

Why Choose UV

Significantly Reduce Costs

Implementing UV disinfection as a replacement for chlorination and dechlorination prior to discharge typically has a quick ROI and can save facilities significant operational costs annually.

Eliminate Storage and Safety Concerns

With UV, there are no corrosion issues or chemical storage safety issues as there are with using chlorine for disinfection.

Easy to Use and Effective

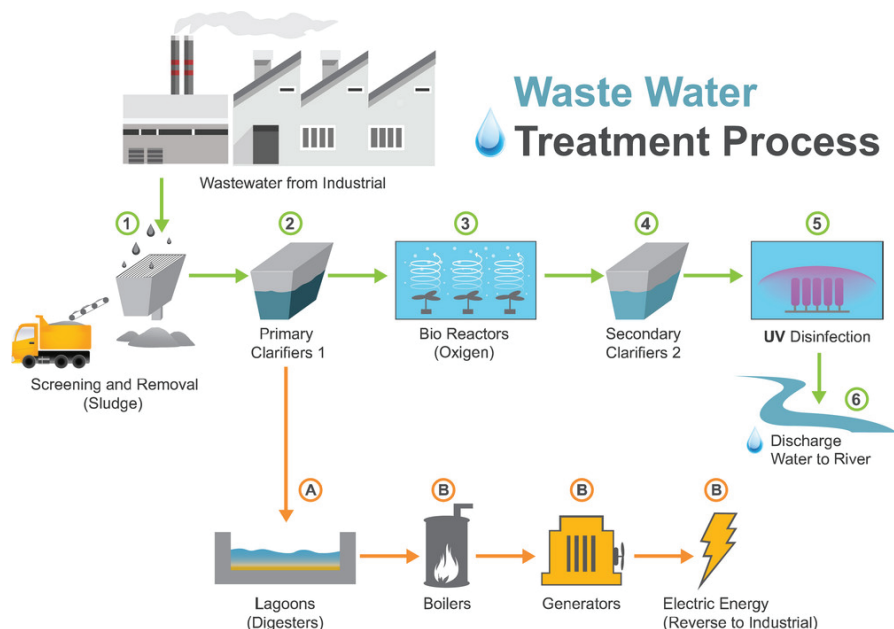
Maintenance is as simple as changing out the lamps annually and keeping the system clean. Aquionics' UV systems can be manufactured with chemical assisted wiping to combat high solid effluent and harsh water quality (ferric, manganese, etc.)

Seamless Installation and Easy Integration

UV can be installed directly in pipe before final discharge. There is no need for large contact chambers.



► 3 x InLine 1250 medium pressure UV



UV vs. Chlorination and Dechlorination

Industrial Wastewater – Meeting NPDES Permit Levels

Cost Analysis

Case Study #1 – Sugar Processing Facility

Discharge to Nearby River

Sodium hypochlorite disinfection and dechlorination prior to discharge

ITEM	CURRENT	UV
Capital Costs	\$0	\$300,000
Operation Costs	\$208,000	\$135,955
Annual Savings \$72,045		
Payback - 3 years		
20 year investment gain - \$1,140,900		

Design Flow: 3MGD

UVT: 25%

TSS <10mg/L

Table 1: Based on a standard 10 year depreciation value for the equipment, the project shows positive gain of \$42,045 per year during the depreciation period and \$72,045 per year for the remainder of useful life of equipment.

UV design included 2, Aquionics closed vessel Inline UV systems installed in series to provide redundancy for performance. Installation included Aquionics' Ultrawipe chemical assisted wiping mechanism to minimize and mitigate the risk of system fouling (primarily due to residual iron leftover in the wastewater from the phosphorous removal process).

Case Study #2 – Poultry Slaughter and Evisceration Facility

Discharge to Nearby River

Sodium hypochlorite disinfection and dechlorination prior to discharge

ITEM	CURRENT	UV
Capital Costs	\$0	\$91,000
Operation Costs	\$45,760	\$20,215
Annual Savings \$25,545		
Payback - 4 years		
20 year investment gain - \$419,900		

Design Flow: 0.75MGD

UVT: 35%

TSS <25mg/L

Table 2: Based on a standard 10 year depreciation value for the equipment, the project shows positive gain of \$16,445 per year during the depreciation period and \$25,545 per year for the remainder of useful life of equipment.

UV design included 2, Aquionics closed vessel Inline UV systems installed in series to provide redundancy for performance. Installation included Aquionics' Ultrawipe chemical assisted wiping mechanism to minimize and mitigate the risk of system fouling (primarily due to high TSS).