



Legislation Text

File #: 19-933, **Version:** 1

CITY COUNCIL AGENDA ITEM

ACTION REQUESTED:

Deny a request by the Plastic Pipe & Fittings Association to repeal the City of Naperville's local amendment to Section 890.320 of the Illinois State Plumbing Code that prohibits the use of certain plastic pipe and fittings for domestic water distribution systems

DEPARTMENT: Transportation, Engineering and Development

SUBMITTED BY: Peter Zibble, Operations Manager

BOARD/COMMISSION REVIEW:

The Building Review Board held hearings on August 21, 2019 and September 18, 2019 to engage the public and industry leaders and discuss information pertinent to the request. The following motion was voted upon by the Board and failed to pass (2-4): Amend Naperville's local amendment to Section 890.320 of the Illinois State Plumbing Code that prohibits the use of certain plastic piping to allow PEX and PEX-like products for that portion of the domestic water distribution system downstream of the meter for all building types. Those in favor of the motion concurred with the applicant and found PEX to be a safe alternative to copper while providing significant cost savings to Naperville residents. Those opposed to the motion indicated that they concurred with the city's review of the information available on the topic and found the risk of potential water quality issues unacceptable. Draft meeting minutes are also included for the City Council's information.

Based on this vote, the BRB did not recommend repealing the city's local amendment to the State Plumbing Code that prohibits the use of certain plastic pipe and fittings for domestic water distribution systems.

BACKGROUND:

In 1996, the City of Naperville adopted the 1993 edition of the Illinois State Plumbing Code with local amendments (Ord 96-014). At that time, numerous local amendments were proposed, including a local amendment to Section 890.320.I.2 to prohibit the use of certain plastic pipes and fittings.

“Plastic pipe, joints and fitting made from Polyethylene (PE), Polyvinyl Chloride (PVC) or Polybutylene (PB) made by either solvent welding or fusion welded connections, compression or insert fittings, metal clamps and screws or threaded joints shall be prohibited for water service or the domestic water distribution system of any building except for the distribution and conveyance of distilled or deionized water.”

This code amendment was reaffirmed by ordinance in 2000, 2006, 2012, 2015 and 2018, generally in coordination with overall building code updates. During this process, working groups comprised of city staff, representatives from the business, building and residential community, the Building Review

Board, and City Council were formed to review the applicable codes. Additionally, the Illinois Department of Public Health (IDPH) has reviewed and approved, as of April 19, 2018, the city's local amendment to the Illinois Plumbing Code.

In August of this year, a representative of the Plastic Pipe and Fittings Association with support of a Naperville resident, applied to the Building Review Board requesting repeal of the local amendment. Their argument is that plastic plumbing (PEX in particular) has been in use for over 50 years and is currently in use in all 50 states. It has been deemed an acceptable material by the Illinois State Plumbing Code and is prohibited only by local ordinance. They added that they believe the prohibition of plastic pipe, which is a less expensive material, imposes unnecessary costs on Naperville residents.

DISCUSSION:

City staff and members of the working groups have considered this issue numerous times over the past 23 years. Each time, and as recently as last year, the group has recommended that the use of plastic pipe for domestic water distribution systems be prohibited. In arriving at this recommendation, the working groups have focused primarily on public safety and reducing the likelihood of waterborne disease such as Legionnaires. The potential for bacterial growth in domestic water supply pipes is extremely complex and involves many variables including the type of pipes and fittings, pipe age and condition, system design, flow rates, water temperature, and water chemistry. Because of this complexity, the numerous studies conducted on this matter are often contradictory. However, when considering the body of information as a whole, the working groups have identified the following points in support of their continued prohibition of plastic pipe for domestic water distribution systems:

- Unlike copper, plastics are not shown to be naturally bacteriostatic materials, that is, bacteria can grow on their surface. Copper has been shown to inhibit the growth of *Pseudomonas fluorescens*, *Bacillus subtilis*, and Bacteriophage MS2, which can cause gastrointestinal disturbance. Copper surfaces have also been shown to be inhospitable to other more serious bacteria such as *Legionella*, *e. Coli* and polio.
- Copper results in the formation of less biofilm on the interior of the pipes as compared to plastics. Biofilm is the medium in which bacteria thrives.
- Cases of reported Legionnaires' Disease are on the rise. The CDC indicates that the rate of reported cases has grown by nearly five and a half times since 2000, and the DuPage County Health Department shows a comparable trend.
- Plastic products present the potential for many undesirable chemicals to leach into the drinking water potentially impacting drinking water safety, odor and taste.

Given this information, staff has great concerns about approving an alternate building material that could have a detrimental impact on public health. However, if the City Council concurs with the petitioner's request, they should direct staff to prepare an ordinance amending Title 5 of the Municipal Code accordingly.

FISCAL IMPACT:

Although there is no fiscal impact to the city, plumbing installation costs could be reduced by 25%-30% for new construction if plastic piping were a permitted material. (Note: this figure was provided by the applicant during the BRB hearing.)

