



## CASE STUDY: WATER UTILITY

### Background

Water Utility plants require perimeter intrusion detection both to prevent loss of assets and to prevent operational disruptions due to malevolent acts. This customer was responsible for securing multiple sites distributed over a large city area. At a particular location, the customer had previously deployed various types of perimeter security (electronic and non-electronic) but to date these had all proven ineffective against a persistent intruder. The intruder penetrated the premises every 2 – 3 weeks, resulting in the repeated theft of thousands of dollars worth of assets. CCTV cameras and DVR systems were installed but only provided post-incident analysis and proved ineffective in making a positive identification. Armed guards were deployed but also proved to be ineffective against these unrelenting but undetected intrusions.

The customer was searching for a reliable, real-time, pre-emptive solution that would provide instant notification and allow for a timely response by security forces. The customer had entertained a large number of solutions but to date all had failed to meet the requirements due to exorbitant costs for covering the large outdoor perimeter, inability to operate over existing infrastructure, lack of geospatial information, and unacceptable FAR/NAR levels.

### Challenges

The recurring security breaches and persistent loss required an immediate solution.

The sites are located in an urban environment with varying weather and lighting conditions. The client required a system that could be monitored at the SCADA center staffed with non-security personnel. Communications for video and data had to be performed over existing infrastructure (T-1, voice-grade phone lines, 802.n wireless systems), connect to the City’s network, meet EPA regulatory security requirements, use existing site lighting, while simultaneously returning zero misdetects and low FAR/NAR over ranges up to 1,000’. The site would be occupied during the work day and the system had to be automatically programmed so that no operator action was required to secure or unsecure the facility. All this needed to be accomplished within tight budget constraints.

### SightLogix Impact

In a single day, three existing cameras were replaced with three SightLogix intelligent edge devices. These were connected directly to the Security Operations Center (SOC) via an existing T1 line without requiring a local workstation or server. The cameras were positioned to monitor perimeter areas for intrusion events as well as to monitor the assets within the perimeter. A Video Management System (VMS) workstation was installed at the SOC and the SightLogix cameras were set to notify the SCADA operators when a perimeter breach was detected. The operators would be able to see the events as they occurred, become situationally aware of the perpetrator’s exact location on the Sight Map, and immediately dispatch law enforcement to the scene. Alarm schedules were set for automatic activation of the Intrusion Detection System (IDS)

At 1:16 a.m. on a Sunday morning, the alarm sounded. The operators were presented with live video of the perpetrator climbing under the perimeter fence and entering the facility. The Sight Map gave his exact location as he proceeded through the water facility. The operators notified law enforcement and the perpetrator was neutralized without loss to the City’s assets.

The customer is currently moving forward with the SightLogix solution at other sites.



*“65% of incidents involve situations where unauthorized personnel entered the premises. We now have the ability to see these perimeter breaches as they transpire, respond immediately, and apply sufficient force to prevent loss, damage, or contamination”*  
- T.C., Security Director

**What:** Water Utility Plant

**Where:** Major metropolitan city

**When:** 2007

**Previous:** CCTV, DVR, fence, armed guard force

**Issues:** Lighting, communications, budget constraints

**Lighting:** Low Pressure Sodium

**Spectrum:** Visible

**Total Perimeter:** 1.2 miles

**Total No. Cameras:** 3

**SightLogix ROI:**

- Perpetrator neutralized
- Less than 50% overall cost
- Eliminated need for guard force
- Real-time monitoring
- Pre-emptive security posture

SightLogix  
Princeton, NJ 08540  
Ph. 609.951.0008  
[www.SightLogix.com](http://www.SightLogix.com)