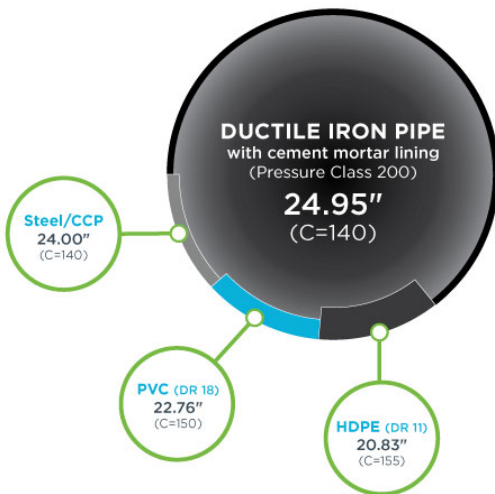


March 19, 2019

## Why Ductile Iron Pipe's Larger Inside Diameter Means Cost and Energy Savings

### ACTUAL INSIDE PIPE DIAMETERS

(Based on a 24" pipe using manufacturer recommended Hazen-Williams C factors)



Ductile iron pipe has a larger inside diameter than other pipe materials, and a comparably smooth inner surface.

### Why is this important?

It takes energy to pump water to its destination. In pipelines, the energy cost is a function of head loss. For a given flow and comparably smooth linings, a larger inside pipe diameter typically means lower head loss, which means less energy is needed to pump water through the pipes. Ductile iron pipe's larger inside diameter results in lower head loss, which equates to energy savings, lower greenhouse gas emissions and dollars saved in pumping costs.

**HYDRAULIC ANALYSIS  
OF DUCTILE IRON PIPE**

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The advantages that result from the strength of Ductile iron translate into typically greater inside diameters, particularly against plastic pipes. PVC and HDPE pipes have the same outside diameter as Ductile, but those weaker materials need thicker walls to even approach the pressure capacity of Ductile. Those thicker walls mean smaller inside diameters, which increases head loss and results in higher energy consumption.



To learn more about how Ductile iron pipe saves energy and money, check out ["The Inside Story: How a Pipe's Inside Diameter Affects Energy Use"](#) and visit [dipra.org](http://dipra.org) to access our [Hydraulic Analysis/Greenhouse Gas calculator](#).

Thank you,  
Patrick Hogan  
President, DIPRA