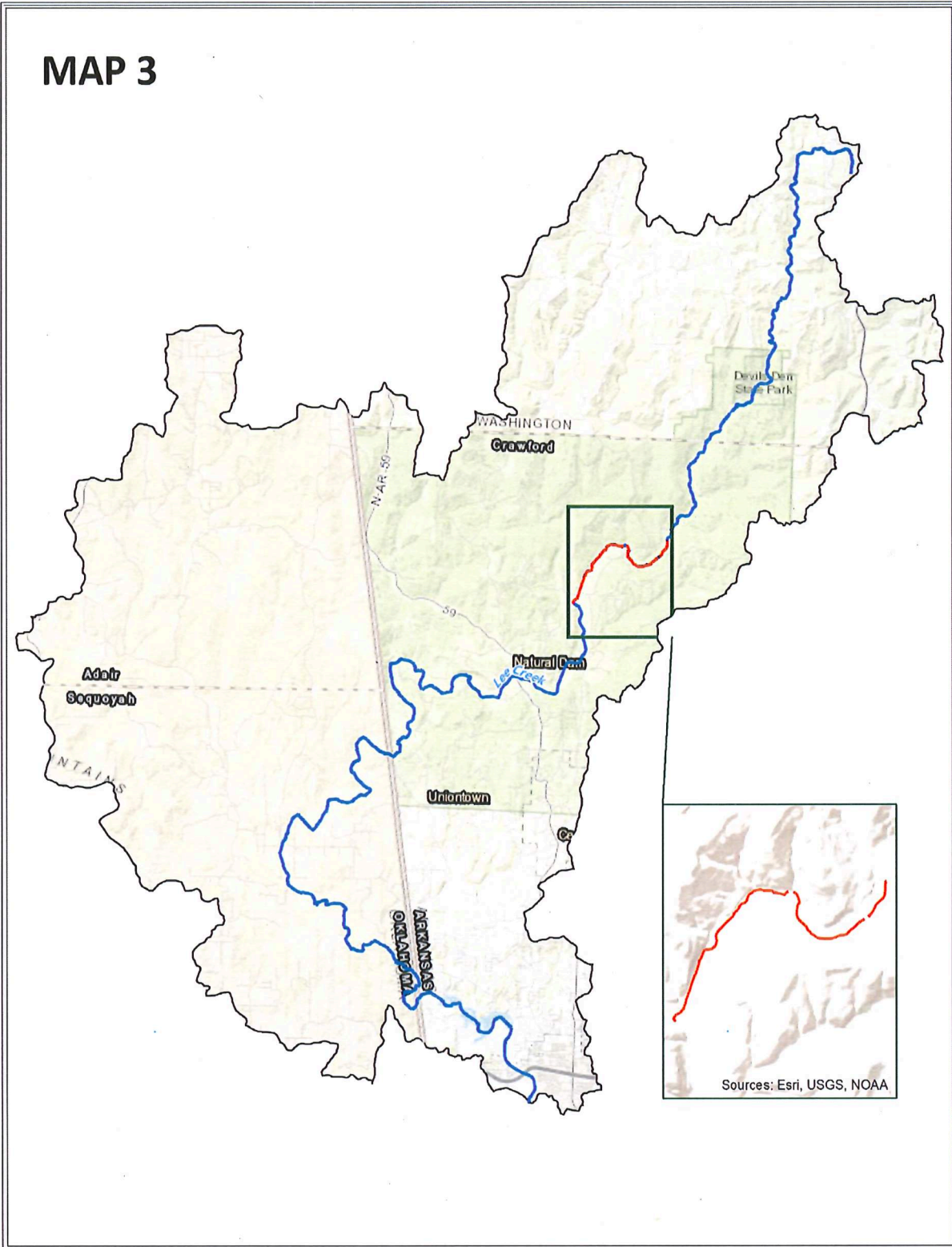
Figure 16 – 2020 303 (d) Category 5 Alternate List (Draft) Illinois River Watershed

Table 15 – 2020 303 (d) Category 5 List (Draft) Lee Creek Watershed

Map Reference	Assessment Unit	Stream Names	Parameter	Descriptor	Miles	Designated Use(s) Not Supported	Source of Contamination	Priority
3	AR_11110104_40	Lee Creek	pH		582 acres	OU	UN	Low

KEY	
OU	Other Uses
AL	Aquatic Life
ORW	Outstanding Resource
DW	Drinking Water
PC	Primary Contact
A&I	Agriculture and Industry
FC	Fish Consumption*
UN	Unknown
UR	Urban Runoff
IP	Industrial Pollution
AG	Agriculture
MP	Municipal Pollution
SE	Surface Erosion
RE	Resource Extraction
NA	Not available/Not

MAP 3



2020 Draft 303(d) List Category 5t.- Lee Creek Watershed
10 Digit HUC - 1111010

Figure 17 –2020 303 (d) Category 5 (Draft) Lee Creek Watershed

Table 16 – 2020 303 (d) Category 5 and Category 4a List (Draft) Poteau River Watershed

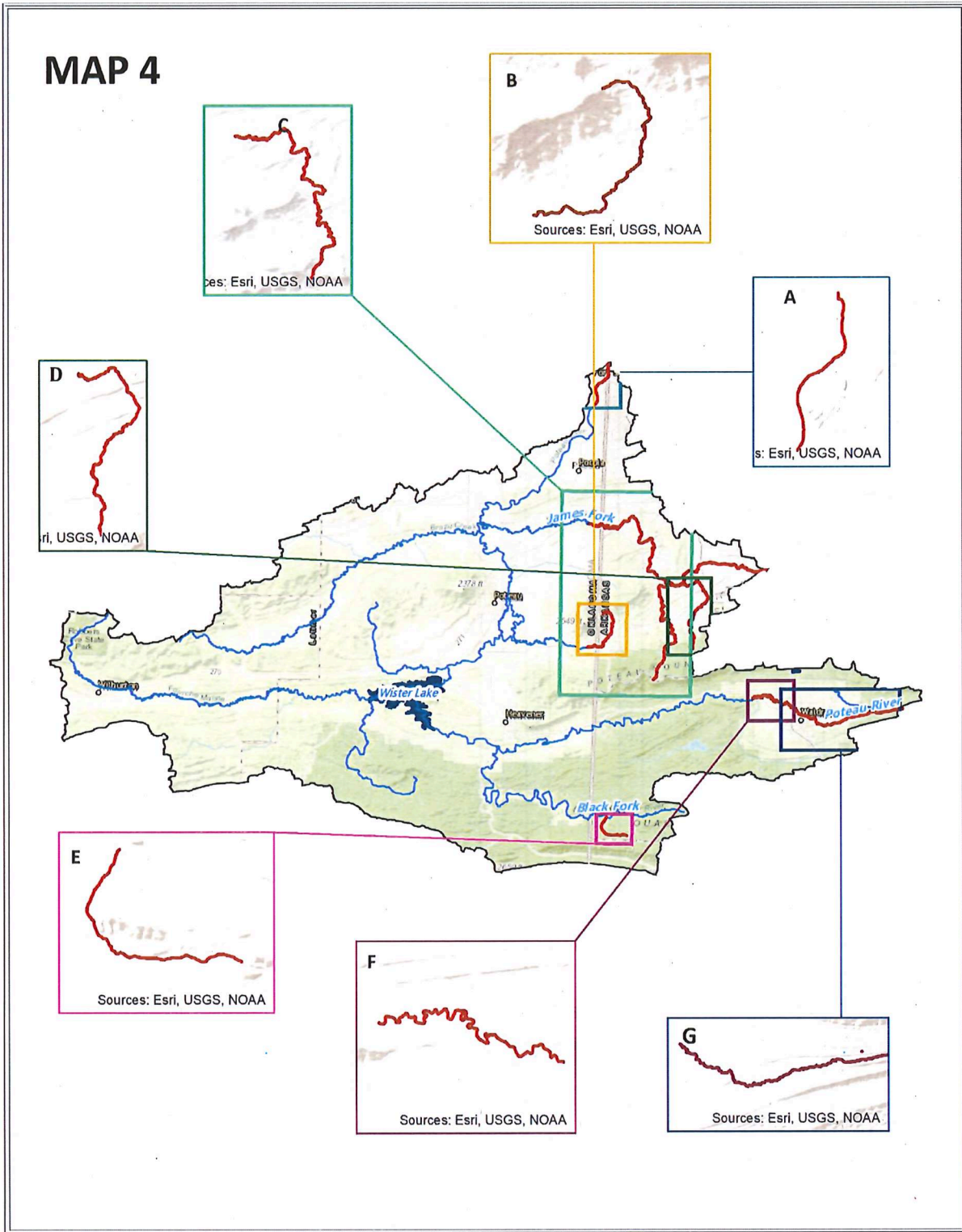
Map Reference	Assessment Unit	Stream Names	Parameter	Descriptor	Miles	Designated Use(s) Not Supported	Source of Contamination	Priority
4-E	AR_11110105_925	Briery Creek	pH		3.8	OU	UN	Medium
4-D	AR_11110105_036	Cherokee Creek	Turbidity	Storm Flows	10.6	OU	AG, UN	Low
4-C	AR_11110105_033	James Fork	Turbidity	Base Flows	28.2	OU	AG, UN	Low
4-A	AR_11110105_001	Poteau River	Dissolved Oxygen	Critical season	4.9	AL	UN	Medium
4-F	AR_11110105_731	Poteau River	Turbidity	Base Flows	13.4	OU	IP, MP, SE, AG	Low
4-G	AR_11110105_031	Poteau River	Sulfates		6.7	AL	IP, MP, SE	Medium
4-G	AR_11110105_031	Poteau River	Turbidity		6.7	OU	IP, MP, SE	Medium
Not Mapped	AR_11110105_831	Unnamed Tributary to Poteau	Chloride		1.1	AL	UN	Low
Not Mapped	AR_11110105_831	Unnamed Tributary to Poteau	Total Dissolved Solids		1.1	AL	UN	Low
4-B	AR_11110105_034	Upper Sugar Loaf	Turbidity	Storm Flows	6.9	OU	UN	Low

303(d) 4a

4-A	AR_11110105_001	Poteau River	Turbidity	Base Flows	4.9	OU	UR	
4-A	AR_11110105_001	Poteau River	Turbidity	Storm Flows	4.9	OU	UR	
4-G	AR_11110105_031	Poteau River Waldron	Total Phosphorus		6.7	AL	IP	

KEY	
OU	Other Uses
AL	Aquatic Life
ORW	Outstanding Resource Watershed
DW	Drinking Water
PC	Primary Contact
A&I	Agriculture and Industry
FC	Fish Consumption*
UN	Unknown
UR	Urban Runoff
IP	Industrial Pollution
AG	Agriculture
MP	Municipal Pollution
SE	Surface Erosion
RE	Resource Extraction
NA	Not available/Not applicable

MAP 4



2020 Draft 303(d) List Category 4a & 5.- Poteau River Watershed
10 Digit HUC - 11110105

Figure 18 –2020 303 (d) Category 5 and Category 4a List (Draft) Poteau River Watershed