

Suggested Comments for Upper Mississippi River Watershed Study -- “Flood Risk Management”

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TOPIC: Flood Risk Management

Questions

- Instead of making a system of levees, floodways and bypasses, how can we let flood waters spread out over floodplains in a way that is equitable to ensure certain landowners are not forced to shoulder more damages without adequate compensation?
- Along the Upper Mississippi, levee districts have over-built their levees, leaving up flood fighting materials after flood events. If a levee district receives funding to perform “flood-fighting” measures, what kind of funding do they receive to remove those measures after-the-fact? Is there strict oversight for how that funding is spent? Which rivers contribute the most to flooding on the Mississippi River? Are there certain rivers that are more “flashy”?
- “Flood fighting” adds a layer of chaos to an already chaotic natural disaster and pits neighbor against neighbor, often increasing flood risk and damages along the river. How can we stop fighting the flood?
- A study in Illinois found that most flood insurance claims were from outside the mapped floodplain, caused severe rain events (made worse by climate change) that overwhelm storm sewers and home pump and drainage systems. How will this study address flooding outside the mapped floodplain?

Concerns

- Climate change and increased precipitation will put even more stress on vulnerable flood infrastructure.
- Our aging flooding infrastructure has cut off important wetland habitat from the natural flows and flooding of the river and needs to be mitigated.
- The changes due to extreme fluctuations (floods to droughts) increases risks for navigation and more intense flooding and increases the need to support resiliency for the all the river system stakeholders, be they wildlife or people. Functional ecosystem restoration can support floodplain connectivity, stabilize river and tributary banks and establish habitat for fish, amphibians, mussels and birds.
- Levee districts on the Upper Mississippi River have demonstrated that there are almost no repercussions to overbuilding their levees to the detriment of their neighbors. Without enforcement and strict penalties, levee districts everywhere will start overbuilding their levees with impunity.

- Flooding disasters are very expensive, and we need to focus on more cost-effective ways to reduce risk. Since 2008, 15 declared natural disasters have been due to flooding — compared to 9 during the previous decade and only 6 during the decade before that. We know that the frequency and severity of flooding disasters is increasing. Extreme weather events, intense management and built infrastructure on our rivers, and increased development have all contributed to making flooding more costly and deadly.
 - Rampant and unauthorized building-up of levees creates a severely restricted river and risks pushing water onto other communities. There must be an equitable system in place to prevent and disincentivize the development of levees without proper approval from the correct agencies.
 - The Mississippi River is North America's largest migratory bird flyway. Over 325 species of birds migrate along its path. The total number of birds who use it bi-annually represents 40 percent of the total migratory bird population on the continent and 50 percent of the waterfowl population. Millions of thousands of acres have been preserved along the river via Federal and state conservation areas, parks, and private conservation easements. The Mississippi River is also home to many endangered fish species and threatened by invasive species, especially the Asian Carp. Efforts to control the Asian Carp must be a high priority for any conservation effort.
 - We need to prioritize floodplain restoration. Healthy floodplains benefit communities by absorbing floodwaters that would otherwise rush downstream, threatening people and property. It has been estimated that restoring the 100-year flood zone of the five-state Upper Mississippi River Basin could store 39 million acre-feet of floodwaters — the same volume that caused the Great Flood of 1993 — and save over \$16 billion in flood damage costs.
 - The Mississippi River and its floodplains consist of nested ecosystems in their natural state. Restoring full functioning ecosystems on a watershed (and sub-watershed) scale is critical to maintain habitat for wildlife, reduce erosion and sediment movement, and restore a healthy river system.
 - On the Lower Mississippi River, floodways are used to hold excess flood water to protect population centers. However, these easements were paid out only once and the money that was supposed to offset the damages caused by repetitive floods was spent long ago, putting today's landowners at a disadvantage. Any new flood risk management system should be based on a long-term strategy that pays landowners fairly after each event — especially where land is intentionally flooded.
- o Opportunities
- The changes due to extreme fluctuations (floods to droughts) increases risks for navigation and more intense flooding and increases the need to support resiliency for the all the river system stakeholders, be they wildlife or people. Functional ecosystem restoration can support floodplain connectivity, stabilize river and tributary banks and establish habitat for fish, amphibians, mussels and birds.

- Reconsider the standards put into place for meeting a certain benefit-to-cost ratio in order to make other innovative solutions more viable and to relieve the burden of failed levees on vulnerable communities.
 - The strategy of depending on levees to protect us from flooding has failed. We need to stop destroying our floodplains for commercial development, and instead restore as much of it as we can to a more natural state. Floodplain restoration involves planting the proper plants, trees, and many other elements that can stabilize the banks and allow the return of wetlands to an area. Restored floodplain and wetlands have numerous benefits, including cleaner water, natural flood storage, wildlife habitat, and recreational opportunities. The costs of restoring floodplains and wetlands is dramatically less than the cost of artificial flood protection.
 - We need to prioritize floodplain restoration and reconnection. Decades of intense management along the Mississippi River has stripped it of its natural recourse for high water events — floodplains and wetlands. The dramatic increase in built infrastructure (levees and dams) along the river has also facilitated rapid, widespread development in floodplains, including agricultural development. These developments have not only increased flood risk by putting people and property in harm's way, but also destroyed precious floodplain and wetland habitats. We also know that the creation of levees have made flooding impacts worse. We can mitigate these flood risks by making room for the river through levee set-backs, community-supported floodplain buy-outs, and floodplain easements.
- o New ideas
- Incentivize more nature-based solutions to flood risk like levee setbacks or removal of levees to create conservation areas. There are examples of successful programs in other states, like Floodplains by Design in Washington, and a basin-wide study is the perfect opportunity to consider other ways to protect people and the environment.
 - Support a grant program that provides funding to perform new and innovative floodplain management along the river. This would include opportunities to create conservation areas and set back levees to reconnect the Mississippi with more of its historic floodplain.
 - We need to take a holistic, basinwide approach to managing the river. Much of the water in the Mississippi River comes from its tributaries, so good management of flood risk, sediment, or water quality on the mainstem of the river must take into account the impact of its tributaries.
 - We need to find ways to “farm with the flood” by offering financial incentives to allow farm fields to flood during events and finding new crops that are flood compatible.
 - Levees on the Upper Mississippi River should be modified with spillways on the downstream end to allow water to overtop the levees slowly and without causing significant and costly breaches.
 - Levee districts who illegally modify their levees must be held accountable.