DEBUNKING DIPRA'S FALSE CLAIMS AGAINST PVC PIPE

It is unfortunate that the Ductile Iron Pipe Research Association (DIPRA) publishes baseless attacks on PVC pipe. This document corrects some of the misleading claims. For more information on PVC pipe's safety, sustainability, and technical attributes, visit www.uni-bell.org.

Claim	Reality
"PVC pipe leaches harmful substances into drinking water…"	*PVC pipe is certified safe for use in potable water systems by the same organizations that certify the safety of ductile iron pipe. PVC pipe is no newcomer to safety verification, with certification procedures in effect for more than 60 years. See The Health, Safety, and Environmental Performance of PVC Pipe.*
"PVC pipe is weak. It cannot withstand stress…"	*PVC pipe has more than 70 years of history withstanding stresses in water systems while having the lowest break rates of any pipe materials according to multiple studies. There are over 1.5 million miles of PVC water pipe in service in the U.S. and Canada.*
"The longevity of PVC pipe is dependent on stress and time…"	*While this is true, the engineering design of PVC pipe accounts for stress and time. Studies of installed pipelines have confirmed PVC pipe longevity to be 100+ years. All pipe materials (including ductile iron) have factors that affect longevity.*
"PVC pipe is sensitive to ambient temperatures…"	*PVC pipe is installed in a wide range of weather conditions and temperatures. It is the predominant pipe material used in Canada and regularly installed in sub-zero temperatures without issue. It is also the preferred pipe material throughout the southern U.S., where installation temperatures frequently exceed 100°F.*
"PVC pipe loses impact strength if exposed to ultraviolet rays…"	*While this statement is true, it is missing proper context. Changes to impact properties of PVC pipe take place gradually over time (typically several years) with continuous UV exposure and can be prevented by covering the pipe during long-term storage. DI pipe can also be affected by impacts during handling and installation. Impact damage to DI coatings, wraps, or linings may lead to premature failures. Proper handling during installation prevents impact-related problems, regardless of pipe material.*
"PVC has higher pumping and energy costs…"	*When comparing equivalent pressure classes utilizing appropriate friction factors, the hydraulics for both pipe materials are similar. Simple hydraulic calculations verify this.*
"PVC pipe requires special backfill…"	*This is entirely false. Pipe stiffness values for PVC are comparable to ductile iron's. In some cases, the pipe stiffness of PVC pipe is greater. The AWWA standard trench types for PVC and ductile iron are the same. PVC does not require special backfill.*
"PVC pipe is susceptible to damage from real-world shipping and handling conditions…"	*Yes, this is true… for all pipe materials. The requirements in any pipe material's literature are similar regarding shipping and handling. When reading the standards and manuals for ductile iron pipe, it is clear that care is required during handling and unloading.*
"Tapping PVC pipe is difficult and time-consuming and can be dangerous…"	*This is another unsubstantiated opinion. Tapping PVC pipe is not difficult, with an estimated 800,000 new taps being done every year in North America. Over the past 50 years, new residential construction has predominantly used PVC water mains successfully. For proper tapping of PVC pipe, resources are available from PVCPA and the pipe manufacturers.*
"Locating a leak in PVC pipe is extremely difficult…"	*Yet another opinionated and incorrect statement. Leakage with PVC pipe is not a common issue like it is with corrosion holes in ductile iron pipe. All technologies used for ductile iron pipe can be used for PVC pipe as well. PVC pipe is used by most North American cities and there have not been issues with leakage or leak detection.*