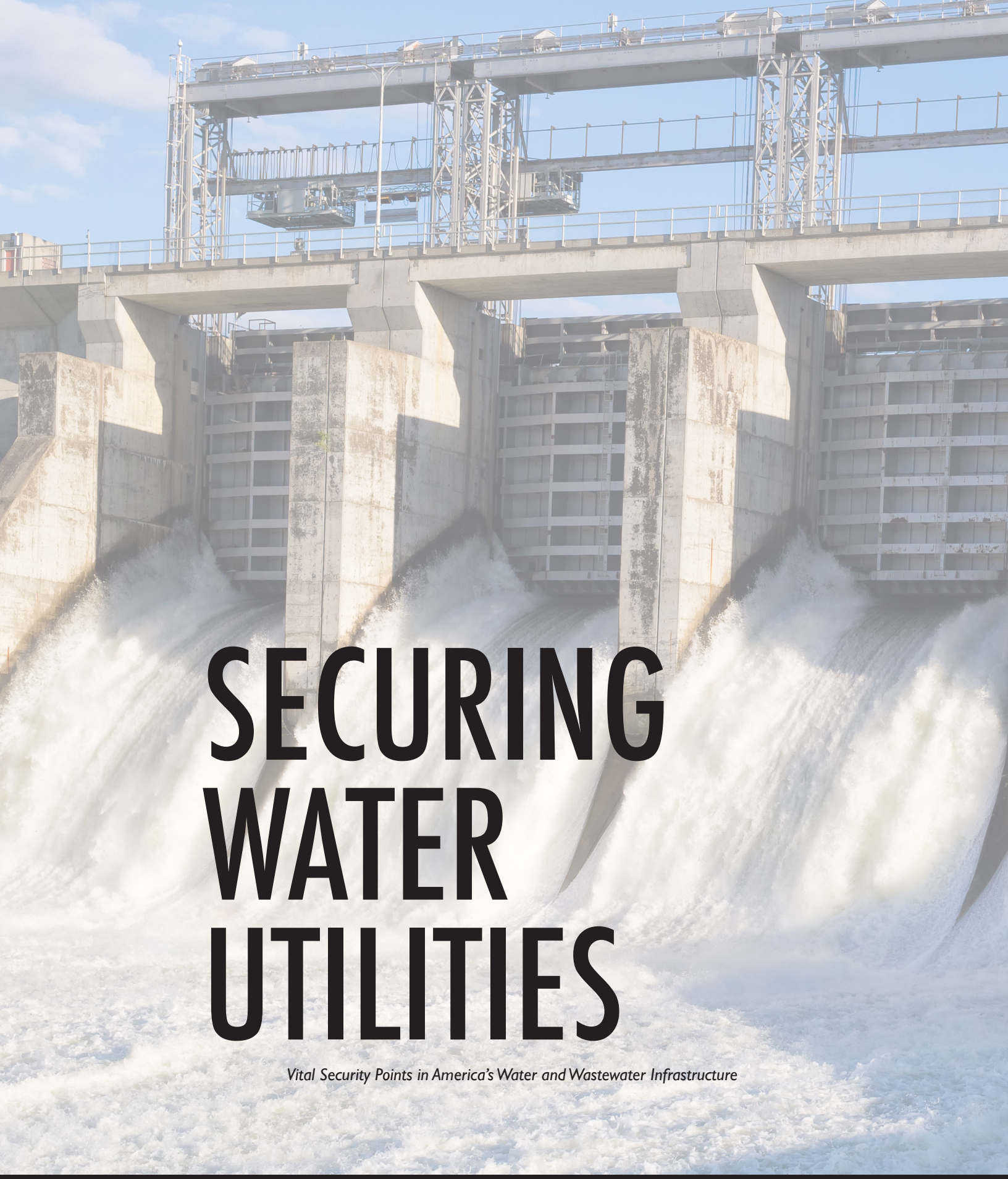

# SECURING WATER UTILITIES

*Vital Security Points in America's Water and Wastewater Infrastructure*


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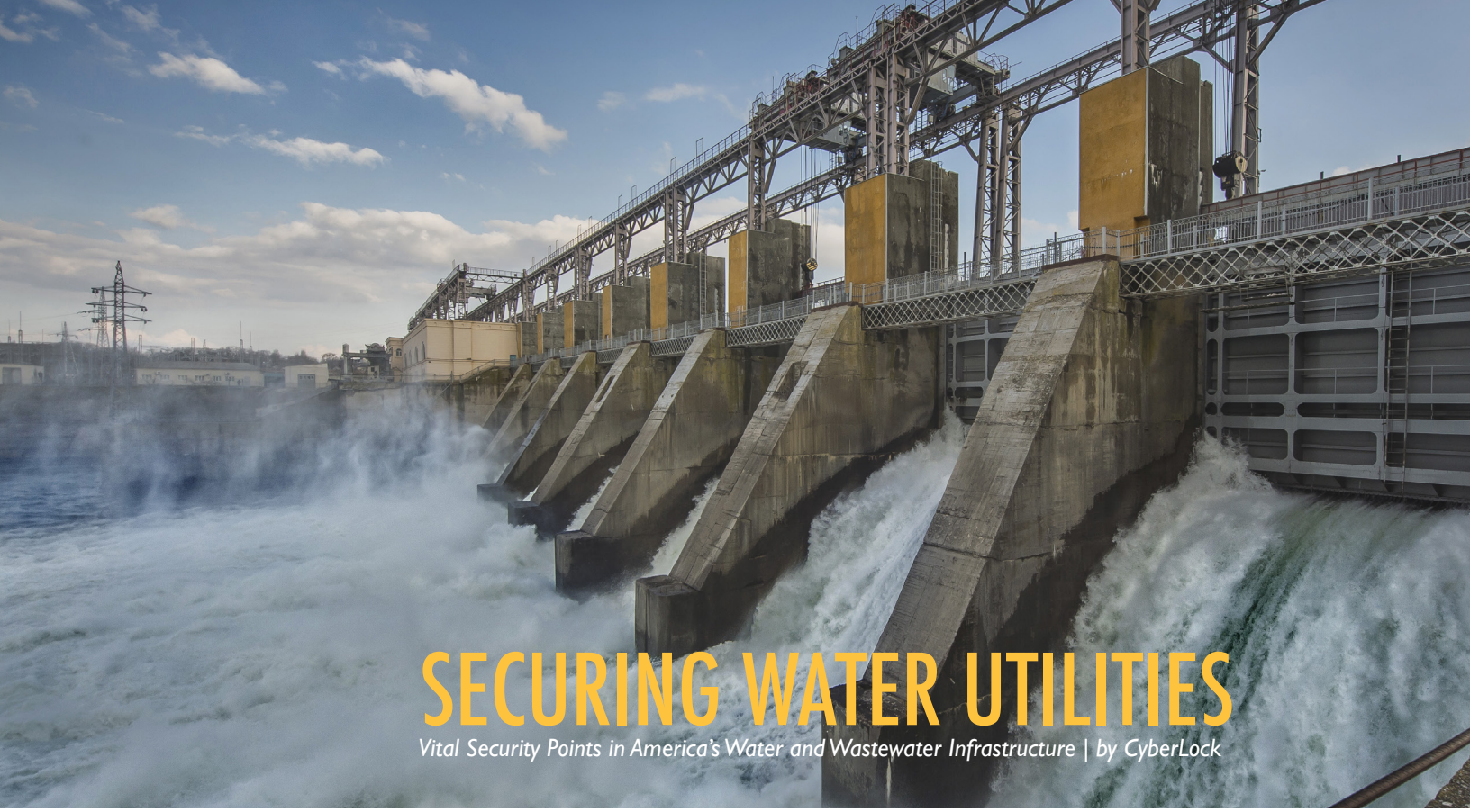

# SECURING WATER UTILITIES

*Vital Security Points in America's Water and Wastewater Infrastructure | by CyberLock*

The Department of Homeland Security (DHS) has identified 16 critical infrastructure sectors "that are so vital to the United States that their incapacity or destruction would have a debilitating impact on our physical or economic security or public health or safety." The Water and Wastewater Systems Sector is managed by the Environmental Protection Agency (EPA) who, under the authority of Congress, developed vulnerability guidelines. These guidelines help water utilities evaluate their susceptibility to potential threats and identify corrective actions necessary to reduce risks. With these guidelines in mind, Water and Wastewater facilities are considering solutions that allow them to secure their perimeters, track the movement of individuals, and prevent unauthorized access to physical assets.

THESE SITES ARE OUTDOORS, EXPOSED TO THE ELEMENTS, OR SITUATED IN REMOTE LOCATIONS, RENDERING MANY PREVALENT SECURITY SOLUTIONS INOPERABLE

**Challenges in Security Within Water and Wastewater Facilities**

Water facilities face a number of unique security challenges due to the nature of the work and the environments in which security solutions must be deployed. Entry gates, well sites, re-pumping stations, chemical feed, and a number of other sensitive areas must be secured. Many of these sites are outdoors, exposed to the elements, or situated in remote locations, rendering most security solutions inoperable or unsuitable for installation. In addition to deployment challenges, water utilities are tasked with electronically tracking and controlling access for all employees, contractors, and vendors. Accounting for each and every access attempt is a difficult task with widespread assets and mobile personnel.

**Mechanical Locks and Keys**

Mechanical locks and keys are generally the first line of defense when it comes to securing a Water and Wastewater facility. With seemingly limitless variety, simple installation, and appealing prices, mechanical locks and keys are an entry-level solution for general security. Although largely effective, mechanical locks and keys can present serious risks for Water and Wastewater facilities that require a more sophisticated security system.

Notably, mechanical locks and keys lack the ability to track who was where, and when. Additionally, the risks associated with a lost, stolen, or copied key are innumerable.

MECHANICAL LOCKS AND KEYS ARE NOT SOPHISTICATED ENOUGH TO MEET THE DEMANDS OF CRITICAL INFRASTRUCTURE.

With no way to trace when a key is copied, facilities can easily lose control of the number of keys in circulation and, inevitably, their physical security altogether. Re-keying a single facility can be cost-prohibitive, let alone re-keying an entire municipality's Water and Wastewater infrastructure. In addition to critical issues with key control, mechanical locks are susceptible to picking and keyway vandalism, rendering them inoperable. Simply put, mechanical locks and keys are not sophisticated enough to meet the demands of critical infrastructure.

**Electronic Security Systems**

Electronic security systems, such as numeric pin pads, RFID card readers, and biometric devices are commonly used in facilities requiring electronic tracking and precise, scheduled control over who has access. Although most electronic security systems provide enhanced security compared to a mechanical solution, the installation costs, potential structural modifications, and power requirements are significant drawbacks for Water and Wastewater facilities. Electronic security systems require hardwired power and network capabilities, which is often not available or feasible at remote locations. Additionally, the cost and time associated with installing a hardwired access control system is notably higher than that of a mechanical lock and key system. Overall, electronic security systems are an excellent choice in a number of industries, however for Water and Wastewater facilities these types of security solutions may simply be impractical.

**Key Centric Access Control**

Although less prevalent than mechanical locks and keys, and even electronic security systems, key centric access control systems combine the precision of electronic systems with the simple installation, affordability, and ease of use of a mechanical system. One such solution is the CyberLock® system. CyberLock access control systems provide full-

*Remote access control CyberLock solutions*

*CyberLock solutions for remote access control*

featured access control to every locking point, whether inside or outdoors. Electronic cylinders are easily deployed, not only on doors, but also on gates, trucks, shipping containers, and other mobile and remote assets. Additionally, the cylinders are installed without power or wiring, making setup and installation quick, easy, and affordable. Instead, the batteries in the CyberKey smart keys energize the CyberLock cylinders, which means there is no need to manage and replace batteries in the field. Keys are programmed with access permissions for each individual user. If a key is lost or stolen, it can easily be deactivated in the system, eliminating the need to re-key. Water and Wastewater facilities can simply mark the key as lost in the software and communicate that information to their locks, rendering the key inoperable if access is attempted. Each lock and key holds a memory of every access attempt, allowing management to view an audit trail showing who accessed or attempted to access specific locations. Key centric access control provides the ideal security solution to meet the needs of Water and Wastewater facilities by providing a sophisticated access control system without hard wiring.

CYBERLOCK ACCESS CONTROL SYSTEMS PROVIDE FULL-FEATURED ACCESS CONTROL TO EVERY LOCKING POINT WITHOUT HARD WIRING NETWORK OR POWER.

## Conclusion

Water and Wastewater Treatment facilities are considered by the Department of Homeland Security to be critical to the health and safety of the public. Therefore, strict security guidelines and protective measures have been implemented in this sector. Mechanical locks and keys and hardwired access control systems do not suit this industry due to the costs, challenges, and limitations. CyberLock electronic locks and keys combine the benefits of both systems, providing an ideal solution for Water and Wastewater treatment facilities.


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