



Village of Massena, NY
Wastewater Treatment Plant

Ultraviolet Disinfection System

Chief Operator: Steve Siddon
Engineer: Stearns & Wheeler, LLC

Project Summary:

In 1996, the Village of Massena upgraded its treatment facility. A key component to the upgrade was the disinfection system. The existing gas chlorination system was replaced with an Ultraviolet Irradiation disinfection system.

The Ultraviolet system provides the Village with safe, economical, and reliable disinfection. Chemical handling safety considerations have been eliminated. O&M savings are substantial; the power requirements for UV are far less than the cost of disinfection chemicals.

Operator safety is a paramount issue at municipal facilities. UV disinfection is safe. Maintenance is limited to periodic lamp cleaning and replacement. As regulations and public awareness for chemical handling and storage are increasing, the Village is now prepared for the future.

Plant Data:

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|-----------------------|---|
| Average Daily Flow | 2.7 MGD |
| Peak Hourly Flow | 6.8 MGD |
| Effluent TSS | < 30 mg/l |
| Disinfection Standard | < 200/100 ml Fecal Coliform (30 day geometric mean) |

Equipment Components:

Trojan Technologies, Inc. System UV 3000

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|-------------------------------|--|
| ## 2 Ultraviolet Banks | ## Stainless Steel Lamp Cleaning Tank |
| ## 18 UV Modules per Bank | ## Effluent Channel Automatic Level Controller |
| ## Power Distribution Center | ## UV Intensity Probes |
| ## Controls and PLC Interface | |