Future of urban water systems: Technological and institutional challenges

David Sedlak, sedlak@berkeley.edu, Department of Civil and Environmental Engineering, University California, Berkeley, Berkeley, CA 94720, United States

The complex infrastructure that cities rely upon for water supply, treatment and drainage are struggling to keep up with the combined effects of climate change, population growth, underinvestment in maintenance and a growing recognition of the impacts of contaminants that cannot be removed easily by existing treatment processes. Technological solutions to these problems that employ the latest developments in materials science, chemistry, biology and electronics are capable of greatly enhancing the performance of these systems. However, the success of these next generation technologies will depend upon their integration into the institutions responsible for urban water management.