


# A River Runs Through It: Building Land-Water Linkages Into Conservation

John Wiens

Governor's Conference on the  
Management of the Illinois River System  
October 4, 2007

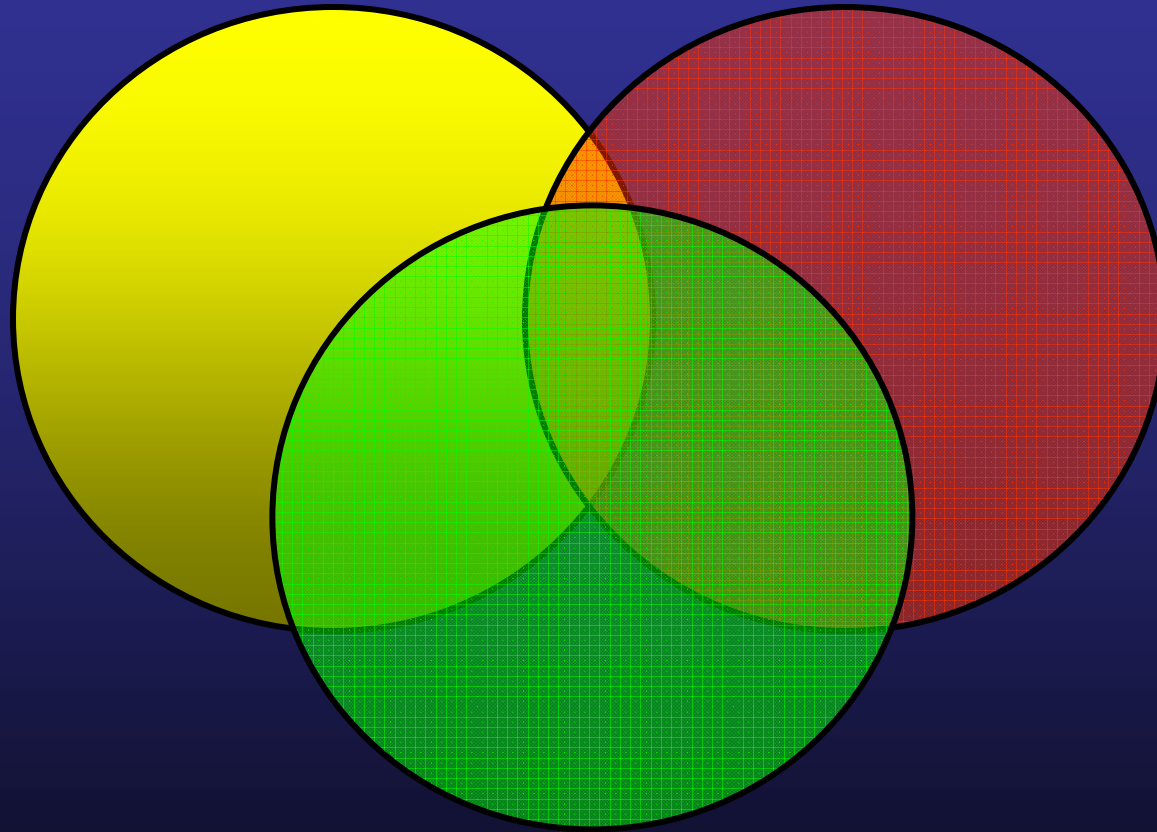


An aerial photograph of a wide river meandering through a dense, green forest. The river is dark blue and reflects the sky. The surrounding land is a mix of vibrant green grass and dark green trees. The horizon is visible in the distance under a pale sky.

"Eventually, all things merge  
into one, and a river  
runs through it"  
-- Norman Maclean

Landscape

People



Rivers

# Modern Civilization Began near Rivers



# And People Still Live Near Rivers



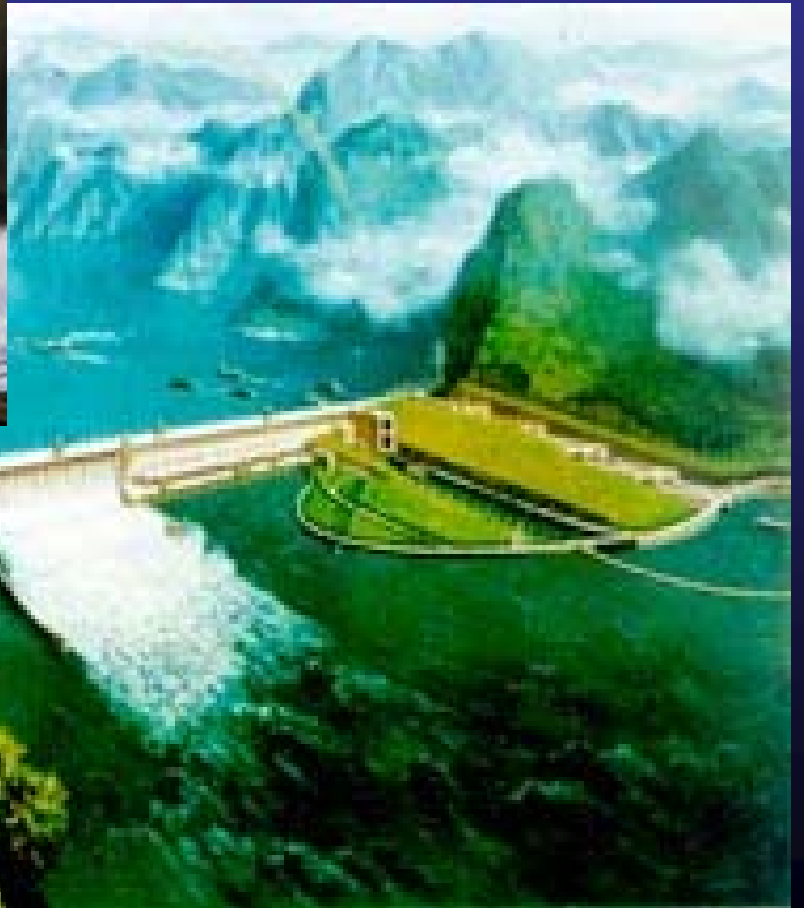
# People Still Use Rivers



# Although Not As They Used To

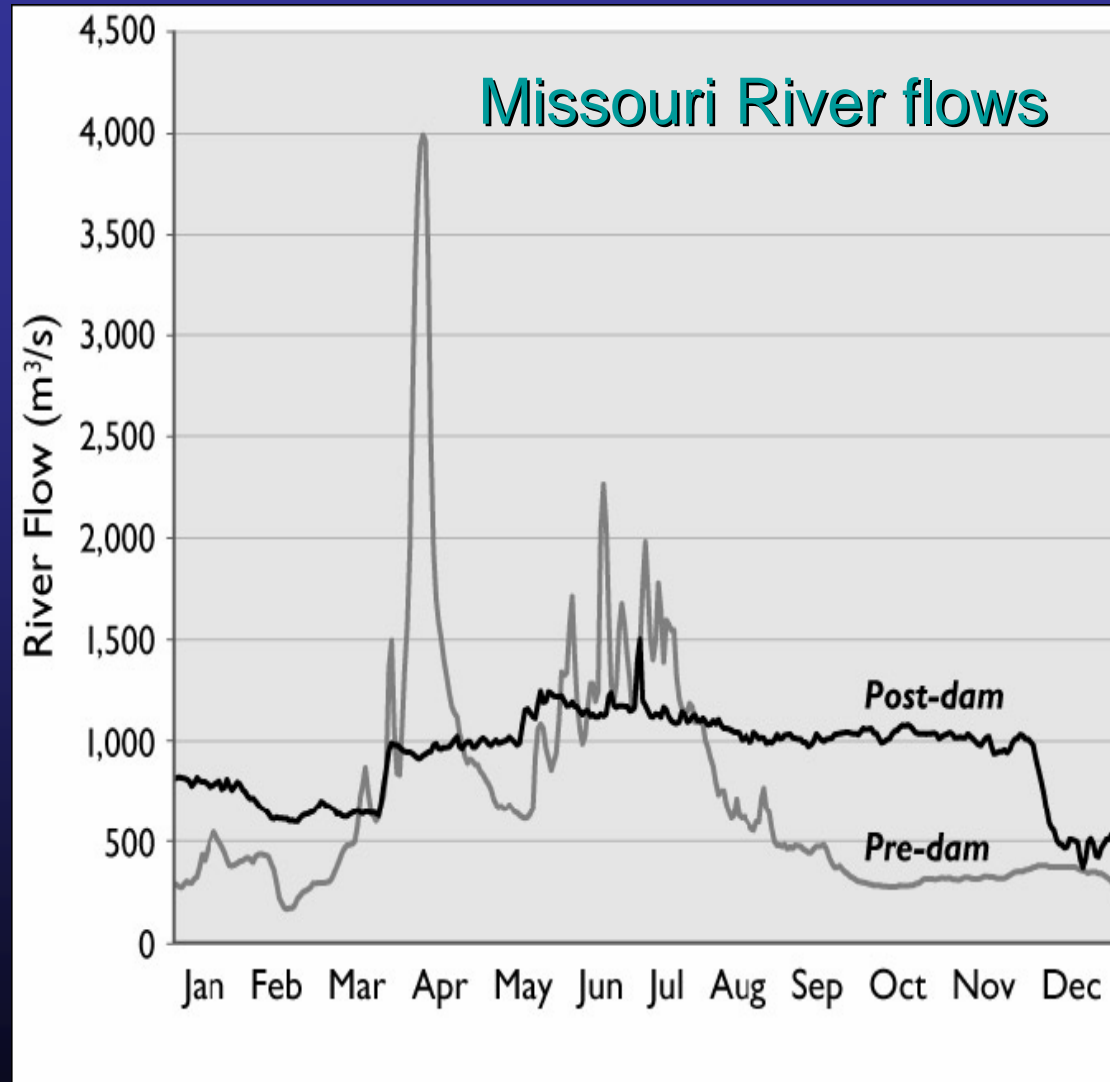


# Rivers have been Dammed





# Flows have been Regulated

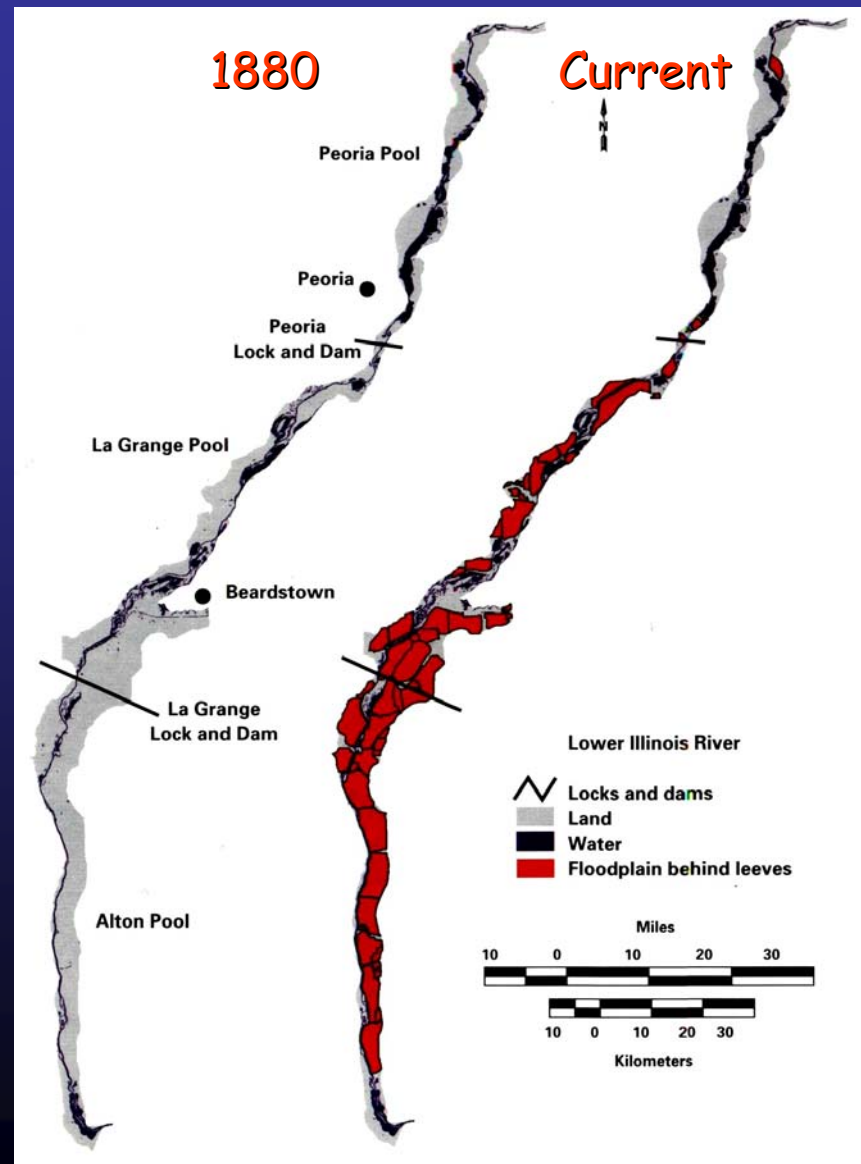


From Postel and Richter, 2003

# River Courses have been Channelized



# Floodplains have been Lost



# And Flows to the Sea are Altered

Mississippi



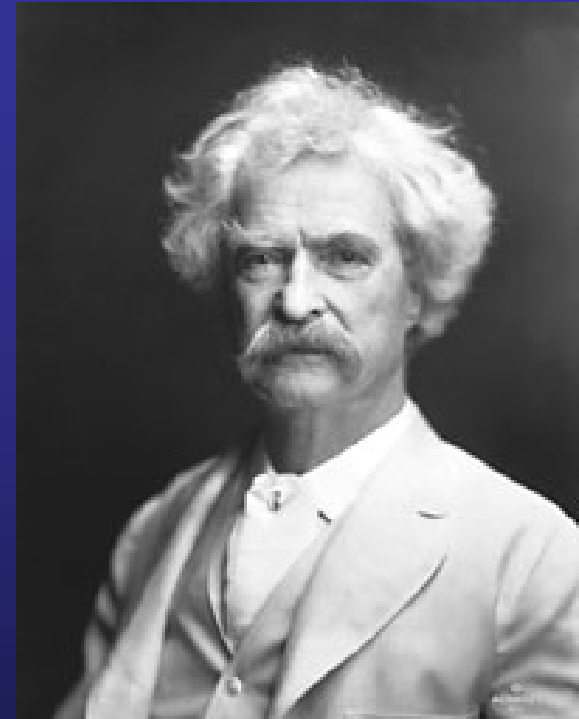
Colorado



*"The Mississippi River will always have its own way; no engineering skill can persuade it to do otherwise."*

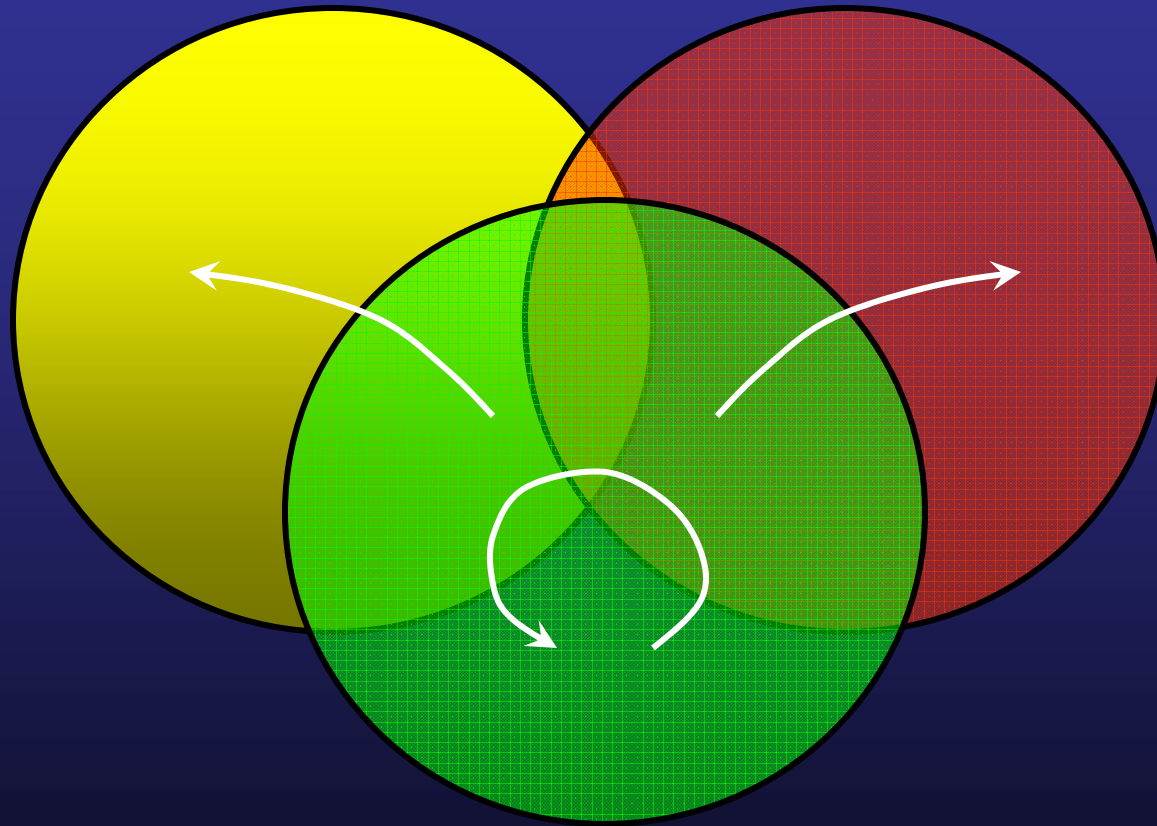


Upper Mississippi River ©U.S.G.S



Landscape

People



Rivers


# Re-establishing Connections Within Rivers




AMERICAN RIVERS

## FOR DAM REMOVAL

to Selected Funding Sources



  
American Rivers

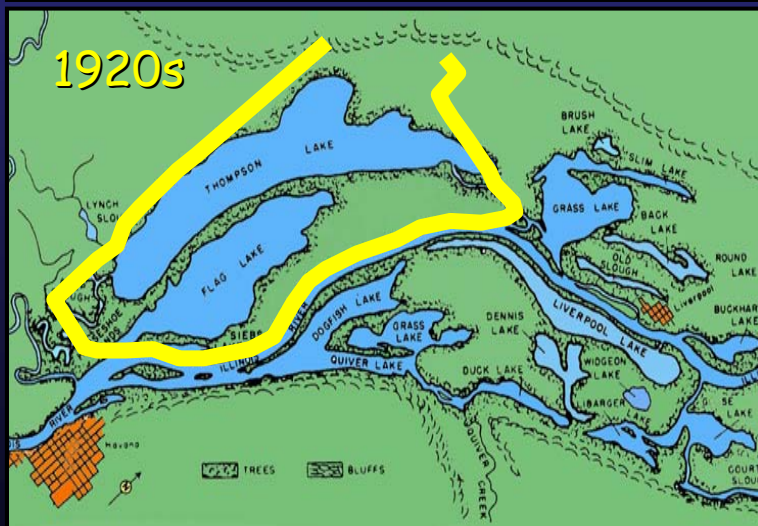
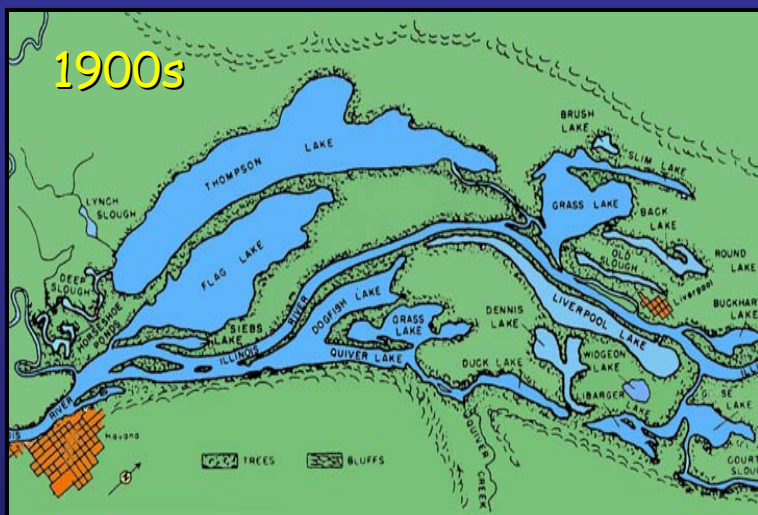
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# Re-establishing Connections to Landscapes





# Floodplain Restoration: Emiquon





December 2004



Chris Young, Springfield State Journal Register

September 2007



## Restoration spring 2007



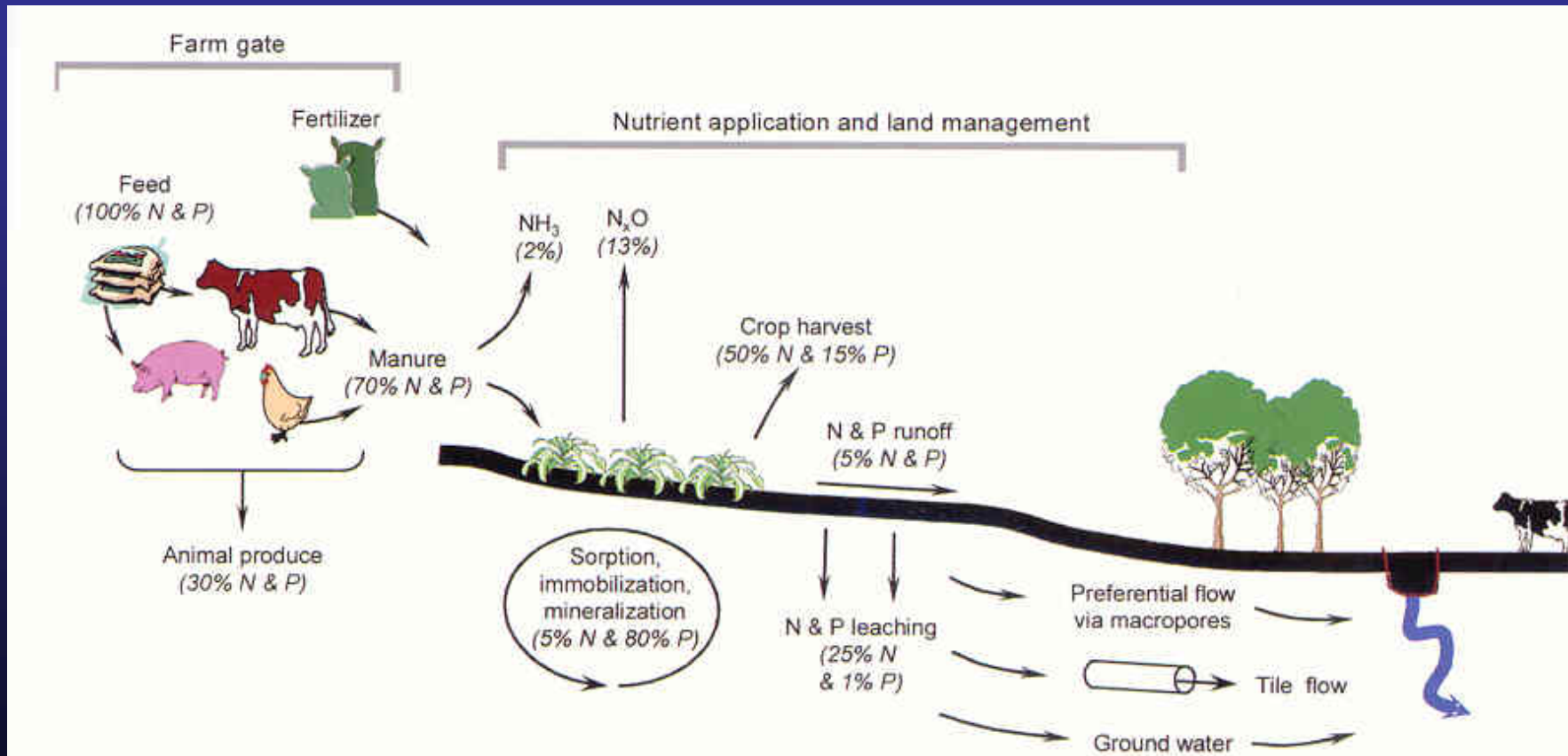
- 176,580 bottomland hardwood trees
- 65,400 upland trees
- 30,625 shrubs
- 6,000 lbs upland prairie seed
- 2,000 lbs wet prairie seed
- 7,000 wet prairie plugs



# Floods Link Rivers to the Land



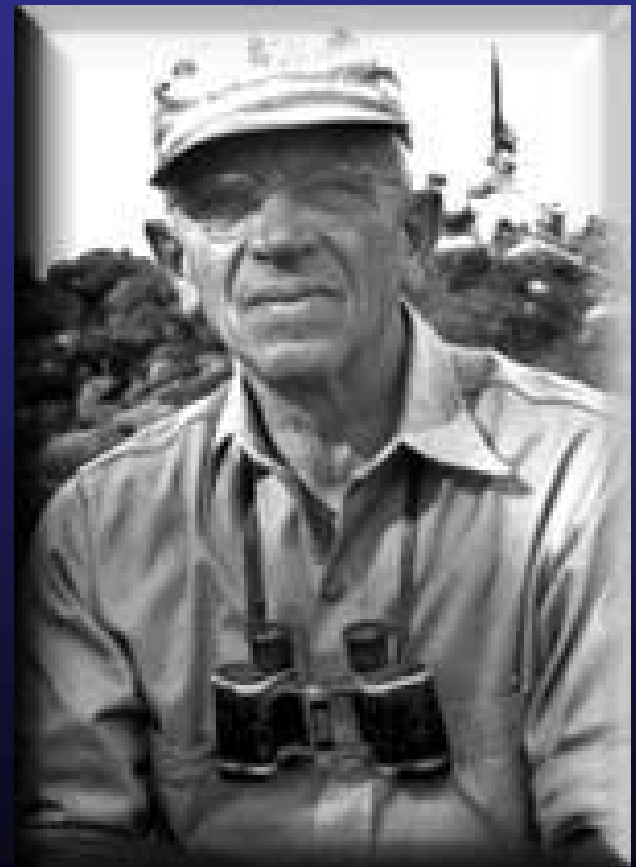
# And Agriculture Links Land to the Rivers



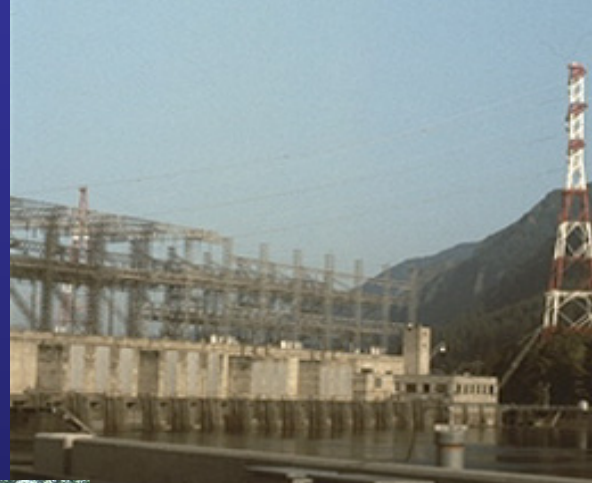
Source: Sharpley et al. 2006

## So Do Animals

“Does the wild goose, reconnoitering the farmer's cornfield, bring something more than wild music from the lake, take something more than waste corn from his field?”



# Re-establishing Connections to People: Ecosystem Services





# Ecosystem Services from Floodplain Wetlands

- Storm water storage
- Facilitate groundwater recharge
- Improve water quality
- Store and process nutrients
- Store and process sediment
- Sequester carbon
- Provide habitats for species
- Provide recreation, education, and economic opportunities



But ...

What?

Change?

APRIL 3, 2006

**SPECIAL REPORT GLOBAL WARMING**

# TIM

**BE WORRIED.  
BE VERY WORRIED.**

Climate change isn't some vague future problem—it's already damaging the planet at an alarming pace. Here's how it affects you, your kids and their kids as well

**EARTH AT THE TIPPING POINT**  
**HOW IT THREATENS YOUR HEALTH**  
**HOW CHINA & INDIA CAN HELP SAVE THE WORLD—OR DESTROY IT**  
**THE CLIMATE CRUSADERS**



**EXCLUSIVE INSIDE THE STEROID PIPELINE STING**  
SI's Luis Fernando Llosa and L. Jon Wertheim, on the scene for the Florida raids, report on the ongoing investigation that will rock sports

# Sports Illustrated



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So Do the Games We Play**  
Time to Pay Attention

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VIES (P.74)

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**COMPANIES STILL**  
**NEED TO DO** (P.26)

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Business Is Taking It So Seriously  
BY JOHN CAREY (P. 60)

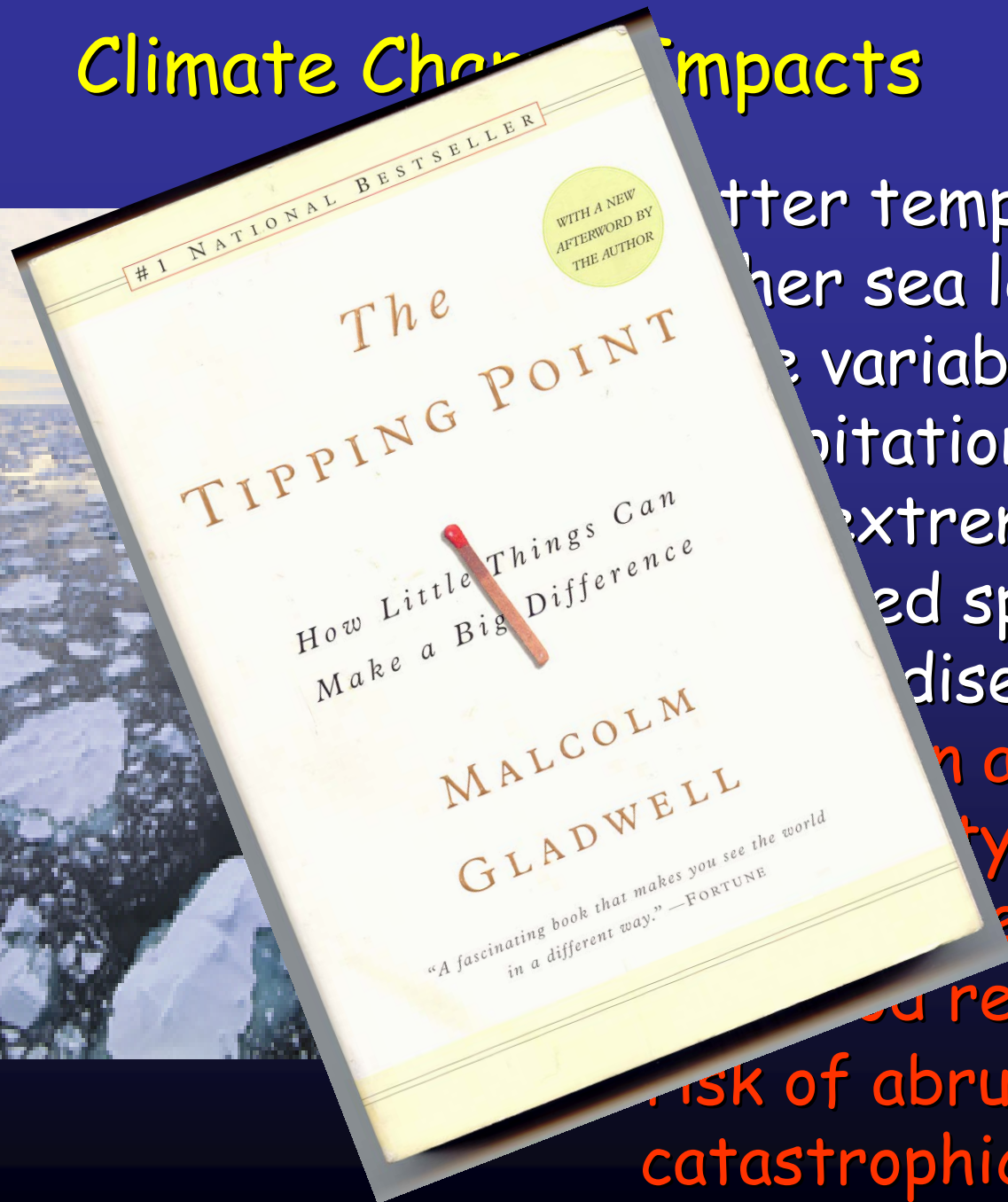
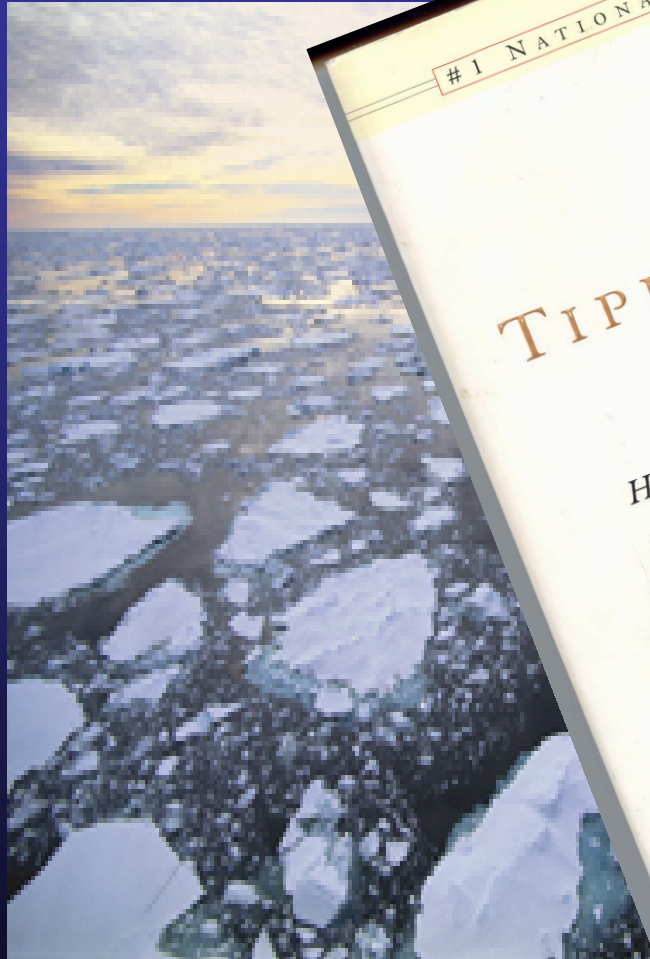


# Climate Change Impacts




- hotter temperatures
- higher sea levels
- more variable precipitation patterns
- more extreme weather
- increased spread of tropical diseases
- changes in agricultural productivity
- altered streamflows and flood regimes

# Climate Change Impacts

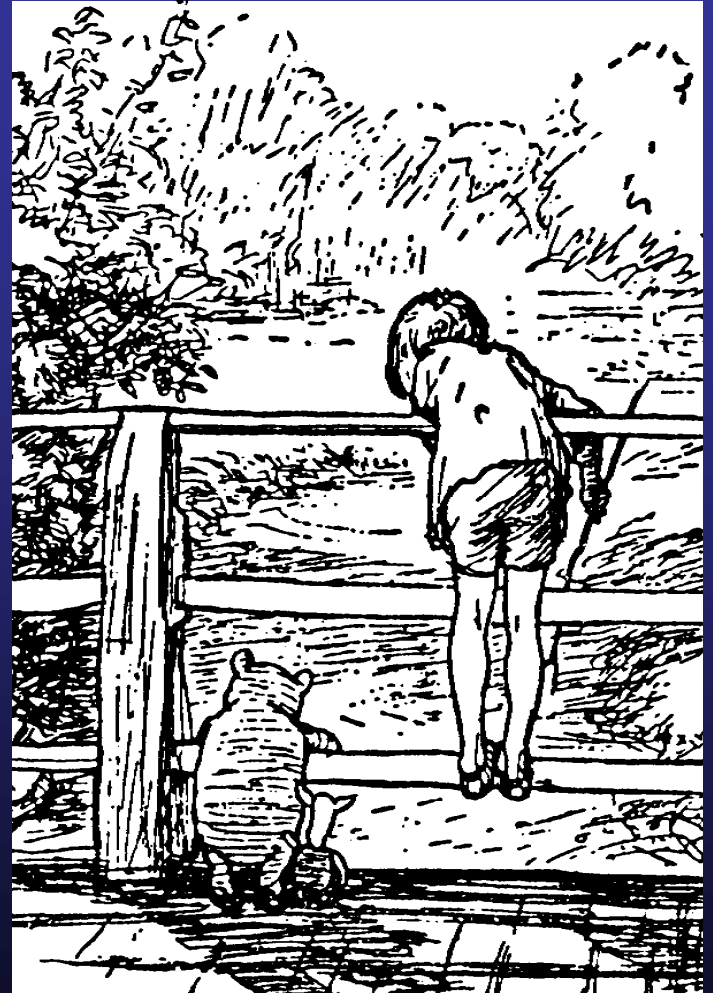


Higher temperatures  
Higher sea levels  
More variable  
Changes in precipitation patterns  
Increased extreme weather  
Widespread spread of  
Emerging diseases  
Impacts on agricultural  
productivity  
Changes in ocean currents and  
regimes  
Increased risk of abrupt  
catastrophic changes

- 
- An aerial photograph showing a wide, winding river flowing through a vast, dense green forest. The river's path is irregular, with several large, rounded islands and peninsulas. The water is a deep blue-grey color, and the surrounding forest is a rich, vibrant green. The perspective is from a high angle, looking down on the landscape.
- Let the river run through it
  - Let the land be the sponge
  - Let the river have its floodplain
  - Learn the lessons of rivers

"Sometimes, if you stand on the bottom rail of a bridge and lean over to watch the river slipping slowly away beneath you, you will suddenly know everything there is to be known."

- Winnie-the-pooh  
(A.A. Milne)





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