



TONKA EQUIPMENT COMPANY

Project Profile

City Of Calhoun, Georgia CALHOUN WATER TREATMENT PLANT

CITY OF CALHOUN

Director of Utilities

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DESIGN ENGINEER

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APPLICATION:

Turbidity Removal

Groundwater under the influence of surface water

TONKA PROCESS EQUIPMENT:

Four horizontal pressure Clari-Filt™ trains with isolated cells incorporating Tonka's Simul-Wash™ backwash process

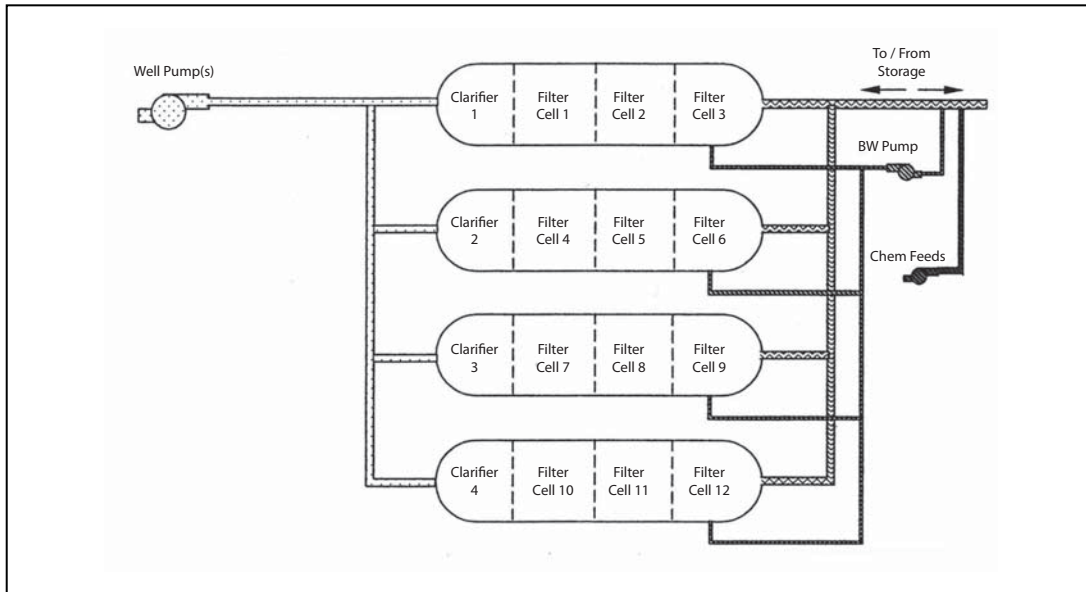
PROJECT:

This water treatment plant was constructed in 2002 and is designed to remove turbidity from groundwater wells under the influence of surface water. Previous water treatment equipment consisted of cartridge filters that required frequent replacement at considerable cost to the city. Water production was limited to only 1,000 gpm. The new water treatment plant design flow rate is 4,000 gpm (5.7 MGD).

PROCESS:

The treatment process consists of raw water pumping; chemical feed; in-line mixing; orthokinetic flocculation; and media filtration in a single multi-cell horizontal pressure vessel. Water is pumped directly from the wells through the filters, where chlorine is added for disinfection just prior to a ground storage tank. High service pumps supply the finished water to the distribution system.

The Clari-Filt™ system supplied includes the value-added Simul-Wash™ backwash process. This process uses air and water in combination for a sustained interval, providing the most effective means of backwashing granular media filters¹. The proven Tonka Equipment Company media rejection Simul-Wash™ trough was integrated into the filter design, which enables the air and water backwash cycle to continue without media loss for a sustained period. This process feature maximizes filter cleaning efficiency, and reduces the backwash wastewater generated, saving approximately 50% of the washwater over conventional methods.



PERFORMANCE:

The raw water analysis summarized below reflects moderate concentrations of turbidity existing in the well water. The Clari-Filt™ system is designed to effectively treat waters with turbidity levels up to 50 NTU. The Calhoun water treatment plant brings current state-of-the-art filtration and backwashing technology that maximizes treatment plant production. It incorporates a controllable air and water backwash process that prevents media loss while providing flexible quality management of the filter media cleaning process.

	Raw Water	Finished Water
Turbidity	0.1 to 50 NTU	ND to 0.14 NTU

FEATURES OF THE TONKA SYSTEM

- Smallest footprint of any considered alternative.
- Lowest capital and life cycle cost over alternative technologies.
- Simul-Wash™ technology maximizes filter cleaning, minimizes wastewater, and eliminates mudballs.

FOR ADDITIONAL DETAILS, CONTACT:

Tonka Equipment Company

¹ Amirtharajah, Appiah, et al. *Optimum Backwash of Dual Media Filters and GAC Filter-Adsorbers With Air Scour*, AWWA Research Foundation and American Water Works Association, 1991.



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