Consultative Council Recommendations on: Water Resources and the Built Environment

In 2013, the American Society of Civil Engineers (ASCE) gave the nation’s drinking water systems a grade of “D” (poor) in its Report on America’s Infrastructure, estimating 240,000 water main breaks per year and citing the urgent need to invest in the nation’s drinking water and wastewater infrastructure. Approximately 6 billion gallons of treated water are lost each day (over 2 trillion gallons/year) due to leaking from aging and poorly managed distribution systems. The American Water Works Association’s (AWWA) 2016 State of the Water Industry Report cites the poor condition of water and wastewater infrastructure, financing for capital improvements and the lack of public appreciation for the value of water systems and services as their members’ top three concerns. These issues are complex and require leadership from all levels of government to ensure that Americans can continue to rely on the safe use of water in buildings across the nation.

More
The Institute’s Consultative Council offers the following recommendations to improve water conditions for all Americans.

**Water and Wastewater Infrastructure:**

- Congress and the Environmental Protection Agency (EPA) should expand and adequately fund Safe Drinking Water Act (SDWA) and Clean Water Act (CWA) State Revolving Funds (SRF); the Water Infrastructure Finance and Innovation Act; and the Water Infrastructure and Resiliency Finance Center programs to help utilities improve infrastructure while also meeting federally mandated water quality requirements.

- Federal and state governments should expand the SDWA and CWA SRF program to allow funding of specific projects that address water reuse.

- The U.S. Department of Housing and Urban Development (HUD), through the Community Development Block Grant Program (CDBG), should expand its criteria to encourage applicants to apply for water-related upgrades and installations.

- EPA should consider requiring the use of disinfectant injector pumps to treat water delivered to buildings located furthest away from centralized water treatment facilities.

- EPA, in consultation with local governments and utilities, should conduct cost studies to determine the financial/environmental costs and benefits of smaller, decentralized urban water/wastewater systems.

- Congress and EPA should support research to develop a set of best practices for utilities pertaining to changes in water treatment sources and to the repair of water distribution pipes; best practices for utilities to effectively mitigate sewer blockages; and identification of the best materials for new and rehabilitated sewer lines.

**Premise Plumbing:**

- Congress should authorize and increase funding for EPA’s WaterSense program.

- The National Institute of Standards and Technology (NIST) should reconstitute its research efforts on premise plumbing in order to modernize calculations for water pipe-sizing in buildings, which were developed in the 1930s and 1940s.

- All levels of government should offer more financial incentives to promote the removal of old water-guzzling plumbing fixtures and appliances and the installation of new, high-efficiency models.

- Congress should authorize the Department of Energy (DOE) and EPA to provide incentives to state and local jurisdictions to adopt and enforce progressive water-efficiency codes and standards.

- Congress should consider legislation that requires compliance with industry standards developed to mitigate outbreaks of legionellosis and other diseases caused by pathogens in building water systems.

- The federal government should consider a moratorium on mandating further flow rate and water consumption reductions for consumer plumbing products, pending research to investigate the effect of lower flows in water pipes on biofilm growth and the associated health/safety-related implications.

- Congress should instruct EPA to issue uniform “fit for use” water-treatment and water-quality requirements for the various uses of non-potable water in and around buildings.

- NIST, EPA and industry stakeholders should conduct research to determine the best approach for the installation of dual plumbing systems in buildings.

- DOE, EPA, NIST and industry stakeholders should support research on zero or near-zero-energy, water and waste for residential and commercial buildings.