COUNCIL OF STATE GOVERNMENTS
December 2017

FIXING THE CRUMBLING WATER INFRASTRUCTURE

OPEN COMPETITION
By the Numbers

• 240,000 water main breaks in the US every year (660 per day)
• We need $1 trillion to replace water mains and $298 billion to replace wastewater and storm water infrastructure over the next 20 years
• Congressional appropriations only aggregate to $42 billion in the same time frame
• We lose 17% of our potable water to leaks, much of which is a result of corrosion
• Water pipe corrosion costs the US $47 billion per year in 2016 dollars
VIRTUAL MONOPOLY

2.02 PIPE:


B. Service Tubing:
   1. Copper: A88, Type K annealed and soft temper.
   2. Water: Any schedule provided by supplier.

2.01 PIPE AND FITTINGS

A. Ductile Iron water main pipe shall meet all the requirements of the latest revision of ANSI/AWWA C151/ A21.51. Pipe shall be scheduled in eight-inch or twenty-four-inch lengths, unless otherwise required. All joints to include joints for rigid and flexible pipe. Pipe joints must be of the smooth or joint and coupling or couplings shall be galvanized. Ductile iron pipe must be cast in accordance with the latest revision of ANSI/AWWA C151/A21.51 to meet requirements for thickness.

B. Ductile iron pipe shall be listed and approved for use in Nebraska. Ductile iron pipes shall be ductile iron pipe, Thickness Class 52 as defined in 0/21.50.

4.02.01.02 Other Materials

Ductile Iron pipe shall be the only approved pipe material for water mains. exceptions are allowed by the Township. All pipe materials shall meet ANSI/AWWA C151/ A21.51. Ductile Iron pipe shall be pressure tested in accordance with the ANSI/AWWA standards and meet the minimum pressure class as follows:

Ductile Iron Pipe, 12 inch Diameter or Smaller
Pressure Class 360

Ductile Iron Pipe, 14 inch Diameter or Greater
Pressure Class 250

Water mains shall be considered to mean ductile iron and/or pre-stressed concrete cylinder pipe complete with specials, fittings, valves, valve wells, valve boxes, hydrants and appurtenances, and connections to existing mains. Ductile Iron Pipe Class 52 or greater and shall
BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF OHIO:

Section 1. That section 153.75 of the Revised Code be enacted to read as follows:

Sec. 153.75. (A) As used in this section, "public authority" means the state, a county, municipal corporation, water or sewer district, school district, or other political subdivision, or any public agency, authority, board, commission, instrumentality, or special purpose district of the state or of a political subdivision.

(B) A public authority shall consider all piping materials for the construction, development, maintenance, rebuilding, improvement, repair, or operation of a water or waste water project that is funded in whole or in part with state money that meet the engineering specifications for the project as determined by the design engineer, who shall be a professional engineer registered under Chapter 4733. of the Revised Code.
Open Competition Studies

MI STUDY REVEALS COST SAVINGS
CLOSED COMPETITION = HIGHER COST
OPEN COMPETITION = LOWER COSTS

OH STUDY REVEALS COST SAVINGS
CLOSED COMPETITION = HIGHER COST
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NEW U.S. STUDY REVEALS TAXPAYER SAVINGS ON WATER INFRASTRUCTURE

CLOSED COMPETITION = HIGHER COST
OPEN COMPETITION = LOWER COSTS

PLASTIC PIPES: FINDING THE RIGHT SOLUTION FOR FIXING OUR NATION’S WATER INFRASTRUCTURE SYSTEM

ADVANTAGES OF PLASTIC PIPES:
- Proven Durability
- Plastic pipes meet numerous ASTM, AWWA, and NSF standards for durability.
- Evidence shows the life span of plastic pipes can exceed 100 years, while legacy materials begin to break down as quickly as 11-14 years.
- Unlike legacy materials, plastic pipes are resistant to corrosion that costs taxpayers $50.7 billion annually.

MAXIMUM EFFICIENCY
- Plastic pipes, because they do not corrode, require less energy for water transport.
- Installation of plastic pipes is faster and saves on energy and manpower increasing savings in time, energy, and costs.
- There are significant energy savings in the manufacturing and transportation of plastic pipes.

Protection
- Plastic pipes meet EPA requirements for clean water by adhering to NSF/ANSI Standard 41, Drinking Water System Components - Health Effects.

Numerous Local Restrictions Waste Taxpayers Money, Hurt Consumers in Michigan

Michigan’s aging water infrastructure is in desperate need of repair. Unfortunately many cities, counties, and municipalities lack the critical funding to support infrastructure projects. This has resulted in higher taxes and increased utility rates for the people that live in cities that have failed provide an open process for selecting the best solution.

Bidding Process Clogged by Regulatory Restrictions

Regulations that limit choice are simply bad policy since no single material is the best option for every project and local engineers should not be forced to use material that does not fit before the project. Michigan Senate Bill 197 would make sure that, when state money is used, all municipalities give the same opportunities to the local private companies to bid on different materials that meet all applicable performance standards used in water infrastructure projects.

The average cost to replace 10” water pipes in a “closed competition” system is $87,73 per foot, but with “open competition” the average cost is $32.721 per pipe cost alone. This is a savings of more than $510,000 per mile. Furthermore, competition lowers costs for the existing material. Plastic pipe costs of the same diameter was found to be less costly in open competition than in closed cities.

CUSTOMER SATISFACTION SURVEY: "Open Competition Increases Customer Satisfaction"
MI STUDY REVEALS COST SAVINGS
CLOSED COMPETITION = HIGHER COST
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CLOSED COMPETITION
Port Huron & Grand Rapids, MI

OPEN COMPETITION
Monroe & Livonia, MI

**HIGHER Pipe Capital Costs**

![Graph comparing pipe capital costs between closed and open competition]

**SAVINGS**

$114,154 per mile pipe cost

![Graph showing savings from open competition]

**2014 Total Average Pipe Capital Cost/Msg**

- $500,000
- $400,000
- $300,000
- $200,000
- $100,000
- $0

**Open Competition**

- Monroe & Livonia, MI
- Savings of up to $114,154 per mile pipe cost

**Closed Competition**

- Port Huron & Grand Rapids, MI
- Higher pipe capital costs

**Much of the United States’ water infrastructure systems were built decades if not a hundred years ago or more. They are nearing the end of their life spans and must be updated.**

**Modernizing these systems will be costly and time consuming. Many communities use “closed competition,” creating a virtual monopoly for one pipe material.**

**The National Taxpayers Union (NTU) estimates that replacing our entire water infrastructure would cost $1.32 TRILLION. According to the NTU, by switching to an “open competition” process more than $371 BILLION could be saved.**

**According to a study done by BCC Research, switching from a “closed competition” to “open competition” could save between 27% and 34% in pipe capital costs alone.**

**The average cost to replace 12” water pipes in a “closed competition” is $84 per foot, but with “open competition” the average cost is $63 in pipe capital costs alone. This is a savings of more than $100,000 per mile. Furthermore, competition lowers costs for the existing material. Ductile iron pipe of the same diameter was found to be less costly in open competition cities than in closed cities.**
OH STUDY REVEALS COST SAVINGS
CLOSED COMPETITION = HIGHER COST
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CLOSED COMPETITION
Franklin Co, OH (Columbus)

OPEN COMPETITION
Delaware Co, OH

SAVINGS of up to $97,680 per mile pipe cost

$300,000
$250,000
$200,000
$150,000
$100,000

2014 Total Average Pipe Capital Cost/Mile

HIGHER Pipe Capital Cost

Compare Costs

$300,000
$250,000
$200,000
$150,000
$100,000

OPEN COMPETITION

SAVINGS between 26% and 39% per mile in pipe cost alone

$50,000
$25,000
$0

OPEN COMPETITION
Chester, NC

SAVINGS of up to $115,902 per mile pipe cost

$150,000
$100,000
$50,000
$0

PLASTIC PIPES
FINDING THE RIGHT SOLUTION FOR FIXING OUR NATION’S WATER INFRASTRUCTURE

Growing volumes of flooding make reports about our nation an urgent reminder that a great deal of water systems in the U.S. are years or more. These systems are nearing the end of their life spans and must be updated.

Modernizing these systems will be costly and time consuming. Many communities use “closed competition,” creating a virtual monopoly for one pipe material.

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According to a study done by BCC Research, switching from a “closed competition” to “open competition” could save between 32% and 35% in pipe capital costs alone.

The average cost to replace water pipes in a “closed competition” is $51.83 per foot, but with “open competition” the average cost is $33.33 in pipe capital costs alone. This is a savings of nearly $100,000 per mile. Furthermore, competition lowers costs for the existing material. Ductile iron pipe of the same diameter was found to be less costly in open competition cities than in closed cities.

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ADVANTAGES OF PLASTIC PIPES:

Proven Durability

• Plastic pipes meet numerous ASTM, AWWA, and NSF standards.

• Evidence shows (life span of plastic pipes can exceed 100 years) plastic pipes do not rot and break as quickly as 11-14 yrs.

• Unlike legacy materials, plastic pipes are resistant to corrosion and mineral growth.

Maximize Efficiency

• Plastic pipes, because they do not corrode, require less energy to install. Plastic pipes also save on energy and on energy, and costs.

• There are significant energy savings in the manufacturing and production of plastic pipe.

Protect Health

• Plastic meets EPA requirements for clean water by adhering to Water System Components – Health Effects.
WHERE IS YOUR WATER COMING FROM?

Across the country, lawmakers are considering plans that will make it easier for our communities to replace aging water and sewer pipes with cost-effective new innovative material - plans that will open competition and drive down the cost of replacing the pipes. That means huge tax savings to you, the taxpayer.

Unfortunately, currently many states and communities around the country restrict the material that is allowed to be considered for these expensive piping projects, which drives up costs and the need for higher taxes.

Help change this system that's stuck in the past. You can join the campaign to modernize our water infrastructure and bring choice and savings to the process. Join today for modern water systems.