



**GLASCO UV**

### VERTICAL RETROFITS

- Ozonia, IDI, Suez
- Ultraviolet Purification Systems
- Ultra Tech

### RETROFIT BENEFITS

- More economical than new
- Limited disinfection down time
- Integrate more powerful lamps
- Increased flow-same footprint
- Low construction costs
- Streamlined engineering
- Upgrades: automatic cleaning, flow-pacing, PLC control

### SYSTEMS RETROFITTED

- Vertical Channel
- Horizontal Channel
- Chambered (vessel)

## “UV” VERTICAL RETRO FIT

For over 50 years, Glasco has provided UV disinfection equipment manufactured in our New Jersey, USA facilities.

The core of our business is the installation of new UV disinfection systems. Since Glasco offers both horizontal and vertical open channel and chambered UV wastewater disinfection systems, we have the ability to recommend the best system configuration and technology for each individual project.

With the acceptance of UV, there are now tens of thousands of UV systems installed worldwide. As these systems come to the end of their lives (between 10-20 years depending on installation conditions), owners have to deal with selecting a new system.

Ten years ago, we started seeing some larger plants coming to the end of their performance lives. These plants had been using the original standard output UV lamp (65 watts) in both horizontal and vertical configurations.



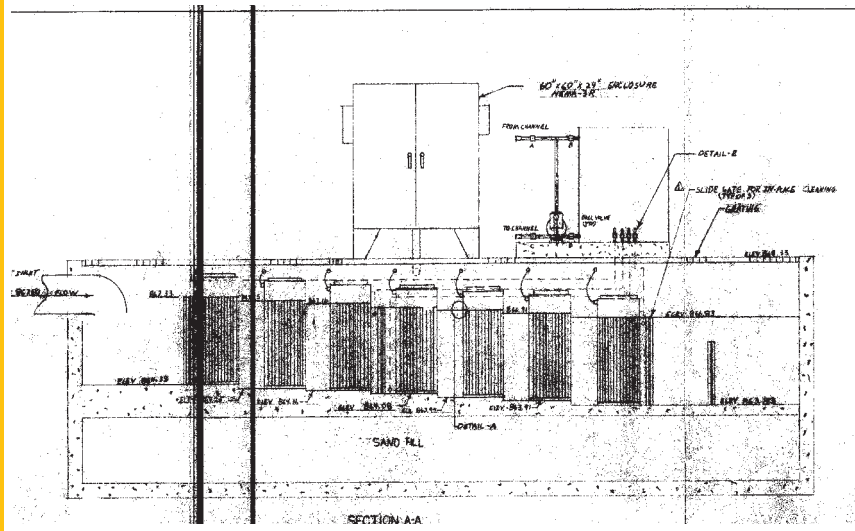
2003. Existing vertical plant using standard 65 watt lamps. Upgraded to high output 155 watt lamps. Allowed the plant to add automatic cleaning and to double flow.



2003. Vertical plant using 65 watt lamps upgraded to amalgam lamps using 320 watts. This allowed the plant to meet more stringent discharge permit and increase their flows.

The channel did not require any major redesign. Modules were dropped in and disinfection processes were not interrupted.





Project used 6 modules using 40 watt lamps in 30" water level. Glasco UV provided 4 new modules using 150 watt 30" amalgam lamp.



30" Vertical modules incorporating low pressure amalgam 150 watt lamps are 3x as powerful as existing lamps.



New modules with automatic cleaning were installed. The remote Ballast Control Center houses the ballasts in an environmentally controlled enclosure.

Modules were designed to fit into the existing channel. Existing level control weir was used.

Enclosure shows UV monitors (side mounted) and lamp operation through LEDs in the window kit.

Each module has a corresponding HOA switch.





BEFORE

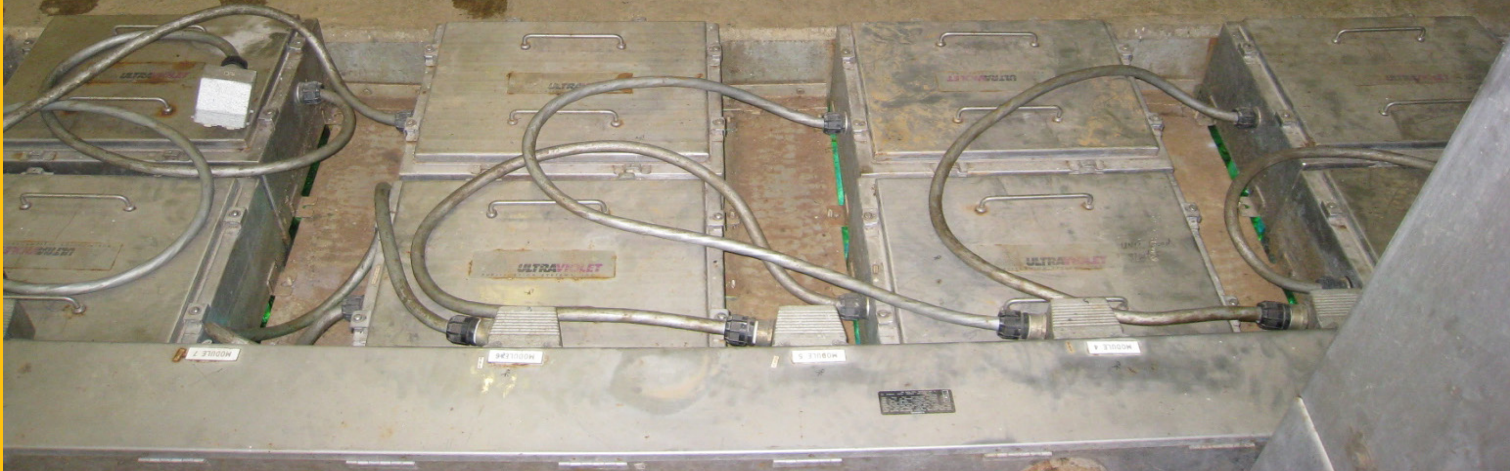
2012. Existing vertical plant using standard 30" - 40 watt 65 lamps. Upgraded to high output lamps. Allowed the plant to add automatic cleaning and add ability to treat larger flow rates.



AFTER



Typical end of life Vertical system. Project uses 16 modules using 65 watt lamp technology. Plant can maintain same footprint and install modules with 155 watt technology and reduce number of modules.



[www.glascouv.com](http://www.glascouv.com)

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