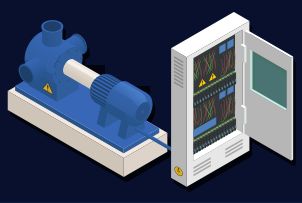
In Hot Water? The Growing Threat of Cyber Attacks to Water Distribution Systems

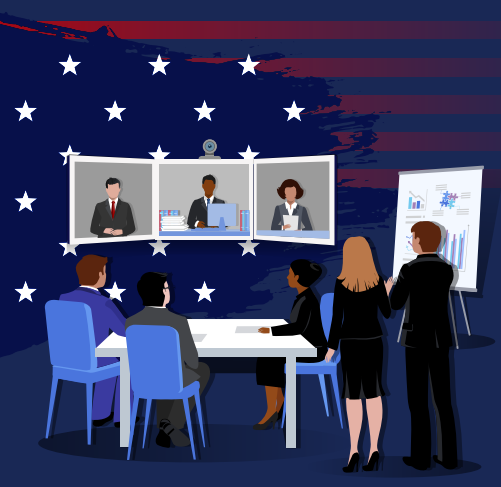
The drinking water infrastructure of the US is aging and underfunded

- Frequent water main breaks
- Billions of gallons of treated water lost daily

In ASCE's 2021 Report Card for America's Infrastructure, the Drinking Water category got a '**C –**'



Now, due to increasing levels of automation and the progressive transformation into smart water distribution systems, cyber attacks have become a legitimate threat



The Infrastructure Investment and Jobs Act supports cybersecurity for the public water system

- **Clean Water Resiliency and Sustainability Program:** Grants to increase resiliency of public treatment systems and distribution networks to cyber attacks and natural hazards
- **$25** million annually for five years

How should we incorporate cybersecurity into the current practices of the public water infrastructure sector?

ASCE collection on cybersecurity in water distribution networks

- Overview of smart water networks, their advantages and weaknesses, and growing challenges in securing resilience
- Analyzing different types of cyber-physical attacks and their effects
- Lessons learned from past cybersecurity incidents
- Modeling and simulation methodologies for managing water distribution security
- AI-based algorithms for detecting and localizing cyber attacks
- Understanding cybersecurity from the perspective of different stakeholders
- Integrating cyber attacks into resilience and risk assessment procedures and emergency response measures

This collection will help engineers and decision makers become familiar with the state-of-the-art in cybersecurity for water infrastructure networks, leading to:

- Resilient and reliable drinking water infrastructure
- Better guidelines and protocols

Cyber attacks will become a more serious and recurring threat the more we transition into smart water distribution systems—we must remain vigilant!

Water Sector Security Collection
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ASCE Infrastructure Report Card

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