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
“Eventually, all things merge into one, and a river runs through it”

-- Norman Maclean
Modern Civilization Began near Rivers

[Map of Ancient Near East with key: Major Cities, Macedonian Empire, Persian Empire, Babylonian Empire, Assyrian Empire]

[Image of person paddling a boat on a river]
And People Still Live Near Rivers
People Still Use Rivers
Although Not As They Used To
Rivers have been Dammed
Missouri River flows

Flows have been Regulated

From Postel and Richter, 2003
River Courses have been Channelized
Floodplains have been Lost

1880

Current

Peoria Pool

Peoria

Peoria Lock and Dam

La Grange Pool

Beardstown

La Grange Lock and Dam

Alton Pool

Lower Illinois River

Locks and dams

Land

Water

Floodplain behind levees

10 0 10 20 30
Miles

10 0 10 20 30
Kilometers
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.”
Re-establishing Connections Within Rivers
Re-establishing Connections to Landscapes
Floodplain Restoration: Emiquon

1900s

1920s
December 2004

September 2007

Chris Young, Springfield State Journal Register
• 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
“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 About Climate Change?
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

- 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
- Risk of abrupt catastrophic changes
• 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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