Importance of Wetlands in Floodplain Function and Ecosystem Services

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April, 2020
Mitigate the losses, costs, and human suffering caused by flooding.

and…

Protect the natural and beneficial functions of floodplains.
CFM on the Job Training
Postcards From the Floodplain
Who Needs Wetlands?
Truth in Advertising

It's called flood plain because it is plain that it floods!! Remember "93"
314-241-2122
A lake view was not in the brochure

“If a community knows it can get a hundred percent aid to rebuild, there’s no incentive for moving out.”
Reverse Swimming Pool Concept

Ceasing to build on the most vulnerable areas would clearly reduce the damage and loss of life.
We haven’t found your cabin yet, but you still have nice river view.
“We ran into a small problem”
When Good Streams Go Bad: Story at 11
Flood Damages are Increasing

- Not getting better
- 2011 – 2020 more flood events annually result billion plus dollars in damage
Milwaukee River Watershed

Rural ............to............. Urban
Milwaukee River Watershed

The color of growth

Before 1950, and even in the 1950s and '60s, most development in southeastern Wisconsin was in cities and villages, or directly around them. But after 1970, as this map from the Southeastern Wisconsin Regional Planning Commission shows, growth exploded in rural areas—especially in Waukesha County. Data after 1995 were not available for this map.
Milwaukee River Watershed

Pre-agriculture Land Cover

Minus Beavers

Still lots of wetlands
Figure 3.21: Relationship between impervious cover and surface runoff. Impervious cover in a watershed results in increased surface runoff. As little as 10 percent impervious cover in a watershed can result in stream degradation.
Impacts of Development on Stream Flow

With Development
- Greater & earlier peak discharge
- Greater runoff volume

Without Development
- Smaller & less rapid peak
- Reduced base flow

Milwaukee River Watershed
Urbanization and the Loss of Species
Southeastern Wisconsin

Wang et. al. 1998
Kinnickinnic River Milwaukee 1960
Kinnickinnic River Milwaukee Future
Definitions

- **Preservation.** Protect “natural” areas before they are “altered”.
- **Restoration.** Return an altered system to a previous condition.
- **Naturalization.** Recover some of the desirable characteristics of a natural system, while maintaining commercial uses.
The broad problem of flood-loss reduction is that the rate at which flood losses are being eliminated by construction of engineering or land-treatment works is of about the same magnitude as the rate at which new property is being subjected to damage. - GFW

Floods are “acts of God,” flood losses are largely acts of man. - GFW

www.floods.org