

# The Arkansas Solution

How a lawsuit led to a different way  
of handling manure

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# Arkansas



# Facts to consider

- Arkansas is the second largest poultry producer with nearly two billion chickens grown a year.
- Arkansas farmers grow about 25,000 birds per house, in six rotations
- In the United States, only Georgia has more chicken houses.
- You can see the density from the air.

# The Eucha-Spavinaw watershed.

- This watershed consists of Lake Eucha and lake Spavinaw, which are in Oklahoma but their water comes from tributaries in Arkansas.
- Half a million residents of Tulsa and the greater Tulsa area get their water from the Eucha-Spavinaw lakes
- Oklahoma and Arkansas have been battling over how to clean the waterways for decades.
- In 1992, in a fight between the two states, U.S. Supreme Court ruled that upstream states must meet the water-quality standards of downstream states.



# Eucha dam

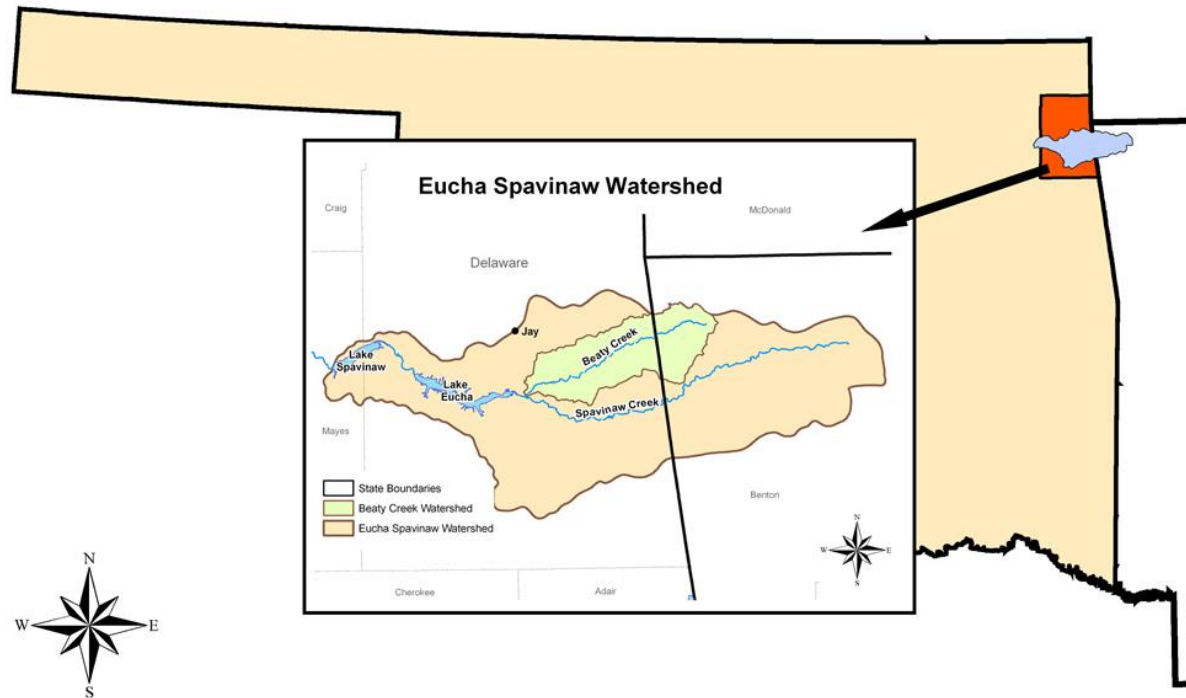


# Tulsa skyline



# Watershed map

## Eucha Spavinaw Watershed Delaware County, Oklahoma





# Spavinaw specs

- There are 1600 poultry houses in the Eucha-Spavinaw
- They produce about 70,000 tons of chicken litter every year
- Prior to the year 2000, it was spread on farms within the watershed
- The most common use was in pastureland for beef cattle farmers

# The lawsuit that changed everything

- In 2001, The Tulsa Metropolitan Utility Authority sued six poultry companies and Decatur, Ark.
- It accused the companies and the plant of polluting the drinking water supply for Tulsa.
- Other counties, states and cities watched closely.

# What would become of an industry?



# Then came the 2003 settlement

- Poultry companies would pay \$7.5 million
- They would establish a litter bank
- Judge set the limit of phosphorus at 300 parts per million.
- Any field higher than that needed to export manure.
- It was a PMT set by a judge.



# Immediate changes

- Right away, 15 percent of the litter was exported out of the watershed.
- Many fields could not accept any more
- Arkansas is also a big hog-raising state, and some farms had accepted hog manure over the years.
- The attitude toward manure changed.

**“I spend more time managing my litter than I do my chickens.  
There is no comparison in terms of what we did and what we do today.  
We used to pile the litter. We didn’t care where we piled it. We would  
never consider doing that today. – farmer Jeff Marley, Arkansas**



# Then the PMT changed again!

- The judge changed the limits to 150 parts per million.
- The farmers began exporting most of the litter.
- Percentages rose until today, when 90 PERCENT of the litter in the Eucha-Spavinaw
- Markets quickly emerged for the litter

# Who is buying?

- Kansas and Missouri
- They use it for corn, which they sell back to the poultry companies.
- Oklahoma (How ironic!)
- Arkansas farmers need an NMP
- Places where manure is going do not necessarily need one.



# It was not the end of lawsuits

- Oklahoma vs. Arkansas, again
- Des Moines water authority vs. rural districts (drainage association and rural counties)
- Washington state's cow palace, which has 11,000 cows that create more than 100 million gallons of manure each year.
- Increasing litigation
- "Be afraid of lawsuits, not regulations."

There is more to the story than just  
the litter exchange, though



# There is Discovery Farms





# Farms coming up with solutions

- The big thing we have accomplished - we have gotten farmers and farm organizations engaged. Farmers will come up with the best solutions if we do not stand in their way. Until we provide farmers with this kind of data, they don't know how to adjust. I tell my farmers, 'I wouldn't worry about regulations when you should be worrying about lawsuits.'
- - Mike Daniels, University of Arkansas



# Some examples

- Ponds to collect runoff
- Concrete slabs in front of the houses for loading and unloading
- Real-time monitoring of BMPS so farmers can change what they do
- Ability to save nutrients and plan for it.

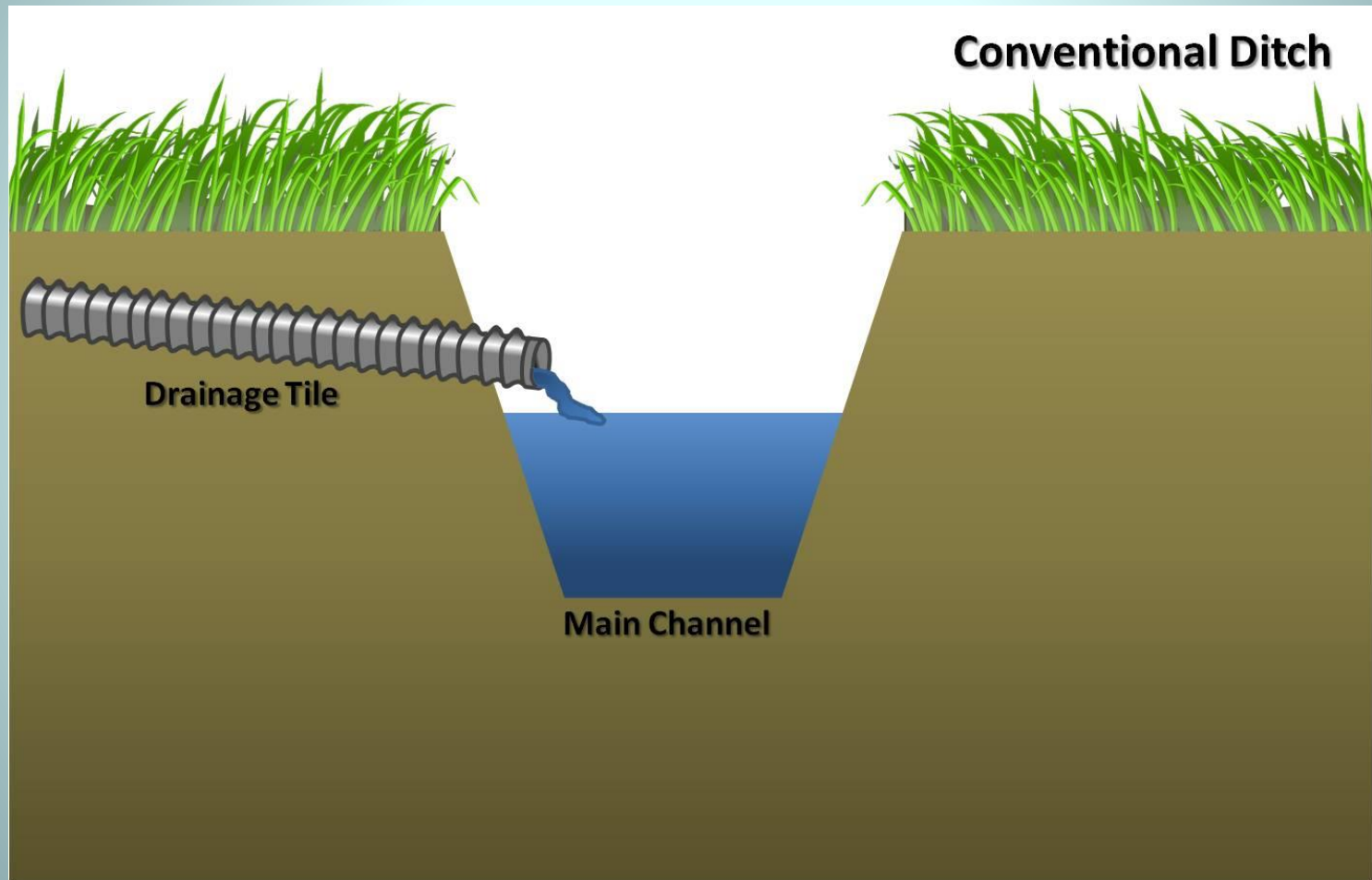
# Is the Arkansas solution enough?

- There was an initial improvement in water quality
- There have not been the reductions in P that scientists hoped for
- There is not conclusive proof that reductions came from less land application
- There is also the idea of exporting the problem

# But it is more than a start

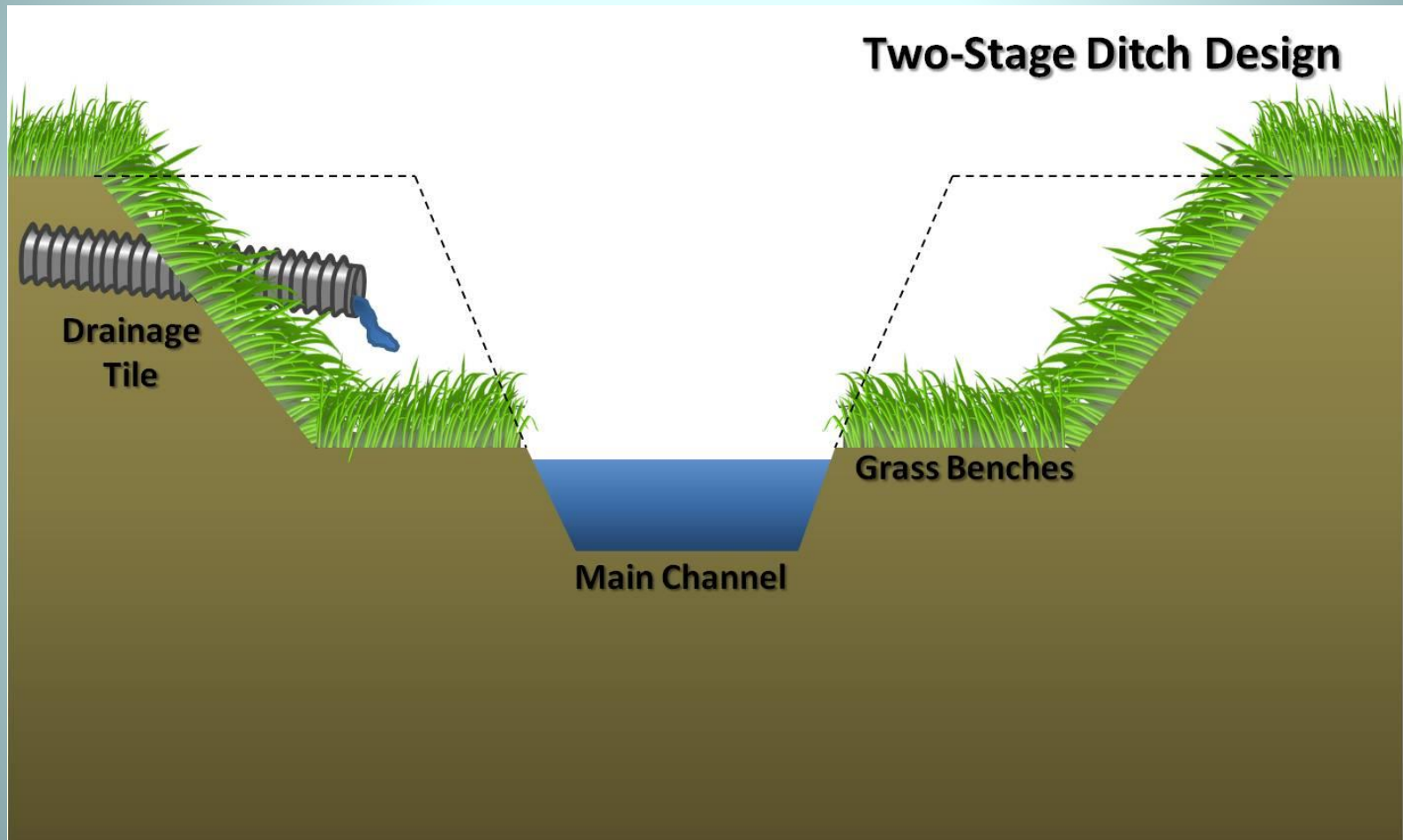


Also can consider the two-stage ditch





# See how it works



# Major reductions in N and P



# Manure to energy

- Ability to take the manure and turn it into several products.
- Used with transport and two-stage ditch, it could work very well
- Manure to energy is having a moment now.



# There is not one answer

- Several people commented we need to look at all the tools in the toolbox.
- We can grow chickens and protect the environment if we are creative.
- We need to keep in mind this fact:
- **During the last 10 years in the United States, cattle, pig, and poultry numbers increased from 10 percent to 30 percent, while the number of farms on which they were reared decreased from 40 percent to 70 percent.**



# Food for thought

- Problem didn't begin overnight, and it won't end overnight
- P moves slowly, remedies take time
- Unintended consequences can come, too.
- Markets are a key motivator

# End of the road- Thank you!

