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 98% 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.
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 www.dipra.org/calculators to learn more.

*Calculation Parameters Based on 24” Pipe*

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Pipeline</td>
<td>30,000 ft</td>
</tr>
<tr>
<td>Flow Rate</td>
<td>6,000 gpm</td>
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<tr>
<td>Unit Power Cost</td>
<td>$0.10/kWh</td>
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<tr>
<td>Pump Efficiency</td>
<td>70%</td>
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<tr>
<td>Pump Rate</td>
<td>24 hrs/day</td>
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<tr>
<td>Design Life</td>
<td>100 years</td>
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<tr>
<td>Rate of Return</td>
<td>5%</td>
</tr>
<tr>
<td>Inflation Rate of Power Cost</td>
<td>3%</td>
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<tr>
<td>C factors</td>
<td></td>
</tr>
<tr>
<td>Ductile Iron Pipe</td>
<td>140</td>
</tr>
<tr>
<td>Steel/CCP</td>
<td>140</td>
</tr>
<tr>
<td>PVC (DR 18)</td>
<td>150</td>
</tr>
<tr>
<td>HDPE (DR 11)</td>
<td>155</td>
</tr>
</tbody>
</table>
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.

P.O. Box 190306
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205.402.8700 Tel
www.dipra.org

**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/videos](http://www.dipra.org/videos), 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.

**Member Companies**

AMERICAN Ductile Iron Pipe
P.O. Box 2727
Birmingham, Alabama 35202-2727

Canada Pipe Company, Ltd.
1757 Burlington Street East
Hamilton, Ontario L8N 3R5 Canada

McWane Ductile
P.O. Box 6001
Coshocton, Ohio 43812-6001

United States Pipe and Foundry Company
Two Chase Corporate Drive
Suite 200
Birmingham, Alabama 35244

**Ductile Iron Pipe is SMART certified**