

Summary of Remarks

Briefing on Fair and Open Competition
in the Procurement of Piping for Water Infrastructure

Hosted by Congresswoman Grace Napolitano
32nd District of California

Wednesday June 25, 2014
2253 Rayburn, Washington, DC

Introduction

*Joe Sheehy, Legislative Director
Congresswoman Grace Napolitano*

As local, state and federal governments continue to make significant investments in improving our water infrastructure, it is important that agencies purchase the most effective and economical products. Some state and local agencies have outdated regulations that limit the types of products that can be procured, even if those products are not the best suited for a project. It is disconcerting that federal funds are used in some instances to buy these inferior and more costly products.

Alternative materials like plastic pipe can offer project savings in materials costs, labor and maintenance. Several U.S. cities have utilized this alternative material to ensure savings; up to 70 percent in the case of one California city. As our nation's water infrastructure is rebuilt, new technologies and better materials should be considered.

Speaking on this problem and how we can ensure that federal funds are spent on the best water infrastructure products and materials are:

Neal Gordon of JM Eagle, Inc., the largest manufacturer of plastic pipe and an industry leader with 20 plants across the country, will speak regarding the current status of the municipal procurement process and the benefits of using corrosion-proof materials.

Bonner Cohen of the Competitive Enterprise Institute, regarding the benefits of competitive bidding for water and sewer infrastructure. Faced with the enormous costs of rehabilitation their decaying underground water networks, municipalities across the country have turned to procurement reform/competitive bidding to ease the burden on taxpayers and ratepayers. In doing so, they are setting an example for governments at all levels to follow to ensure that water remains both affordable and safe.

Bruce Hollands of the PVC Pipe Association, regarding the growing trend in public policy and at all levels of government on the need for open bidding for water and sewer projects. How the federal government can make a difference by including the U.S. Department of Agriculture's competitive procurement policies for infrastructure projects in all new funding bills for the Clean Water/Drinking Water State Revolving Funds. This will help ensure taxpayer dollars are spent more effectively and efficiently.

FRIST SPEAKER

Near Gordon, Vice President of Marketing and Waterworks Sales

JM Eagle

ISSUE OF DISCUSSION

- \$3.8 Trillion for Water Infrastructure Repair, currently estimated over 20 years
- Challenges; Procurement Procedures for Federally Funded Projects and State Funds of Local Projects do not consider all material options
- Avoid mismanagement/ “protectionism” and sole specified (sole spec’d) projects at the local level
- Competitive Bidding is the answer, allowing benefits comparison plastic pipe vs. ductile iron

INDUSTRY LEADER

JM Eagle produces high quality high performance plastic pipe throughout 20 plants across the United States utilizing 300 pipe extruders with a 2.2 billion pound production capacity.

OUR CRUMBLING INFRASTRUCTURE

The American Society of Civil Engineers gave the United States a report card on the state of its infrastructure. It rated water systems a D-. The U.S. water system experiences 850 water main breaks a day, totaling an estimated 4,500,000 broken water mains since 2000. The repair cost for the ruptures is estimated at \$584 billion.

OUR WATER INFRASTRUCTURE LOSES

The poor condition of our water systems and underground infrastructure attributes to significant water loss; 2.6 trillion gallons of treated water per year (17% supply) is lost in pipe breaks and leaks, approximately 6 billion gallons every day. Our nation’s water loss is equivalent to the daily water use in the state of California.

CONGRESSIONAL REPORT ON CORROSION

REPORT: NACE International

Corrosion Costs and Preventative Strategies in the United States

Highlighted points:

- Corrosion prevention saves billions of dollars in the U.S.
- Direct & Indirect Costs = \$552 Billion
- 6% of GDP

THE COST OF CORROSION

Direct cost of maintenance and repair of water pipes is about 50% of the total budget of water departments. Corrosion accounts for 36% of pipe deterioration in all major cities

DAWN OF THE REPLACEMENT ERA

Currently the U.S. is facing a significant need to replace failing iron pipes that make up the majority of its underground infrastructure. A million miles of iron pipe are nearing the end of its useful life and replacement cost is estimated at over \$3.8 Trillion.

Solution to Corrosion; the Choice of Materials

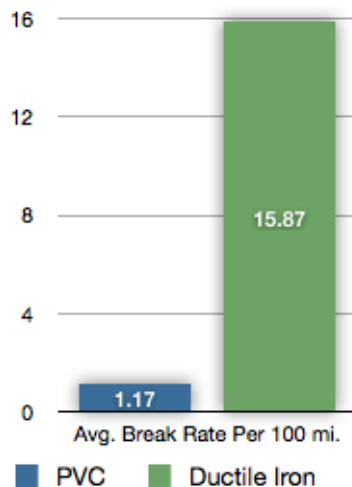
In a comparison of pipe material, ductile iron vs. PVC, there are significant benefits of using PVC than the use of iron pipe. PVC provides material cost savings, lower break rates, material longevity and environmental benefits resulting from green manufacturing practices.

COST SAVINGS

Plastic pipe offers a savings up to 70% compared to ductile iron. Plastic pipe saves 54% in material costs compared to ductile iron. Ductile Iron's weight and external joints requires more workers to install, while plastic pipe's light weight composition requires less labor and results in significant labor cost savings per job. Plastic pipe's light weight composition requires fewer trucks and consumes less fuel to transport. A larger quantity of plastic pipe can be shipped on one flatbed truck than ductile iron pipe, offering transportation costs savings.

BREAK RATES

A study by the National Research Council (NRC) of Canada reported that the average break rate per 100 miles of pipe for ductile iron is 15.87. PVC exhibited only 1.17 breaks per 100 miles of pipe. The NRC report shows that ductile iron pipe breaks 13.57 times more than PVC pipe. This difference in break rates results in significant repair cost differences for PVC and ductile iron.



CORROSION AND SOIL CONDITIONS

Corrosion and soil conditions are a major factor in determining pipe performance. Some 75% of U.S. cities have corrosive soils (2012 USU Water Main Break Study). The American Water Works Association reported that ductile iron pipe in moderately corrosive soils have a life expectancy of only 11-14 year.

LONGEVITY STUDIES

Studies have proven that PVC pipe is unaffected by corrosion, giving the plastic pipe a significantly longer product life span.

“Long Term Performance of PVC Pipe”: AWWA RF with CSIRO, 2007

Highlight Point:

- Good for 110 years

Plastic Pipe Institute with Jana Laboratories, 2009

Highlight Point:

- PE lasts more than 100 years.

EXTENDED WARRANTIES OFFER CONFIDENCE

In addition to the material’s proven useful life of 100+ years, JM Eagle offers a 50 year warranty that covers AWWA Water Transmission Pipe. The extended warranty demonstrates that manufacturers, like JM Eagle, stand behind the high quality of its PVC pipe.

GREEN COMMITMENT

The manufacturing processes for plastic pipe conserve water and guard against air and ground pollution. PVC has complete recyclability of scrap. When installed PVC pipe offers environmental protection through leak prevention, which also protects against secondary pollution, i.e., sewage leaking into water systems.

ERA OF INFRASTRUCTURE REPLACEMENT

In this era of infrastructure replacement it is important to choose the right product. Pipe materials that save tax payer money and offer longevity of the water system. Pipe produced by commitment of manufacturers who provide extended warranties. To meet these recommendations all pipe material options should be considered to offer the best solution to solve the corrosion problem.

SECOND SPEAKER

*Bonner Cohen, Ph. D., Adjunct Scholar
Competitive Enterprise Institute*

Many of the nation's underground water networks are in an advanced state of decay. According to a 2010 U.S. Conference of Mayors report, rehabilitation of the nation's underground water and wastewater systems will require spending \$3.8 trillion over the 20-year period 2009-2028. Underground pipes account for some 60 percent, or \$2.28 trillion, of that total, according to the U.S. Environmental Protection Agency (EPA).

Widespread corrosion in metallic pipes is the primary cause of an estimated 300,000 water-main breaks in North America every year. Hundreds occur every day. Gregory M. Baird, former chief financial officer for Aurora Water, Colorado's third-largest water system, estimates that leaking underground pipes lose 2.6 trillion gallons of water each year, or 17 percent of all water pumped in the United States. Montana State University microbiologist and water researcher Timothy Ford argues that as pipes corrode and break, water escapes and diseases enter the system, posing a serious threat to public health.

Water systems are capital-intensive operations. When jurisdictions fail to raise sufficient funds to cover the cost of rehabilitating their underground water networks, repairs are put off, decay accelerates, and upgrades require even more funds. The underfunded, EPA-administered State Revolving Funds (SRF) program is in no position to provide adequate relief to local water systems.

Congress, along with state and local governments, should embrace competitive bidding to encourage innovation and reduce costs. In the area of underground water pipes, by far the biggest expense facing water utilities, let the producers of polyvinylchloride (PVC) pipes, ductile-iron pipes (foreign and domestic), and pipes of any other material slug it out in an open and transparent bidding process.

A growing number of jurisdictions are doing just that. Municipalities as diverse in size and location as Charlotte, Cleveland, Dallas, Denver, Fargo, Houston, Indianapolis, Jacksonville, Louisville, Las Vegas, Myrtle Beach, Oakland, San Antonio, and San Diego have joined a host of other cities in allowing the competitive bidding process decide the future of their water systems.

Recently, Rep. Robert Aderholt (R-Ala.) slipped a "Buy America" provision into the Water Infrastructure Finance and Innovation Act (WIFIA), which was signed into law in June. It requires recipients of federal water funds under a WIFIA program to buy only American iron and steel pipe and other materials necessary for water infrastructure upgrades – when other less-expensive and longer-lasting options are available. This blatantly anti-competitive provision will cast a long shadow over efforts to fix corroding, leaking underground water pipes. Clean and affordable water is much too important to fall victim to cronyism in Washington that rewards the well-connected to the detriment of everyone else.

THIRD SPEAKER

*Bruce Hollands, Executive Director
PVC Pipe Association*

Presentation Topics:

- The Growing Trend in Public Policy on the Need for Open Bidding in Water and Sewer Projects
- Getting Greater Value for Taxpayer Dollars and Spurring American Innovation
- Problem: Outdated Procurement Policies

UNI-BELL PVC PIPE ASSOCIATION

Founded in 1971 as a non-profit organization, the PVC Pipe Association (PVCPA) is the authoritative source of information on PVC pipe and serves the engineering, regulatory, public health and standardization communities.

Our mission is to support the use of longer-life, lower-maintenance, cost-effective and corrosion-proof PVC piping in water and wastewater systems – for sustainability and long-term asset management.

The PVC pipe industry contributes in excess of \$14 billion annually to the US economy and supports more than 25,000 jobs. With over two million miles in service, PVC pipe is the product of choice for buried water, sewer, drainage, and irrigation infrastructure.

QUALITY COMMITMENT

Plastic pipe is manufactured under the highest quality and performance standard. Adhering to a wide array of tough control tests and independent certifications issued by independent third party regulatory agencies like, American Water Works Association (AWWA). AWWA C900 pipe receives a minimum of 28 quality control checks daily on each extrusion line. Each piece of pipe is put through a Hydrostatic proof test that tests at twice its pressure rating or higher. The industry inspection agencies can prevent shipment and initiate a recall of nonconforming pipe products.

PUBLIC HEALTH

Plastic pipe is safe and beneficial to public health. It meets or exceeds all required health and safety standards issued by the U.S. & Canadian Safe Drinking Water Acts and the U.S. Food & Drug Administration. Its use is monitored by independent agencies like NSF International and supported by the scientific community with ten million quality control tests performed and passed.

THE ENVIRONMENT

Plastic pipe is the best choice for the environment, produced with sustainable and abundant resources. Its manufacturing process is clean and safe, product is recyclable and results in a smaller human footprint in the manufacturing process. It leads all other piping materials in sustainability, it uses four times less energy to make than concrete pipe, and half the energy used to produce iron pipe.

THE CORROSION CRISIS

The current failing infrastructure crisis faced in our country is owed to materials used in America's underground pipe networks over the last 100 years. Beginning with the use of cast iron pipe and followed by thinner-walled ductile iron pipe. Both materials now suffer from the ravages of corrosion. Although, corrosion-mitigation measures are employed to safeguard the materials they result ineffective in eliminating the problem and only delay the unavoidable outcome. Corrosion is the leading cause of water main breaks in North America (850 per day, 300,000 annually) and the contributor to costs in the U.S. of \$50.7 billion annually (2002 Congressional Study). Corroded leaking pipes lose some 2.6 trillion gallons of drinking water every year, or 17% of all water pumped in the U.S. and representing \$4.1 billion in wasted electricity annually.

LACK OF OPEN BIDDING: MAJOR PROBLEM

There is growing awareness that corrosion and the lack of open bidding for piping are major problems in the U.S. the water utilities sector and is attracting attention of the media as well as municipal, state and federal lawmakers. Numerous organizations support open procurement measures for local water and waste water projects including:

- U.S. Conference of Mayors Water Council
- U.S. Water Alliance
- National Taxpayers Union
- Competitive Enterprise Institute
- Water Finance Research Foundation
- American Legislative Exchange Council
- Water and Wastewater Equipment Manufacturers Association, Inc.
- National Association of Home Builders

MEDIA

Covering the issues regarding our water infrastructure:

- Livebetter, "Promoting Sustainable Water Systems"
- Chicago Tribune, "Cutting Wasteful Spending a Priority for 2012"
- The Hill, "Sustainable Solutions for Water Infrastructure Without Soaking Taxpayers"
- Mayors Water Council, "Underground Water Infrastructure: Getting results in Indianapolis through continuing improvement and modern materials procurement practices."
- New York Post, "The Pipe Crisis Beneath NYC"
- Roll Call, "Getting the Best Bang for the Buck in the Nation's Infrastructure"

- Dollars & Sense, “Fight Back Against Rising Water Bills”
- American City & County, “Viewpoint: Fix procurement rules before fixing faulty pipes”
- Gloucester Times, “Letter: Roots of water main breaks run deeper than aging pipes”
- The Bond Buyer, “A Better Path for Infrastructure”
- Republican Herald, “Break Indicative of Bigger Problem”

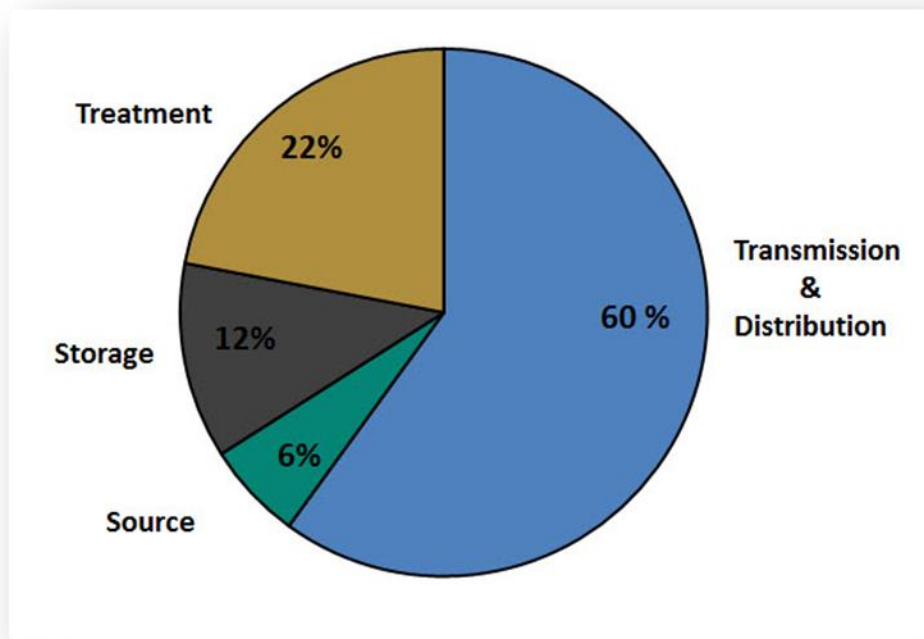
ATTENTION FROM CREDIT AGENCIES AND LENDERS

On October 28, 2011 The Bond Buyer ran an article titled, “A Better Path for Infrastructure”
With the following highlighted points:

- Use of corrosion-prone piping materials is undergoing scrutiny
- Huge replacement cost savings can be achieved through use of non-corrosive piping materials like PVC, which studies suggest as a design life of 110 to 170 years or greater, at 30-70% of the metallic pipe costs

FOCUS ON PIPE PROCUREMENT

60% of Utility Capital Investment



TRENDS IN PUBLIC POLICY VARIOUS REPORTS ISSUED

REPORT: COMPETITIVE ENTERPRISE INSTITUTE, "Fixing America's Crumbling Underground Water Infrastructure: Competitive Bidding Offers a Way Out"

Highlighted points:

- Problems afflicting today's underground systems stem from deteriorating, corrosion-prone metallic pipes
- Pipe networks single largest component of a utility's infrastructure assets, significantly affect operations and maintenance costs - increasing annually at 6% above rate of inflation
- Cities that have opened up their bidding processes to alternative pipe materials have benefited from the competition

REPORT: U.S. CONFERENCE OF MAYORS, "Municipal Procurement: Procurement Process Improvements Yield Cost-Effective Public Benefits"

Highlighted Points:

- According to the US Conference of Mayors a total of \$2.28 trillion is needed in water and wastewater piping over the next 20 years.

"Closed procurement processes lead to unnecessary costs, and may diminish public confidence in a local government's ability to provide cost-effective services."

"The common practice of choosing metallic pipes without a full financial evaluation continues to dominate procurement decision-making...Only by modernizing procurement practices and the assumptions upon which pipes are selected can municipalities achieve much needed cost-savings and performance improvements in their underground infrastructure at a time of dwindling financial resources."

"The use of non-corrosive materials can help reduce the overall costs of maintenance, operations and expensive capital replacement plans."

*- Richard F. Anderson, Ph.D.,
Senior Advisor, U.S. Conference of Mayors Water Council*

CASE STUDY: SCHENECTADY, NY

Highlighted Points:

“The traditional habit of using one or two pipe materials exclusively is no longer satisfactory. Local officials need to compare all proven pipe materials on a life cycle basis before choosing the best pipe for the city.”

- *Schenectady (NY) Mayor Brian Stratton,
Co-Chair of the U.S. Conference of Mayors Water Council*

CASE STUDY: PLEASANTON, CA – “Pleasanton's Underground Infrastructure: Sustainability, Cost-Efficiency Through Better Materials Procurement Practices”

Highlighted Points:

“As a solution to corrosion and to better control costs, Pleasanton began using corrosion-proof PVC pipe in the mid-1980s because it doesn't need coatings, liners, or other materials to ensure strength or sustainability.”

“PVC pipe is about 70% cheaper than ductile iron pipe.”

“Pleasanton's demonstrated progress and outside recognition have come from being adaptive, flexible and open to better technologies such as PVC pipe...”

- *Pleasanton (CA) Mayor Jennifer Hosterman,
Co-Chair of U.S. Conference of Mayors Water Council*

CASE STUDY: INDIANAPOLIS, IN – “Underground Water Infrastructure: Getting Results in Indianapolis through Continuing Improvement and Modern Materials Procurement Practices”

Highlighted Points:

“We found that alternative pipe materials like PVC pipes have demonstrated far superior performance...and also learned through life cycle analysis that PVC pipe has both a longer useful life than traditional pipe materials, and has a lower cost to both install and maintain.”

“PVC pipes in our system have a failure rate 2.5 times less than traditional pipe materials, helping our city realize significant cost savings for ratepayers.”

- *Indianapolis (IN) Mayor Gregory Ballard,
Co-Chair of the U.S. Conference of Mayors Water Council*

REPORT: NATIONAL TAXPAYERS UNION, "Reforming Our Nation's Approach to the Infrastructure Crisis: How Competition, Oversight, and Innovation Can Lower Water and Sewer Rates in the U.S."

Highlighted Points:

"Open procurement practices for underground piping, cost-justification analysis and better asset management could save U.S. taxpayers an estimated \$371 billion on future investment requirements for water pipe infrastructure."

"Cities which do not have open procurement policies could reap large benefits from such reforms."

"Impediments to change are more fiscal and political in nature than they are technical."

"With corrosive soils affecting 75% of all U.S. water utilities, coupled with significant iron pipe wall thickness reductions over the last century, iron pipe longevity has plummeted."

REPORT: AMERICAN LEGISLATIVE EXCHANGE COUNCIL, "*Lowering Costs in Water Infrastructure through Procurement Reform: A Strategy for State Governments*"

Highlighted Points:

"Despite meeting standards of the American Society for Testing and Materials and the American Water Works Association, some materials are often excluded from consideration. Allowing the consideration of all materials will introduce competition and help states and municipalities make procurement decisions that will provide the best water infrastructure for taxpayer dollars."

NEW MODEL LEGISLATION

Issued by American Legislative Exchange Council, ALEC

The Open and Fair Competition Act for Water and Wastewater Projects:

"It is the intention of this Act to ensure that all proven and acceptable piping materials must be included in all bids for water and wastewater projects. This promotion of free competition will ensure limited government resources are being used to the greatest advantage. The goal is to construct a project at the best price and best value for system customers and taxpayers."

"This proposed Act serves to ensure that open procurement procedures are utilized in the selection of piping materials for water and wastewater infrastructure projects undertaken by state or local agencies where state funding is used."

- American Legislative Exchange Council, ALEC

STATE OF OHIO

The State of Ohio is moving forward with open competition legislation for the procurement of water and sewer piping with the Ohio State of Representatives, H.B.No. 417

“A Bill to enact section 153.75 of the revised code to ensure that all proven and acceptable piping materials be included in bids for water and wastewater utility service improvement projects.”

REPORT: UTAH STATE UNIVERSITY

“Water Main Break Rates in USA and Canada: A Comprehensive Study”

Highlighted Points:

- Study on water main breaks in the US and Canada showed PVC pipe to have the lowest rate of main breaks of all pipe materials examined, which included ductile iron, cast iron, steel, concrete and asbestos cement
- Corrosion of iron piping is a major problem for water systems and newer metallic pipe are experiencing failures more rapidly than older types because of their thinner walls

PVC PIPE LONGEVITY REPORT

“A Comprehensive Study on PVC Pipe Excavations, Testing and Life Cycle Analysis”
Utah State University, Buried Structures Laboratory

Highlighted Points:

- Affordability and the 100+ Year Benchmark Standard

“A combination of pipe examination and testing data in conjunction with previous pipe break studies support PVC as a sustainable pipe material and confirm its longevity in excess of 100 years.”

“Understanding the longevity of pipes improves the ability of a water utility to make better infrastructure investment decisions with improved affordability results for customers,” says report author Dr. Steven Folkman.

“A major finding of the study is that US water utilities can reduce water main breaks and operations and maintenance costs by including corrosion-proof PVC piping in their replacement programs.”

LONGEVITY OF PVC PIPE

Report: "Long Term Performance Prediction for PVC Pipes; Subject Area: Infrastructure Reliability" AWWA Research Foundation

Highlighted Points:

- AWWA Water Research Foundation study confirms life expectancy of PVC water pipe in excess of 110 years
- European tests on PVC water pipe excavated in Germany in 2004 determined PVC pipe's longevity at 170 years

USDA OPEN PROCUREMENT POLICY

"All procurement transactions...shall be conducted in a manner that provides maximum open and free competition. RUS expects the owner and the design engineer to be open to reasonable alternatives... Contractors, manufacturers, and suppliers with acceptable equipment and materials should have a chance to participate in the project. Once the facility requirements have been established that assures good quality, the goal is to construct the project at the best price for the system and the taxpayer."

-US Department of Agriculture

FEDERAL WATER BILLS

Adopt USDA procurement policy for funding water and sewer projects

ADMINISTRATIVE PROVISION: To the maximum extent practicable, the Administrator of the Environmental Protection Agency shall conduct all procurement transactions with funding made available in this Act through the Clean Water State Revolving Funds and the Drinking Water State Revolving Funds in a manner that provides open and free competition to eliminate unfair competitive advantage and provide the taxpayers increased efficiencies by utilizing the most cost effective available technology.

OPEN PROCUREMENT: SUPPORTS SUSTAINABILITY

Corrosion and water loss is not sustainable. PVC pipe requires less energy and fewer resources to manufacture. Its light weight and ease of installation reduces transportation and installation costs, yielding further benefits for the environment. PVC pipe's ultra-smooth surface reduces pumping costs and its leak-free joints eliminate water loss. PVC pipe's greatest environmental attribute is perhaps its exceptional durability and corrosion resistance, leading to better water conservation and lower replacement, maintenance and repair costs

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