AMERICAN WATER

Security Standards and Monitoring

Nicholas W. Santillo Jr.
Vice President, Internal Audit and Chief Security Officer
American Water

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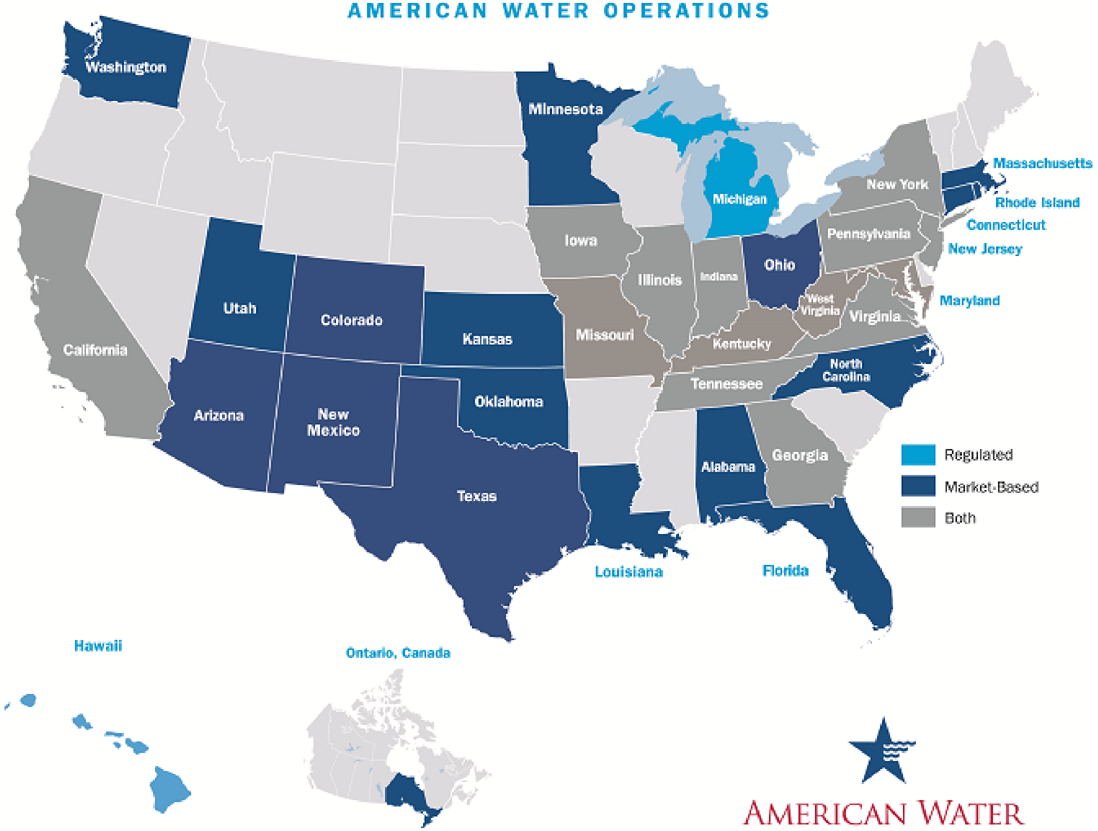
Who Is American Water

We are the largest publicly traded water and wastewater utility in the United States

- Broad national footprint and strong local presence
- Services to an estimated 15 million people in more than 1,500 communities in more than 47 states and parts of Canada
- Approx. 6,600 dedicated and active employees
- Treats and delivers more than one billion gallons of water daily

AMERICAN WATER OPERATIONS



Regulated Water Utility Must Balance …

Safe, Reliable Water Service

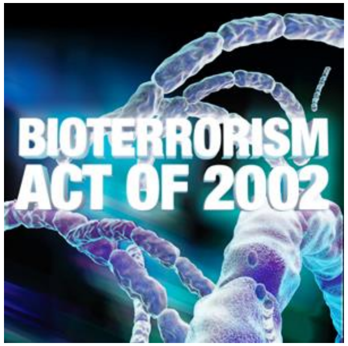
Just, Reasonable Rates

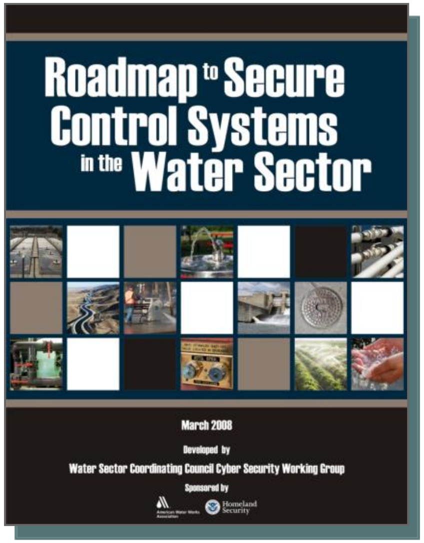
The Security Challenge

The Goldilocks Dilemma
Too Much
Just Right
Not Enough

Water Sector & Cybersecurity

911





Roadmap to Secure Control Systems in the Water Sector

March 2008

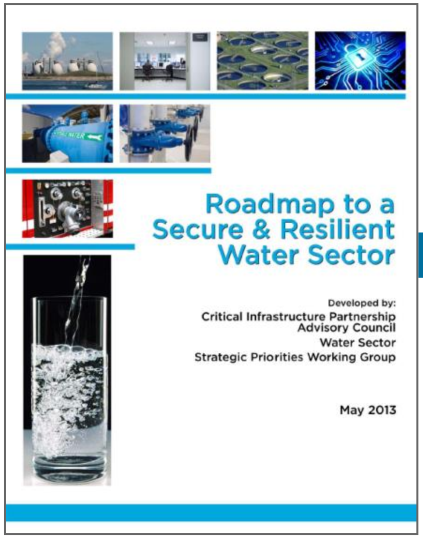
Developed by

Water Sector Coordinating Council Cyber Security Working Group

Sponsored by

American Water Works Association

Homeland Security



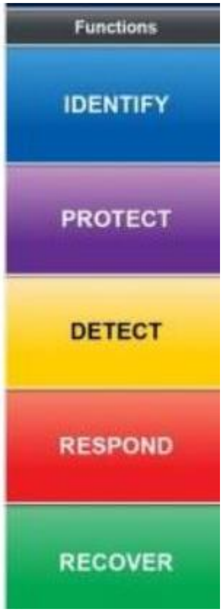
Roadmap to a Secure & Resilient Water Sector

Developed by:
Critical Infrastructure Partnership Advisory Council
Water Sector
Strategic Priorities Working Group

May 2013

IMPROVING CRITICAL INFRASTRUCTURE CYBERSECURITY

SEAL OF THE PRESIDENT OF THE UNITED STATES



Functions

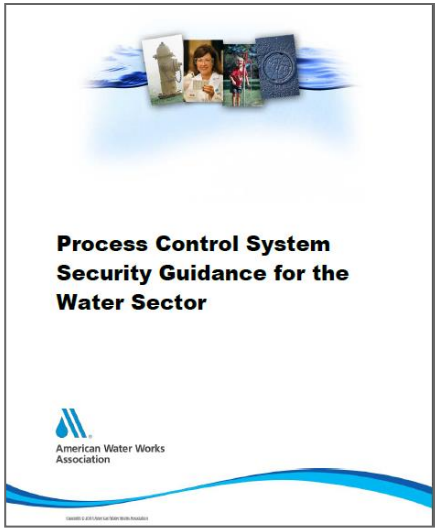
IDENTIFY

PROTECT

DETECT

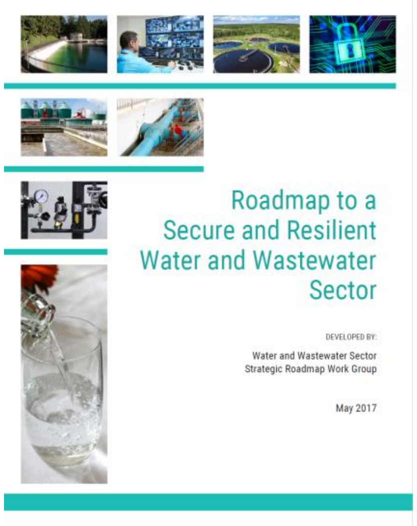
RESPOND

RECOVER



Process Control System Security Guidance for the Water Sector

American Water Works Association



Roadmap to a Secure and Resilient Water and Wastewater Sector

DEVELOPED BY:
Water and Wastewater Sector
Strategic Roadmap Work Group

May 2017

SEAL OF THE PRESIDENT OF THE UNITED STATES

STRENGTHENING THE CYBERSECURITY OF FEDERAL NETWORKS AND CRITICAL INFRASTRUCTURE

Standards & Guidance

ANSI/AWWA G430-14: Security Practices for Operation & Management

- Information protection and continuity is a requirement

ANSI/AWWA J100-10: RAMCAP® Standard for Risk & Resilience Management of Water & Wastewater Systems

- Cyber is required threat domain

ANSI/AWWA G440-11: Emergency Preparedness Practices

- Consideration of key business & operating system recovery

Business Continuity Plans for Water Utilities

- Cyber recovery plan is required action item

Process Control System Security Guidance for the Water Sector

- Supports voluntary adoption of NIST Cybersecurity Framework

Resources / Partnerships

US-CERT
UNITED STATES COMPUTER EMERGENCY READINESS TEAM

ICS-CERT
INDUSTRIAL CONTROL SYSTEMS CYBER EMERGENCY RESPONSE TEAM

C3 VOLUNTARY PROGRAM

- Cyber Security Advisors (CSA)
- Protective Security Advisor (PSA)
- National Cybersecurity Assessment & Technical Services (NCATS)
- Cyber Information Sharing and Collaboration Program (CISCP)

CSET®
CYBER SECURITY EVALUATION TOOL

- Design Architectural Review (DAR)
- Network Architecture Verification and Validation (NAVV)

WaterISAC

Six Questions for Leadership to Ask (ISACA)

1. Does the organization use a security framework?
2. What are the organization's top five cybersecurity risks?
3. How are employees made aware of their cybersecurity role?
4. Are external and internal threats considered when planning a cybersecurity program?
5. How is cybersecurity oversight managed in the organization?
6. If a breach occurs, is there a strong response protocol?

http://www.theiia.org/bookstore/product/cyber-security-what-the-board-of-directors-needs-to-ask-download-pdf-1852.cfm