

**Title**

Addressing the urban stream syndrome in the northeast United States

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**Abstract**

The Northeast has become one of the most urbanized regions in the United States, following a long history of watershed alteration and development. Much of the historical drainage infrastructure was designed to transport wastewater and stormwater to streams and rivers as quickly as possible, with the intentions being to reduce health risks and flooding. These drainage networks, along with sprawling impervious areas, modified wetlands and stream channels, and stressors associated with human activities, have caused serious impacts to stream ecosystems. As a result, substantial ecological changes have been observed in streams, largely due to stormwater, altered flow regimes, and stressors associated with development and human activities. Although annual precipitation is slightly increasing in the region, summers are expected to become dryer. Increased rates of drinking water withdrawals during summer coupled with reduced retention capacity of developed watersheds will likely put further pressures on freshwater resources. Recent legislation initiatives and novel management strategies are making progress toward mitigating current and future impacts, but governance structures, information access, and financial costs continue to be obstacles facing stream restoration and protection.