dipra
Ductile Iron Pipe
Research Association

Celebrate Sustainable Infrastructure

Strength and **Durability** for **LiFe®**

The primary raw material used to manufacture Ductile iron pipe is shredded scrap iron and steel. As a result, Ductile iron pipe has up to 90% recycled content.

Consider that every year nearly 12 million cars are recycled, and one standard length of 24-inch Ductile iron pipe can contain up to one recycled car's worth of iron. That means for every mile of 24-inch Ductile iron pipe , the equivalent of 150 recycled cars are given a new life delivering clean water to communities in North America.

Recycled Content

The Ductile Iron Pipe Research Association has created the following environmental policy in order to define our commitment to sustainable water infrastructure options. The member companies of DIPRA will uphold the following principles in all of their business activities through management commitment, employee involvement, and allocation of adequate personnel and other resources:

Compliance: We will manage our business activities to meet all governmental laws and regulations as well as internally established environmental, health, and safety requirements. Our goal is 100% compliance, 100% of the time.

Protection: We will conduct our activities in a responsible manner to protect our employees, the public, and the environment by focusing on injury and illness prevention, pollution prevention and minimizing impact and risks to the environment from our operations.

Improvement: We will continually improve our environmental, health, and safety performance with a primary focus on setting and achieving goals and objectives.

DIPRA has been recognized by the Institute for Market Transformation to Sustainability with SMaRT® Certification of Ductile iron pipe. This certification recognizes the environmental, social, and economic benefits of sustainable Ductile iron pipe.

Environmental Policy

Ductile iron pipe, with the standard cement-mortar lining and designed in accordance with ANSI/AWWA C150/A21.50, has a larger inside diameter than other pipe materials. As a result, for a given flow and nominal size of pipe, cement-mortar lined minimum pressure class Ductile iron pipe typically experiences less head loss than substitute material pipelines. In other words, less energy is consumed to pump through Ductile iron pipe than any other pipe material. These energy savings result in fewer dollars spent on energy and less greenhouse gas emissions.

DIPRA has created an online calculator, Hydraulic Analysis of Ductile iron pipe, to help you see how much you can save on energy and money on infrastructure projects. Visit **https://dipra.org/technical-resources/calculators** to learn more.

***Calculation Parameters Based on 24" Pipe**

Length of Pipeline:	30,000 ft
Flow Rate:	6,000 gpm
Unit Power Cost:	$0.10/kWh
Pump Efficiency:	70%
Pump Rate:	24 hrs/day
Design Life:	100 years
Rate of Return:	5%
Inflation Rate of Power Cost:	3%
C factors:	Ductile Iron Pipe - 140
	Steel/CCP - 140
	PVC (DR 18) - 150
	HDPE (DR 11) - 155

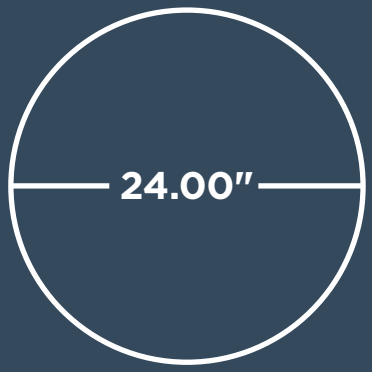
Energy Savings

Ductile Iron Pipe

Unit Head Loss: 1.73 ft/1000 ft

Calculated Annual Pumping Cost: $73,225*

Steel/CCP



Unit Head Loss: 2.09 ft/1000 ft

Calculated Annual Pumping Cost: $88,511*

Annual Additional Cost Using Steel/CCP: $15,286

Present Worth of Additional Cost: $672,178

PVC

Unit Head Loss: 2.38 ft/1000 ft

Calculated Annual Pumping Cost: $100,817*

Annual Additional Cost Using PVC: $27,592

Present Worth of Additional Cost: $1,213,307

HDPE

Unit Head Loss: 3.45 ft/1000 ft

Calculated Annual Pumping Cost: $146,195*

Annual Additional Cost Using HDPE: $72,970

Present Worth of Additional Cost: $3,208,741

For more information contact DIPRA or any of its member companies.

Ductile Iron Pipe Research Association

An association of quality producers dedicated to the highest pipe standards through a program of continuing research and service to water and wastewater professionals.

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Member Companies

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Social Media

Get in the flow with Ductile iron pipe by connecting with us on **Facebook**, **Twitter**, and **LinkedIn**.

Visit our website, **www.dipra.org** and click on the YouTube icon for informational videos on Ductile iron pipe's ease of use, economic benefits, strength and durability, advantages over PVC, and more.