

# Backflow Cross Connection Control Program



Council Presentation  
January 10, 2017



# Program History & Overview

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- ❑ The Program began in 1996 and is managed and staffed in Development Services with technical & financial resources from the Utilities Department.
  - ❑ The Program complies with rules established by the Texas Commission on Environmental Quality - Chapter 290: Public Drinking Water; Rules and Regulations for Public Water Systems & the Texas State Board of Plumbing Examiners.
  - ❑ Licensed staff inspect all new assemblies, review test and certification reports and perform Customer Service Inspections (CSI's) for all new and substantially improved plumbing systems within the City's jurisdiction.
  - ❑ Modifications and alterations to water service systems on private property without a City permit or inspection requires risk mitigation strategies to protect the City's water system.
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# Program Data

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- ☐ Total Number of Active Backflow Prevention Assemblies in City Database
- ☐ Total Number of Inactive / Out of Service Assemblies in City Database
  
- ☐ Total Number of Residential Backflow Prevention Assemblies
- ☐ Total Number / Percent of Delinquent Residential Assemblies
  
- ☐ Total Number of Commercial Backflow Prevention Assemblies
- ☐ Total Number / Percent of Delinquent Commercial Assemblies

Between 0.5% and 25% of the assemblies tested failed to meet field test criteria. On average, 11% of the assemblies tested fail to pass the field test.<sup>1</sup>

1. Data reported by the Foundation for Cross-Connection Control & Hydraulic Research at the University of Southern California, Spring, 2008.

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# Risk Mitigation Strategies

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- ☐ Contract with a third party testing agency to test and certify delinquent commercial and residential backflow assemblies. Appropriate charges for testing, repair or replacement to be placed on Customers Utility Bill.
  - ☐ Require annual testing and certification for residential irrigation backflow prevention assemblies.
  - ☐ Conduct a public outreach campaign to educate the Community about the potential consequences of alteration to public or private water service systems.
  - ☐ Require a Retail Service Agreement for Water Service Customers granting City personnel access to property for inspection and prevention of cross connection practices.
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# Risk Mitigation Strategies

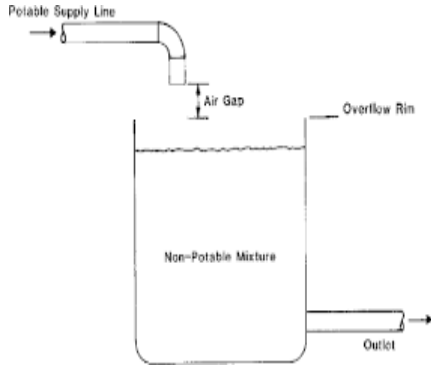
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- ☐ Conduct surveys for Backflow Protection at all facilities within the Industrial District and require backflow protection where appropriate.
  - ☐ Conduct surveys of properties with water wells who receive City water service and require backflow protection where appropriate.
  - ☐ Require backflow protection for all City water service connections.
  - ☐ Know who are Customers are. Current City policy allows businesses to obtain utility services without a Certificate of Occupancy.
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# Typical Forms of Backflow Protection

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## **Air Gap**

Approved for Low or High Hazard  
Approved for backsiphonage or  
backpressure



## **Reduced Pressure Principle Assembly (RPZ)**

Approved for Low or High Hazard  
Approved for backsiphonage or  
backpressure



# Typical Forms of Backflow Protection

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## **Double Check Valve Assembly (DCV)**

Approved for Low Hazard  
Approved for backsiphonage  
or backpressure



## **Pressure Vacuum Breaker Assembly (PVB)**

Approved for Low or High Hazard  
Approved for backsiphonage



# Questions

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Questions?