

The US EPA is developing assessment tools to evaluate the effectiveness of green infrastructure (GI) applied in stormwater best management practices (BMPs) at the small watershed (HUC12 or finer) scale. Based on analysis of historical monitoring data using boosted regression tree analysis, urbanization-response models are being developed for stream communities (fish, macroinvertebrates, periphyton) and habitat (flow, thermal regime, substrate quality) across New England. GI stormwater BMP inventories have been developed and used to summarize %impervious area treated at the scale of NHDPlus local catchments and then aggregated to the full watershed scale. Twelve watersheds along an urbanization gradient, and in which GI stormwater BMPs had been implemented, were chosen for monitoring of stream biota and habitat during 2011. Measured condition of watersheds with implemented GI BMPs will be compared with predicted condition based on degree of development and modifying factors. Habitat endpoints and stressor-specific community metrics will be used to show the progression of degradation along urban gradients as well as trajectories of recovery.