

PVC PIPE ASSOCIATION ISSUE BRIEF

SOLVING THE CORROSION EPIDEMIC IN WATER INFRASTRUCTURE WITH PVC PIPE

THE PROBLEM

- Water delivery and sewage treatment are critical to public health and the environment. Corrosion, leaks and breaks in old-technology pipe materials are degrading our drinking water and wastewater systems.
- Corrosion costs U.S. drinking water and wastewater systems \$50.7 billion annually, according to a 2002 congressional study. A report entitled, *Corrosion, not Age, is to Blame for Most Water Main Breaks*, confirms that corrosion is the leading cause of over water North America (see watermainbreakclock.com).
- The burden of corrosion-prone pipe materials is not limited to the cost of repairing and replacing failed pipes. It includes the cost of treated water leaking from the system. The American Society of Civil Engineers estimates that 2.6 trillion gallons of potable water are lost every year through leaking pipes, or 17% of all water pumped in the U.S.
- Countless studies confirm the extent of the corrosion scourge, and entire industries and organizations like the National Association of Corrosion Engineers have spawned in an attempt to address it.
- While certain pipe manufacturers continue to explore “solutions” to corrosion – because their materials are affected by it – PVC remains indisputably resistant to it.

PVC PIPE: OUTSTANDING PERFORMANCE AND COST-EFFECTIVE

- PVC pipe is a proven and extremely durable alternative to traditional corrosion-prone pipe materials. Recognized by state, national and international agencies and standards organizations, it has been a benchmark since it was introduced in the U.S. sewer, water and drainage markets in the 1950s.
- Over two million miles of PVC water and sewer pipe are currently in service. A review by *Engineering News Record* in 1999 found use of PVC for water and sewer pipe to be one of the top twenty engineering advancements of the last 125 years.
- Less energy is required to manufacture PVC than traditional pipe materials. PVC pipe’s lighter weight makes it easier and less costly to handle, transport and install. Most PVC pipe can be handled manually, reducing the need for expensive installation equipment.
- PVC pipe’s ultra smooth surface means that less energy is needed to pump water through it. Significant savings over the life cycle of a pipe network are achieved with PVC, since increasing amounts of energy are consumed in corrosion-prone piping systems as they deteriorate.
- It is also totally recyclable – however, being so durable, most of it has yet to enter the recycling stream.
- An American Water Works Association Research Foundation study confirms the life expectancy of PVC pipe to be in excess of 110 years.

REAL SUSTAINABILITY

For buried infrastructure, durability and corrosion resistance is the cornerstone of true sustainability and strength. PVC pipe provides North American water and wastewater infrastructure a resilient and high-quality option, making it ideal for long-term asset management.