THE PIPELINE

Cheaper Piping in the 1970s Costing Water Systems Billions Now

Looser standards allowed the use of PCCP, now proving to have half the life of steel

(Photo by Don Bartletti / Los Angeles Times)

Los Angeles will spend as much as $2.5 billion replacing deteriorating PCCP over the next 20 to 25 years. Repairing or replacing PCCP mains nationwide could cost $40 billion.

For the LA Metropolitan Water District (MWD), which serves 19 million residents of Southern California, the wake-up call sounded in 1999. That's when a water main in Irvine suffered a catastrophic blowout, spilling 5 million gallons and shutting off service to 700,000 residents.

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In a subsequent inspection of the system, the district found hundreds of leaks and breaks, which it blamed on premature deterioration in pre-stressed concrete cylinder pipeline (PCCP). At least 100 miles of the 160 miles of pipe made from the material were judged to be in need of repair or replacement.
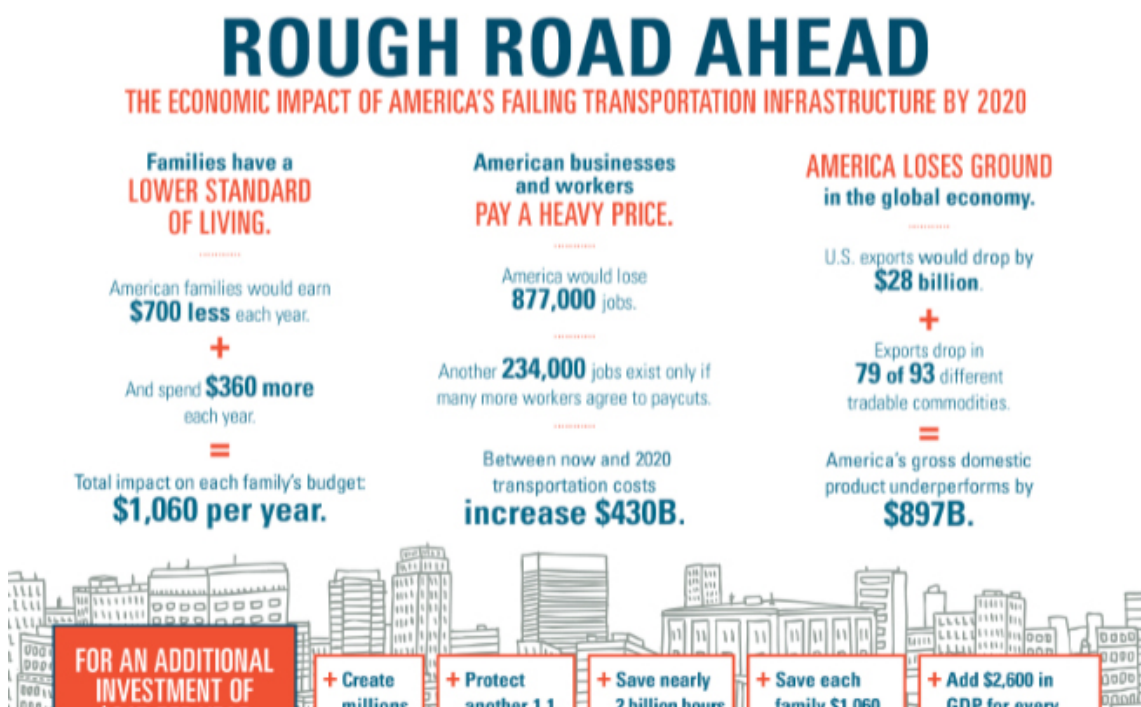
The MWD expects to spend as much as $2.5 billion on the task over the next 20-25 years, and repairing or replacing PCCP nationwide could cost $40 billion, according to a technical assessment produced for the EPA and AWWA.

The problem appears to be the loosening of manufacturing standards in the early 1970s. Engineering organizations promulgated liberalized standards for PCCP, which incorporated reinforcing steel wires that were stronger, but also thinner. Those wires turned out to be more vulnerable to corrosion and brittleness than expected.

"They thought they'd come up with a new technique that would be cheaper," says Jeffrey Kightlinger, general manager of the MWD. But the lifespan of PCCP from that era is about half that of steel.

Read the whole article here.

HydraTech engineered products are helping water utilities prevent sinkholes for a fraction of the cost of repairs after sinkholes occur. Learn more at HydraTech's website.

ROUGH ROAD AHEAD
THE ECONOMIC IMPACT OF AMERICA'S FAILING TRANSPORTATION INFRASTRUCTURE BY 2020

Families have a LOWER STANDARD OF LIVING.

American families would earn **$700 less** each year.

+

And spend **$360 more** each year.

=

Total impact on each family's budget: **$1,060 per year.**

American businesses and workers PAY A HEAVY PRICE.

America would lose **877,000** jobs.

Another **234,000** jobs exist only if many more workers agree to paycuts.

Between now and 2020 transportation costs increase **$430B.**

AMERICA LOSES GROUND in the global economy.

U.S. exports would drop by **$28 billion.**

+

Exports drop in **79 of 93** different tradable commodities.

=

America's gross domestic product underperforms by **$897B.**

FOR AN ADDITIONAL INVESTMENT OF

+ Create millions

+ Protect another 1.1

+ Save nearly 2 billion hours

+ Save each family $1,060

+ Add $2,600 in GDP for every

This ASCE economic report on surface transportation found that deteriorating infrastructure will cost the American economy more than 876,000 jobs and suppress the growth of GDP by $897 billion by the year 2020 if not addressed soon.

Read the report here.

WaterLine Epoxy Gave Mid-Atlantic Pipes New Life without Excavation

Market

Water / Utilities

Challenge
HydraTech was asked to restore an aging iron water main that needed cleaning and new connections.

Engineered Solution
The AWWA Class I WaterLine Potable Water Epoxy was selected as the lining system for the project.

Scope
Once a bypass was established, the line was dewatered, mechanically cleaned, and remotely lined with WaterLine epoxy. The dry film thickness of the application was 40 mils. The lining process was completed in 400-foot sections of 4-inch diameter ductile iron pipe.

Solution
HydraTech's WaterLine epoxy is a cost-effective method of sealing 4-inch or larger pipes from the inside. It restores proper flow and extends the operating life of the pipe. A pipe lined with WaterLine can be returned to service after just 16 hours.

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McCormick Place, Chicago, Illinois
Visit our distributor, Cretex, at booth #641.

Conference: September 30 - October 4, 2017

Ohio Transportation Engineering Conference
Columbus Convention Center, Columbus, Ohio | Booth #530

The average bolt of lightning contains enough energy to toast 100,000 pieces

toast 100,000 pieces of bread.

In 1992, 29,000 rubber ducks were lost at sea, and they are still being discovered in unexpected places.

If all the LEGO bricks ever manufactured were clipped on top of one another, they would make a tower ten times as high as the distance to the Moon.

HydraTech solutions save time and money. Contact HydraTech at (513)827-9169 or info@hydratechllc.com for more information.

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