

Cleaning Combined Sewer Overflow (CSO) Screens: The 4 Challenges

CSO chambers are designed to let water levels rise naturally during periods of heavy rainfall. When the capacity is exceeded, the surplus water is diverted into an overflow pipe. This excess is then either stored in attenuation tanks or released at controlled locations into the sea or nearby watercourses. In this way, the CSO system helps prevent sewage from spilling out in unwanted places – such as onto roads or pavements.

An essential component of a CSO chamber is the screen, which filters out solid materials from the overflow. These solids are retained within the main sewage system rather than entering the overflow route. This helps stop solid waste from being released into rivers or other water bodies, effectively ensuring that the most harmful debris stays within the wastewater network.

Below we examine four common challenges in CSO screen cleaning in the water industry:

1. Remote / Inaccessible Sites

- Wash water might not be available
- The site might be hard to get people to
- The screen is sometimes inaccessible even when people are on site

Solution

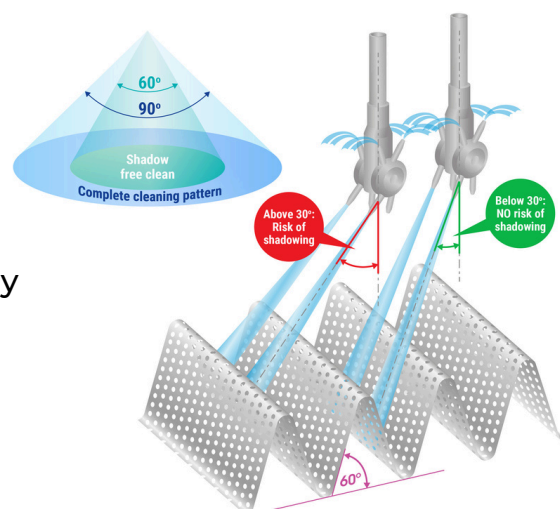
Automated cleaning systems with installed wash water infrastructure.

2. Shadowing from the Screen

- Screens may be in wave form
- This makes them difficult to clean

Solution

Properly designed cleaning systems. Simply directing water at a screen is not enough. A well-designed system will consider the geometry and shape of the screen and many other factors to ensure success.



3. Tough Residue

Fats and oils can form sticky residues that bind solids to the screen. In other cleaning applications, fats and oils can be dissolved with solvents, but this is not really practical in most screen cleaning systems in the water industry. As such, we need to rely on water impact and volume to do the job.

Solution

A properly designed jetting system that can deliver the required cleaning impact.

4. Wash Water Quality

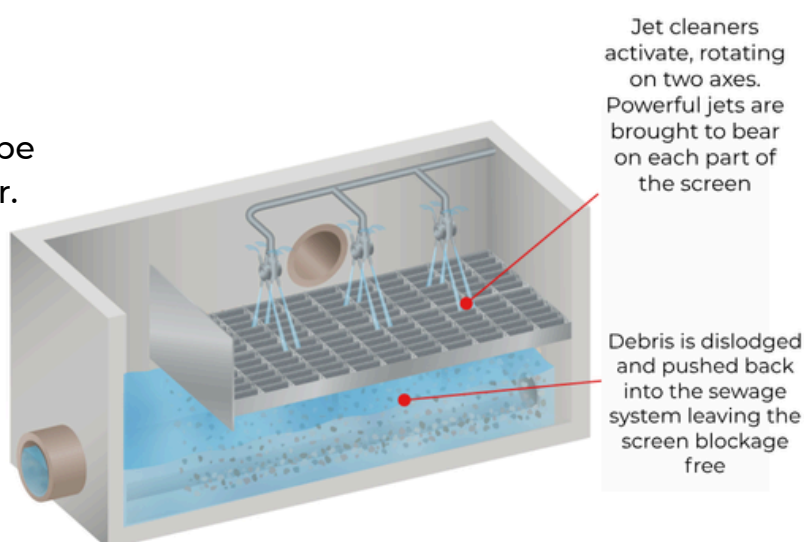
The water quality available on site might not be good, and even if it is, it is wasteful to use quality water to clean CSO screens. Any nozzle-based system must therefore be able to cope with poor quality water, or it will itself become clogged and ineffective.

Solution

A jetting system that can cope with poor quality wash water.

How SNP Can Help

The screens used in the water industry vary in design and size. Site conditions and available resources also vary.



In short, screen cleaning requires a nuanced approach. A one-size-fits-all solution is unlikely to be effective.

This is where our expertise comes in. We have helped design cleaning systems for almost any conceivable situation, from small process components to vast vessels. Our Storm Blaster storm tank cleaning system is widely regarded as the most effective solution for cleaning stormwater attenuation tanks. We bring this experience to bear on the cleaning of screens in the water industry.