

New Ideas for Restoring an Old River



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The Neponset River, an urban waterway in eastern Massachusetts with a history of industrial contamination, has a PCB problem. In spite of recent successful efforts to improve water quality and restore aquatic habitat, the lower portion of the river still has high levels of PCB (polychlorinated biphenyl) contamination. The 2004 Soils, Sediments and Water conference provided Neponset River stewards with a unique opportunity to solicit guidance from some of the nation’s leading environmental remediation experts.

watersheds (rivers, streams and adjacent lands). “The purpose of the workshop,” said Pelto, was “to bring the experts’ experience with remediation and restoration to bear on the question of how to restore and decontaminate the Lower Neponset River.”

The Neponset River has supported communities along its banks for centuries. Since the early 17th Century, industrialists have been attracted to the Neponset because of its manageable size and close proximity to Boston. The flow of its waters provided the energy for the country’s first water-powered grist mill, first gunpowder mill, and first paper mill, among others. As early as 1750, the river had earned a reputation as a highly polluted waterway fouled by untreated sewage and industrial discharges.

However, over the past several decades, the water quality of the Neponset River has improved dramatically. According to the Neponset River Watershed Association, the river and its tributaries are the cleanest they have been in more than 300 years. Nevertheless, a U.S. Geological Survey assessment of the river found elevated levels of PCBs in the soft sediment impounded behind the river’s two dams and a source of PCBs that continues to contaminate the waterway. Rob Breault, of the USGS and others involved with the restoration effort are looking for expert counsel on how to decontaminate the river without destroying habitat.

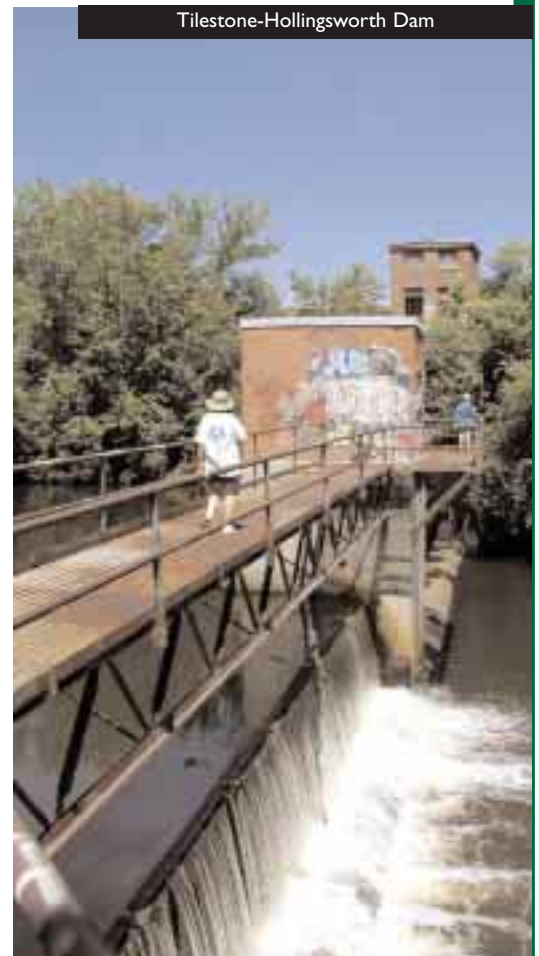
“Remediation is not without consequences,” says David Ludwig of BBL Sciences. Pelto agrees. “Some remediation practices are so destructive,” she said. “You’ve really got to think about the habitat needs of the species you’re trying to restore. So, we’re looking for affinities between remediation techniques and restoration goals.”



Baker Dam

The Tuesday evening workshop, which focused exclusively on the Lower Neponset, was intended to be part of “a nationwide talent search to look for innovative and cost-effective solutions to treat contaminated sediments and achieve ecological restoration of the Lower Neponset,” according to Karen Pelto, of the Massachusetts Riverways Program, a statewide initiative dedicated to promoting the restoration, protection and ecological integrity of the Commonwealth’s

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Tilestone-Hollingsworth Dam