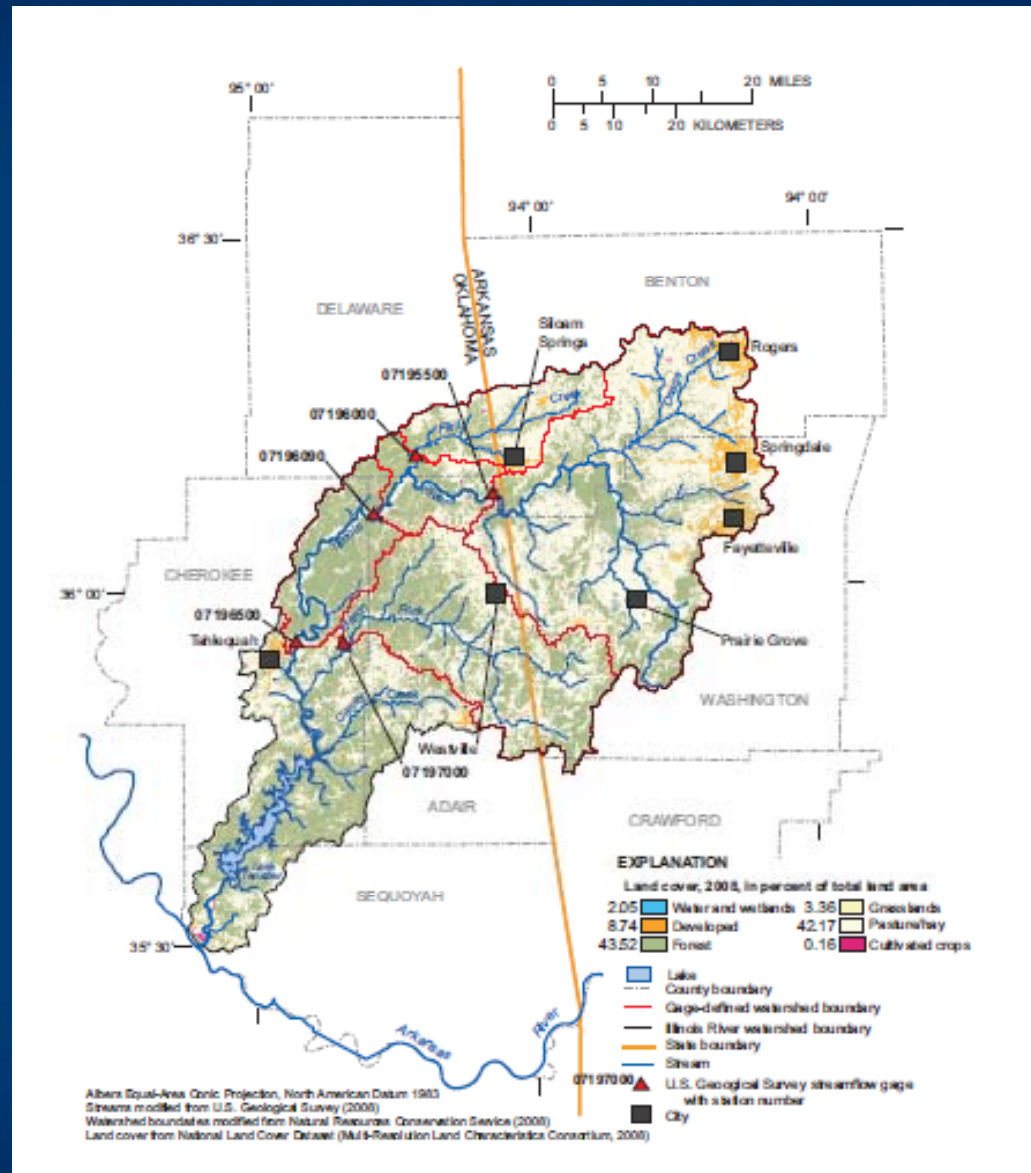


# Arkansas, Oklahoma & The Illinois River

Allan Gates

MITCHELL | WILLIAMS

Mitchell, Williams, Selig, Gates & Woodyard, P.L.L.C.

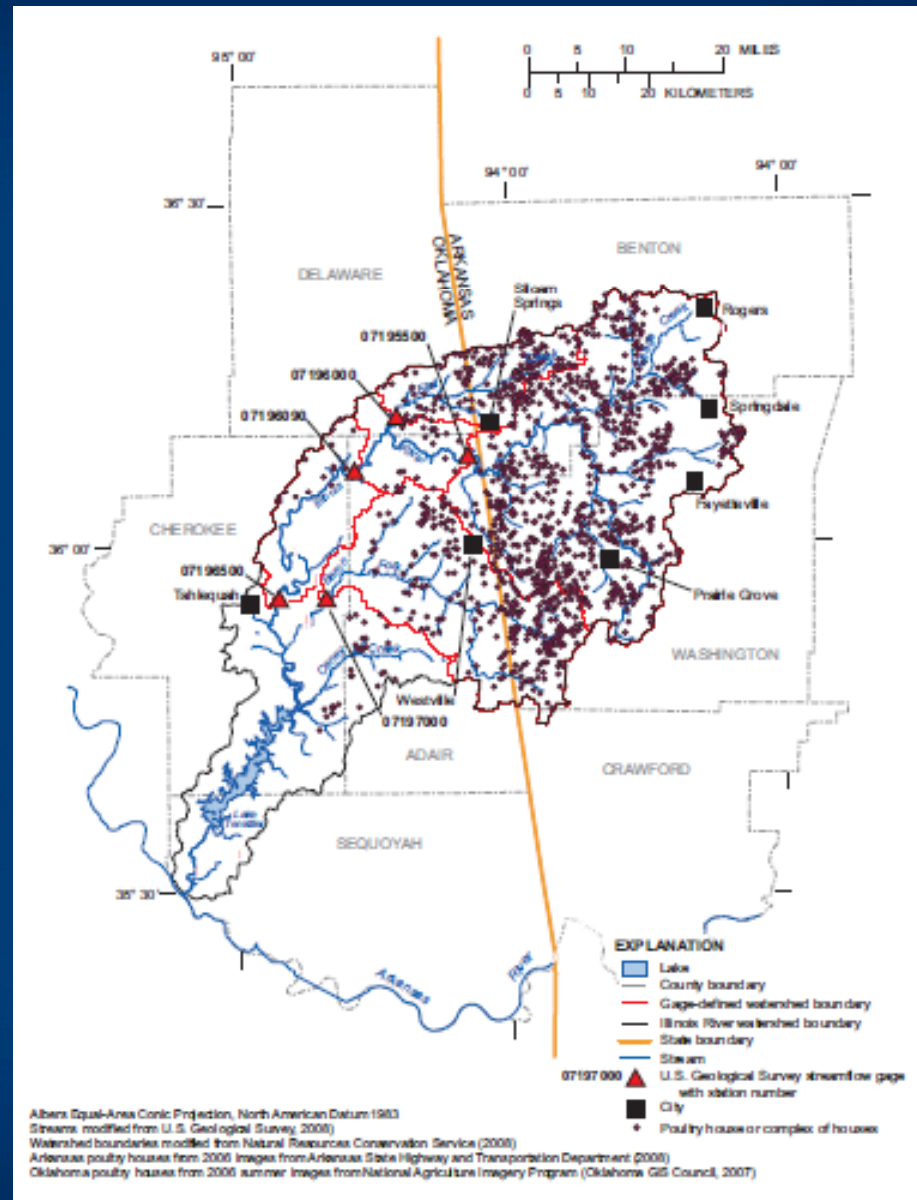


# Illinois River Watershed

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Poultry  
20 million  
annually

Cattle  
156,000  
annually



# Historical Chronology – Part 1

1952 Lake Tenkiller Dam completed

1968 National Wild & Scenic Rivers Act  
enacted

1970 Oklahoma Scenic Rivers Act enacted



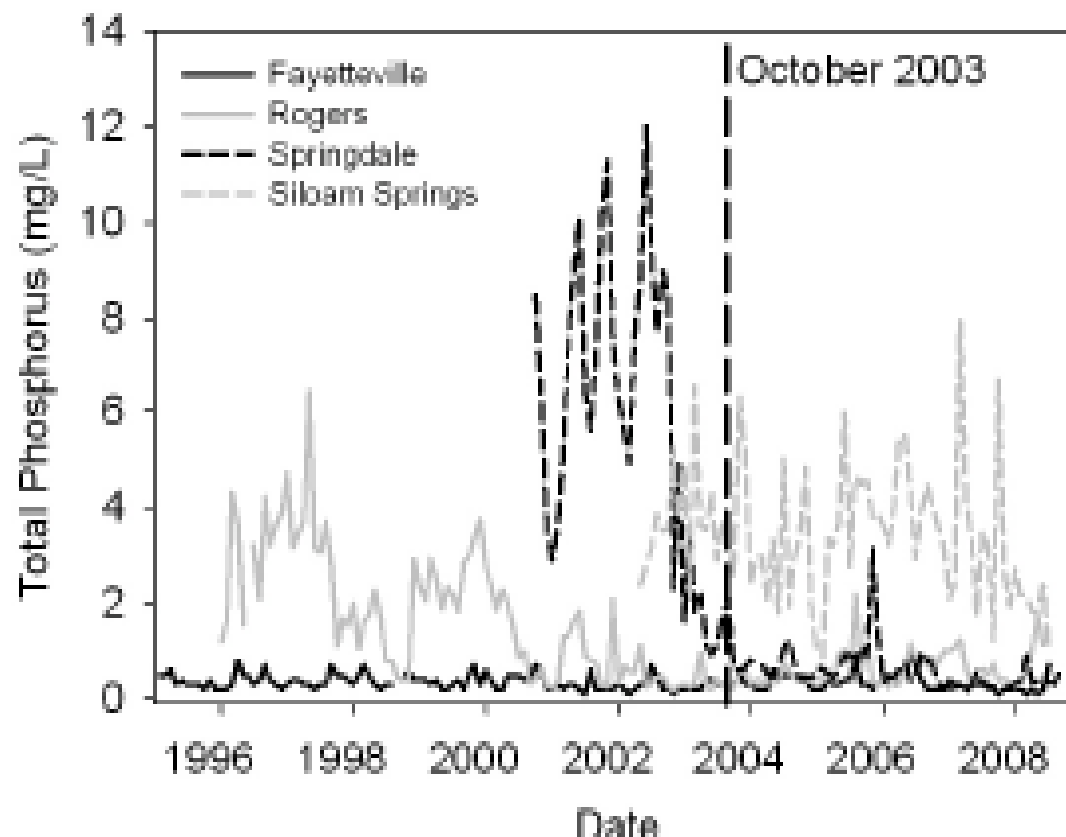
## Historical Chronology – Part 2

- 1985 Fayetteville applies to EPA for a permit for a new POTW discharge to unnamed tributary of the Illinois River, Oklahoma objects
- 1992 *Arkansas v. Oklahoma*, 503 U.S. 91 (1992)
- 1992 ODEQ issues NPDES permit to Tahlequah with 1.0 mg/L TP limit
- 1996 Arkansas-Oklahoma Arkansas River Compact Commission sets goal of reducing TP from by 40% from 1980-93 levels at five sites on Illinois River

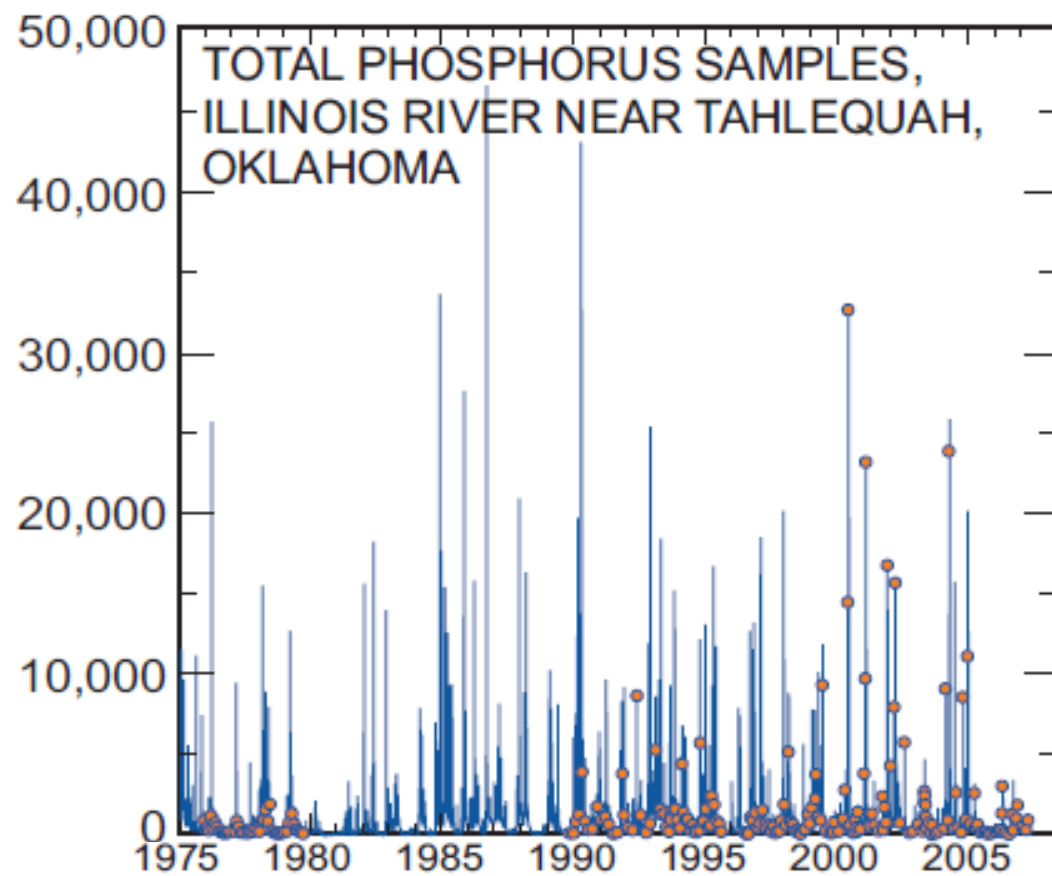
## Historical Chronology – Part 3

- 2002 OWRB adopts .037 mg/L numeric criterion for TP in Oklahoma Scenic Rivers, immediately effective but not fully effective until July 2012
- 2003 Arkansas and Oklahoma enter into Statement of Joint Principles and Actions
- 2003 Arkansas POTWs begin implementing treatment for TP removal
- 2003 Arkansas enacts legislation authorizing mandatory regulation of non-point source use of fertilizer in “nutrient surplus areas”
- 2005 Arkansas adopts mandatory regulation of non-point source application of fertilizer in Illinois River watershed

## NW Arkansas POTW Phosphorus Reductions Since 2000

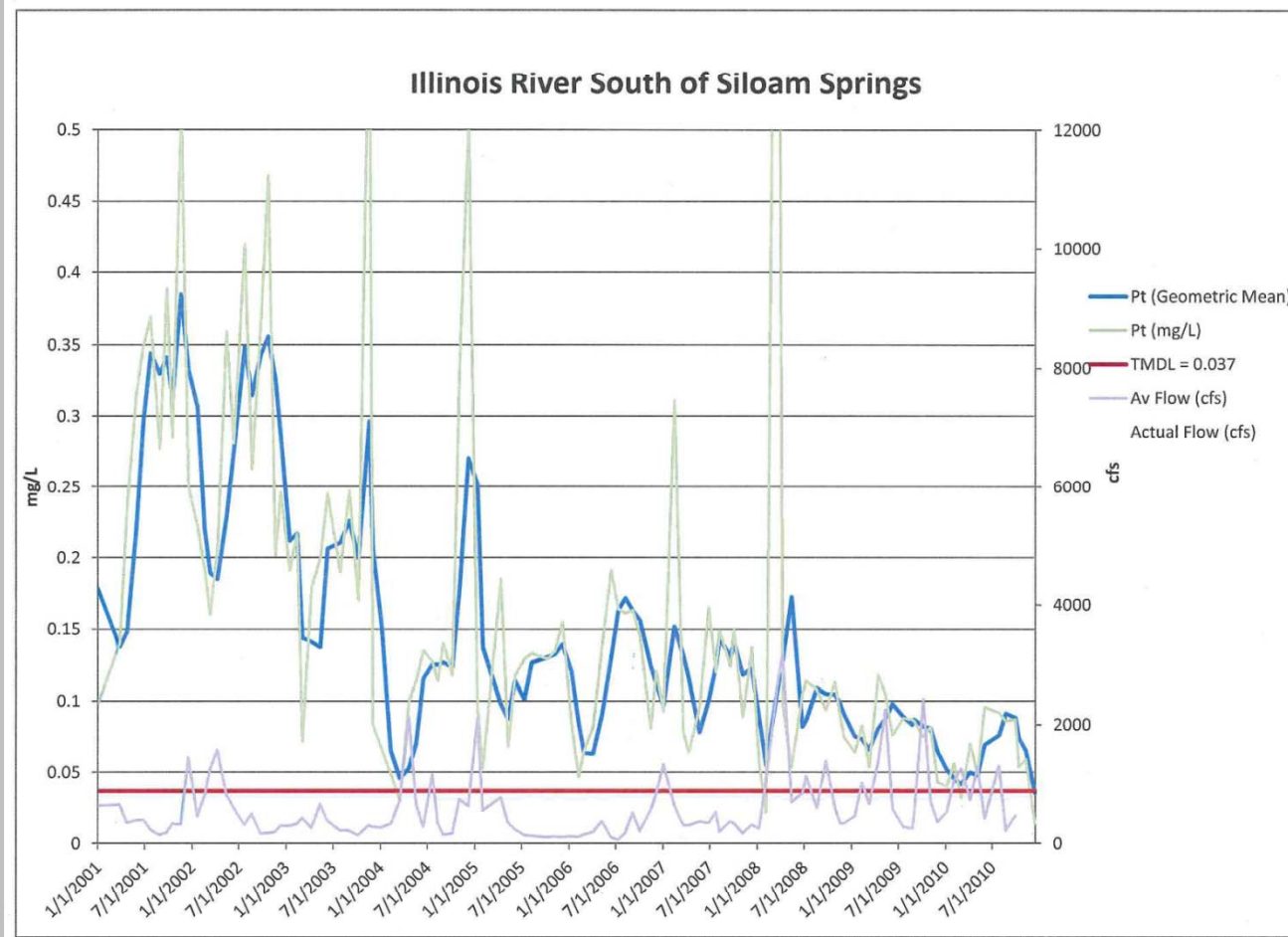


## Stream Flow is Highly Variable in the Illinois River

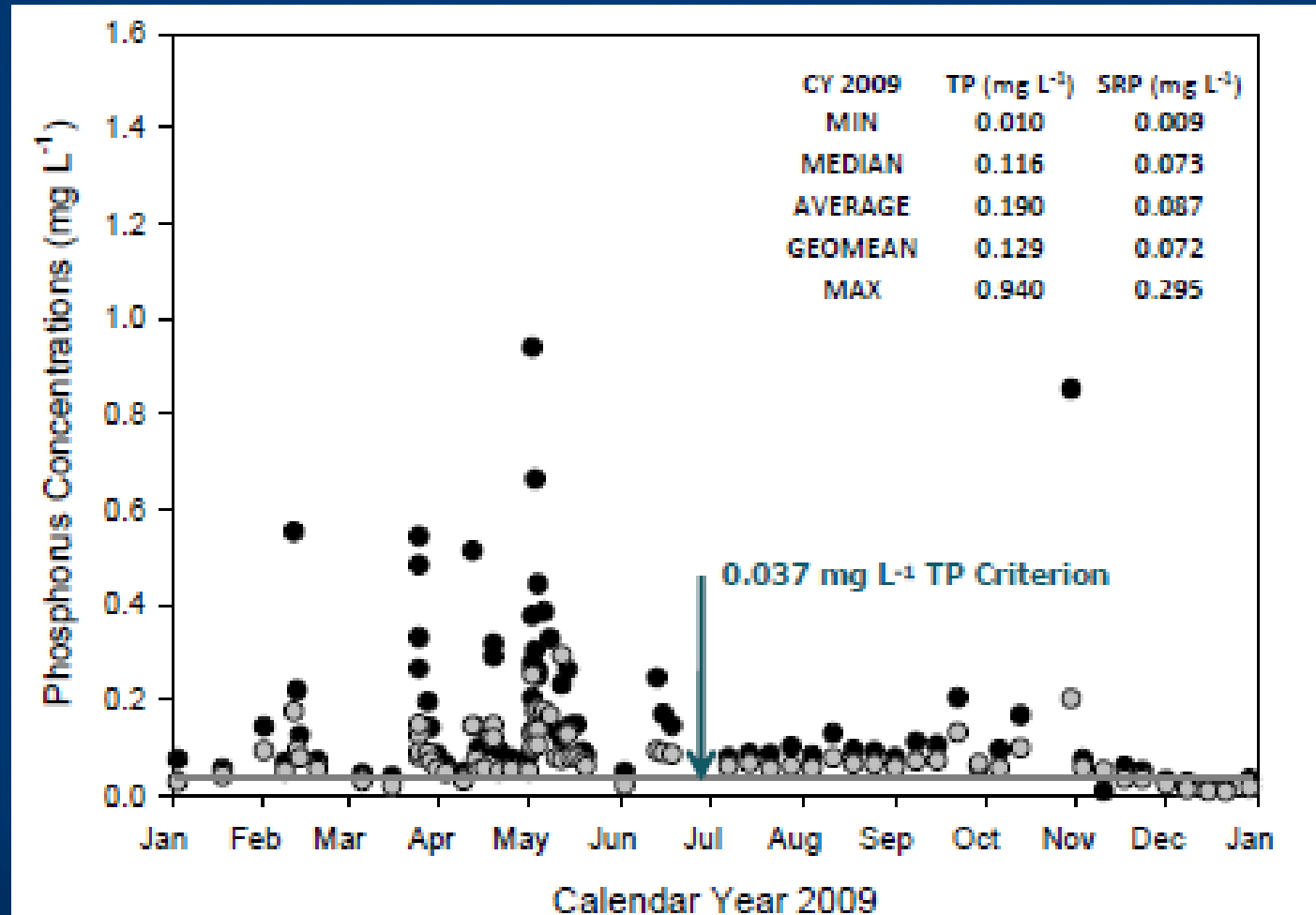




# 10 Year Trend – Phosphorus & Flow

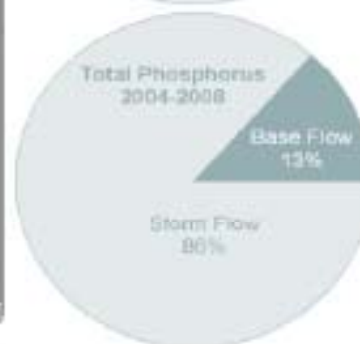
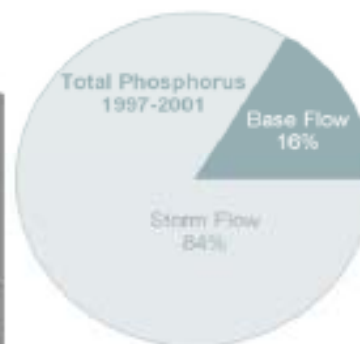
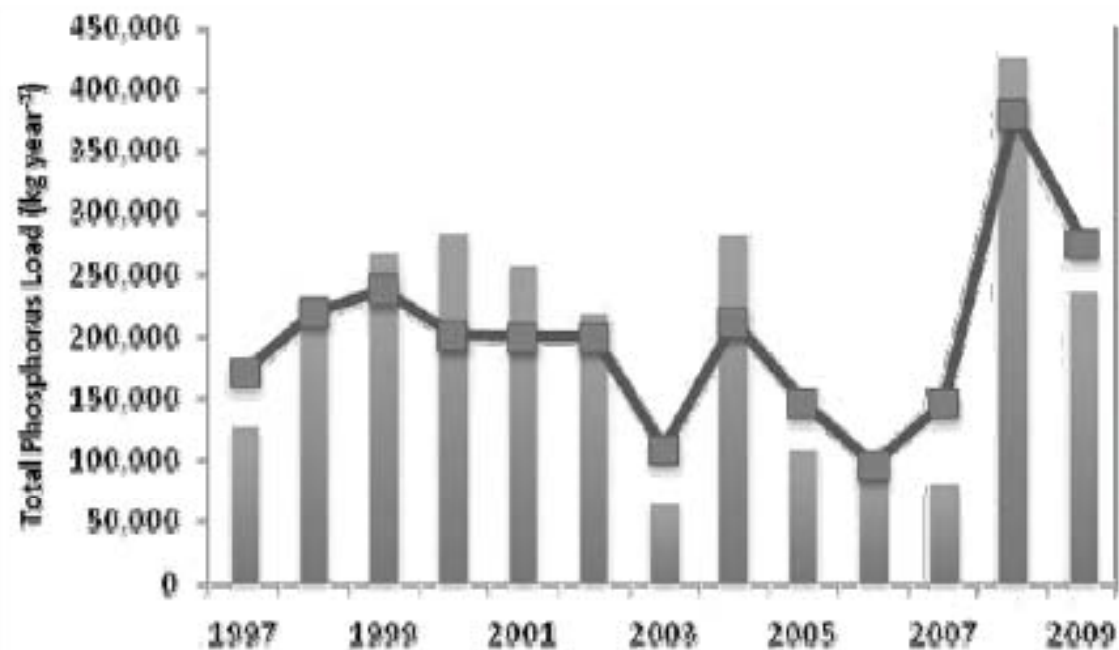


## 2009 Phosphorus Samples at AR 59 Bridge

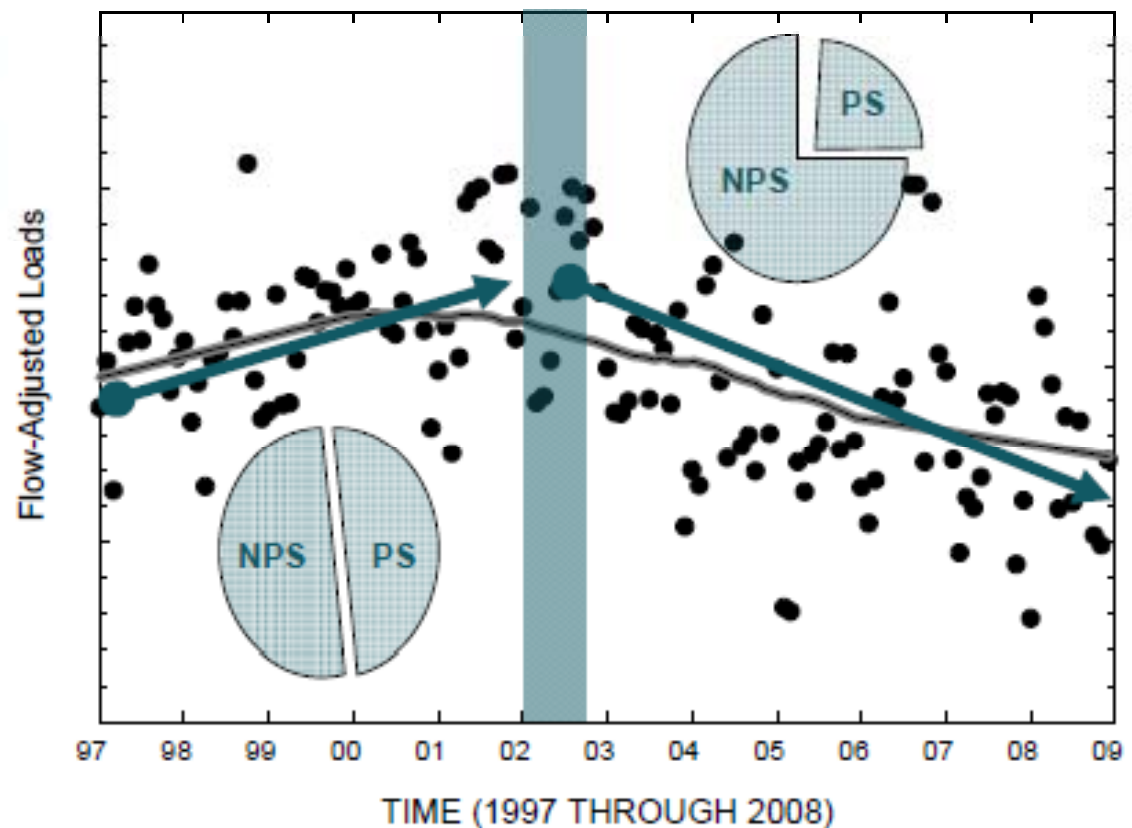


## Annual TP Load Varies with Rainfall Runoff and Discharge

### Illinois River at HWY 59



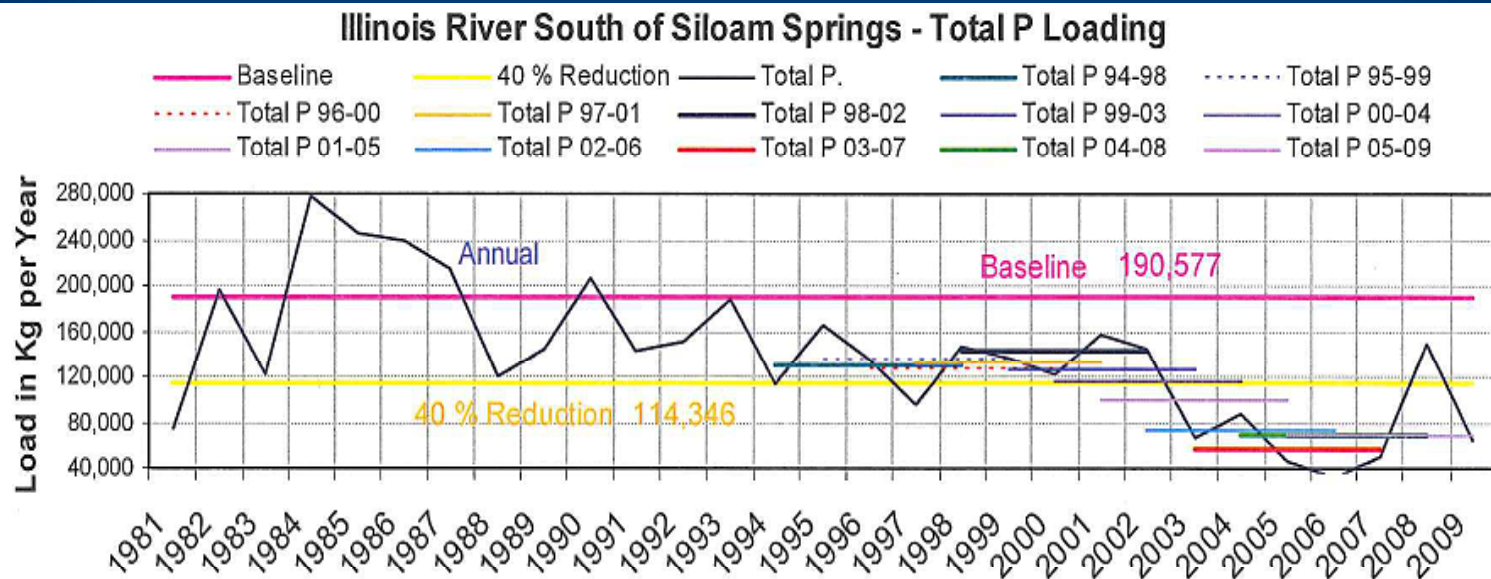
## Flow Adjusted Phosphorus Load at AR Highway 59 Bridge



The distribution between NPS and PS changed after 2002, and flow-adjusted loads decreased.



# Progress Toward 40% Reduction of Phosphorus at State Line

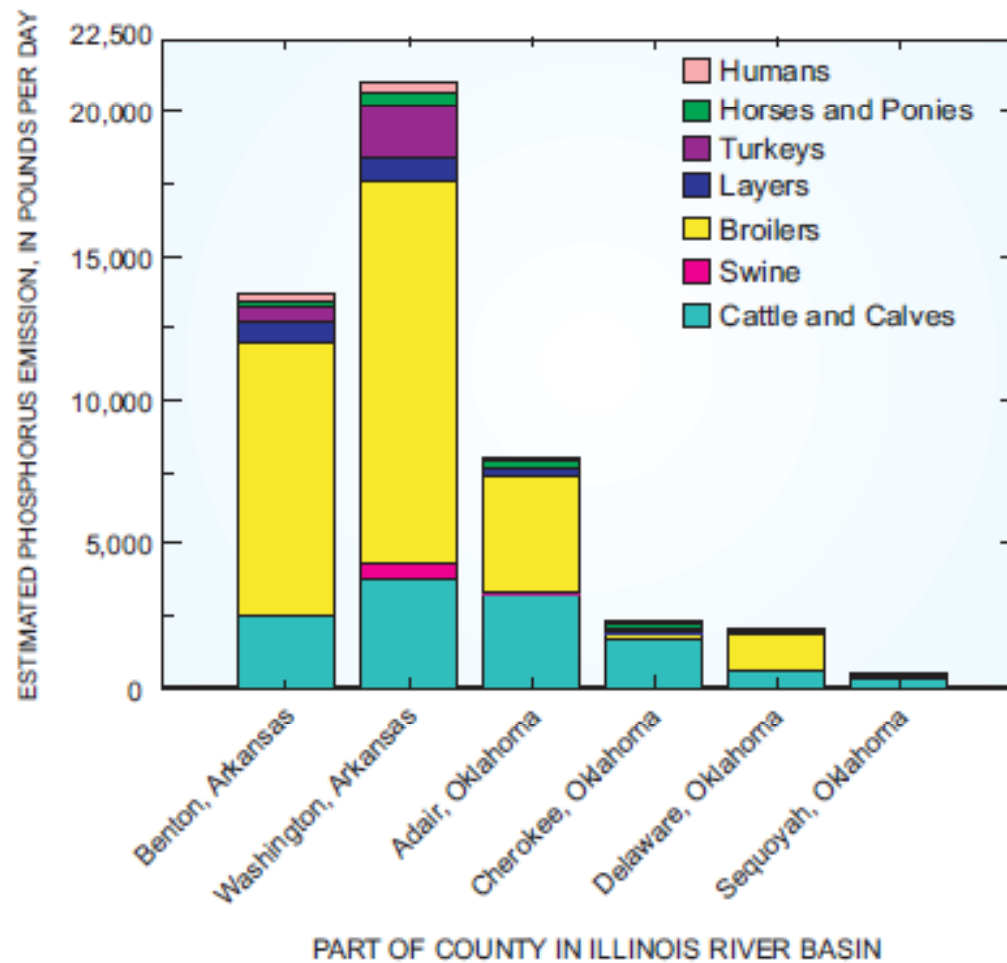




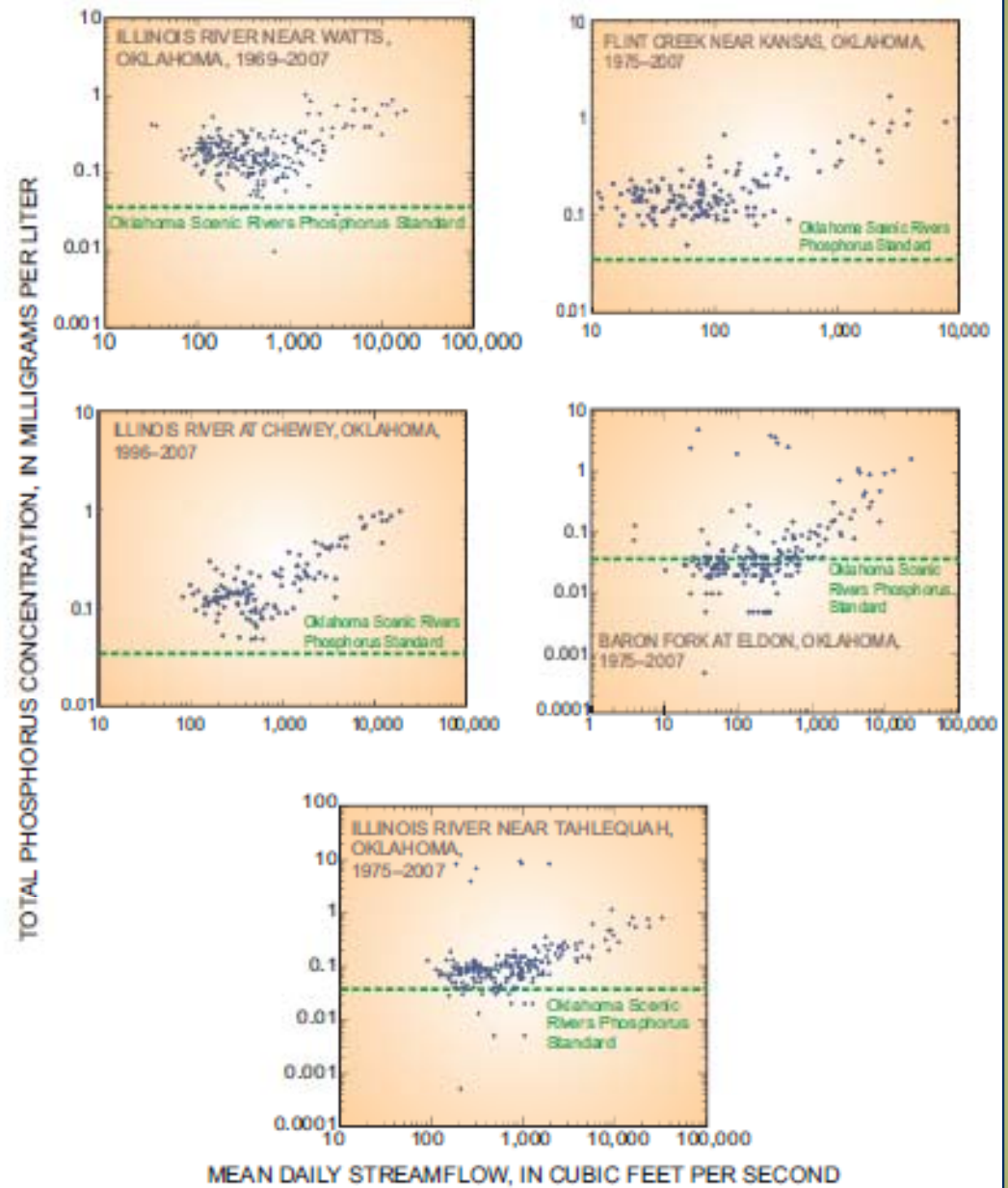
## Historical Chronology – Part 4

- 2005 ***Oklahoma ex rel. Edmondson v. Tyson Foods***  
filed in N.D. Okla.
- 2009 EPA Region 6 begins Illinois River Watershed  
computer modeling/TMDL project
- 2010 EPA Region 6 announces “hold” on approving  
renewal of NW Arkansas POTW permits
- 2011 Arkansas 303d list finds no TP impairment on Illinois  
River in Arkansas; EPA fails to approve or  
disapprove within 30 day period specified in 40 CFR  
130.7(d)(2)
- 2011 OWRB convenes Okla/Ark/EPA Technical Advisory  
Group to begin review of .037 mg/L TP criterion

## Phosphorus “Emissions” By Type and Location of Source



# Phosphorus Sample Results from Oklahoma Stations on Illinois River





What is the Beneficial Use In the River  
the Oklahoma Criterion Is Protecting?



## What is the Beneficial Use in the River the Oklahoma Criterion Is Protecting?





## What is the Beneficial Use in the Lake the Oklahoma Criterion Is Protecting?





## What is the Beneficial Use in the Lake the Oklahoma Criterion Is Protecting?



# Where Do We Go From Here?



# We All Live Upstream from Someone





## Sources for additional information on Illinois River Nutrient Issues:

EPA Illinois River Watershed Modeling Project:

[http://www.epa.gov/region6/water/npdes/illinoisri  
verwatershed/index.html](http://www.epa.gov/region6/water/npdes/illinoisri<br/>verwatershed/index.html)

OWRB Review of Oklahoma .037 mg/L TP  
criterion:

[http://www.owrb.ok.gov/quality/standards/scenicri  
vers.php](http://www.owrb.ok.gov/quality/standards/scenicri<br/>vers.php)

U of A - Arkansas Water Resources Center:

<http://www.uark.edu/depts/awrc/conference.htm>