In Deep with Mississippi Flood Control

To breach or not to breach has long been the question when it comes to the swollen Mississippi. Perhaps, experts say, it's time for a different query. Should we give up trying to control the Mississippi altogether?

The answer to that question isn’t an easy one. Our 100-year death grip on the mighty river has brought a tangle of boons and burdens that aren’t easily unknotted. Although the widespread and serious flooding seen in recent weeks has led to calls for systemic change, returning the river to a more natural state could unleash a deluge of unwanted economic effects.

“The debate is more engineering versus less engineering,” Christopher D'Elia, dean of Louisiana State University’s School of the Coast and Environment told the Los Angeles Times. “There are a lot of people who just want to build more levees and dikes and control [the river] that way, but the people who understand sediment dynamics understand that's not going to work.”

For Louisiana, where levees cause land-building sediments to be carried out to sea leading to salt water encroachment and eventual inundation, the solution may be to "let the river run wilder," according to the Times. But D'Elia recognizes that less engineering also has costs, "…how do you manage that socially? How do you recover the social and economic loss that occurs? That's the challenge we're in right now. We're absolutely hamstrung by this situation.”

Upstream, D'Elia's comments are equally relevant to the loss of agricultural land should the river be allowed to run wild.

“To abandon the floodplains for crop production would shift the cost of food,” Harold Deckerd, Missouri's assistant state conservationist for water resources, told the Wall Street Journal. “The cost of food would become astronomical.”

Even so, it's obvious that something will need to give. Severe flooding is becoming increasingly prevalent and the river basin—which has lost more than 35 million water-absorbing acres in its upper basin alone, according to American Rivers—is increasingly unable to handle the stress. American Rivers' Sandra Postel suggests the solution requires striking a balance.
“What is needed is a comprehensive plan to add ecological infrastructure to complement engineering infrastructure—specifically to expand wetlands and re-activate floodplains so as to mitigate future flood risks,” she writes in National Geographic Daily News. “Instead of letting the nation’s ecological infrastructure degrade further, federal and state authorities should work to expand and rebuild it. Cadres of ecological engineers should join civil engineers in shoring up the nation’s flood defenses. Re-creating wetlands and re-activating floodplains in strategic locations will result in a more robust and resilient flood protection system.”

There’s some indication the United States might be slowly heading in that direction. The Clean Water Framework released by the White House in late April calls for restoring important bodies of water and updating water policies to include more ecological input. The Army Corps of Engineers is also expected to change its focus from building levees to “providing some degree of restoration and ecological services in heavily altered ecosystems,” according to a National Academies report.

That sort of political will could go a long way toward finding a balance, but many experts have pointed out that we also need to stop building in vulnerable areas. One of the great unlearned lessons of the Mississippi is that we shouldn’t live and work too close to it, Postel points out.

“But fifteen years later, when the 2008 flood hit, there was little evidence of lessons learned. Instead of calling floodplains and wetlands back into active duty, officials in the region had permitted even more floodplain development. According to Nicholas Pinter of Southern Illinois University in Carbondale, 28,000 new homes and 6,630 acres of commercial and industrial development have been added on land that was under water in 1993.”

Time will tell if we get any wiser where Mississippi River flood management is concerned. But from Minnesota to Louisiana, it’s clear there's little give left in the mammoth water system, and we can no longer afford to be inflexible.

“We need a bend but don't break approach to flood management,” American Rivers’ Andrew Fahlund told the Wall Street Journal. “Right now, there's very little bending and the breaking has catastrophic consequences.”

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