Saint Paul Regional Water Services

September 9, 2025

STAFF REPORT

SUBJECT

BOARD RESOLUTION NO. 25-1420

To affirm the use of Waterfall Security Solutions' unidirectional gateway technology to enable secure, one-way data transfer between the Operational Technology (OT) and Information Technology (IT) systems at Saint Paul Regional Water Services (SPRWS).

2025 STRATEGIC PLAN GOALS: Infrastructure Strategy & Performance

Saint Paul Regional Water Services operates and maintains critical infrastructure that provides safe, clean drinking water to over 450,000 residents in the City of Saint Paul and neighboring communities. As cyber threats against public utilities and municipal services grow in sophistication and frequency, the need for robust cybersecurity measures has become a top priority.

One key cybersecurity challenge faced by SPRWS is the historically siloed nature of its OT systems, which operate mission-critical equipment such as pumps, valves, sensors, and treatment controls. These systems are intentionally isolated from internet-connected IT systems to reduce exposure to cyber threats. However, this isolation also limits SPRWS's ability to analyze operational data, improve efficiency, and respond in real time to system performance indicators.

To address this, staff has identified the need for a secure data exchange solution that would allow OT data to be accessed by IT systems without introducing cybersecurity vulnerabilities. After technical evaluation, Waterfall Security Solutions' unidirectional gateway was selected and deployed. This hardware-based solution ensures one-way data flow from the OT network to the IT network, physically preventing any remote access into the OT environment.

Staff recommends the Board approve the accompanying resolution affirming the continued use of Waterfall Security Solutions' unidirectional gateway as a necessary, time-sensitive cybersecurity measure. The resolution also commits SPRWS to a future procurement process to evaluate alternative solutions that meet our technical and functional requirements.

RECOMMENDATION

Approval