



TONKA EQUIPMENT COMPANY

Project Profile

ATTICA, OHIO WATER TREATMENT PLANT

CITY OF ATTICA, OH

Operator

Contact: Gary Weis
419-937-4205

DESIGN ENGINEER

GGC Engineers

Contact: Mike Carder
614-471-7310

TONKA REPRESENTATIVE

Ted Baker & Associates

Contact: Doug Borkosky
614-361-3673



APPLICATION:

Turbidity Removal

TONKA PROCESS EQUIPMENT:

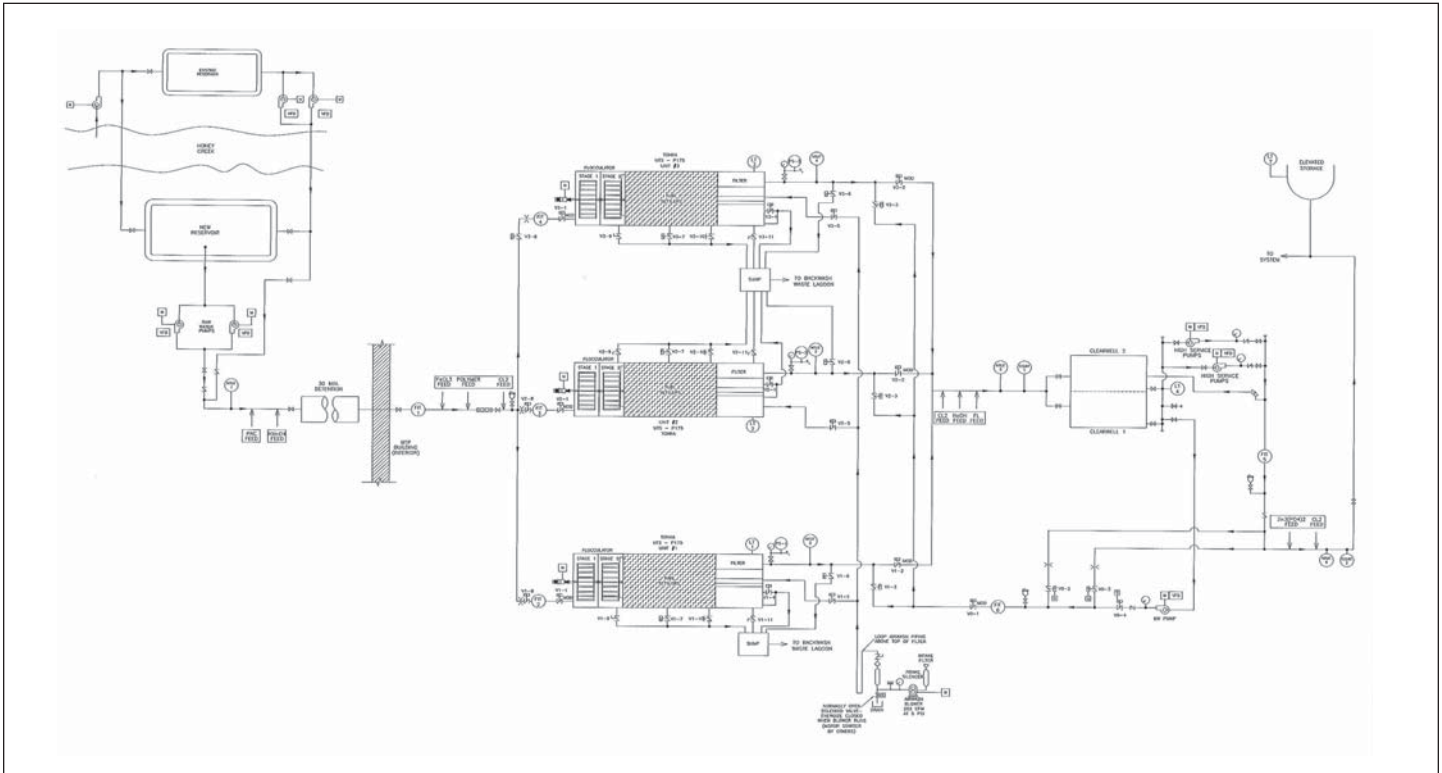
- ◆ Three Tonka UTS™ package surface water treatment units

PROJECT:

Attica is a small community in north central Ohio. The original water treatment plant, built over 50 years ago, extracted water directly from Honey Creek but could no longer meet treatment requirements and capacity demands. The Village Council and GGC Engineers determined that the plant was not conducive to retrofit or expansion and the Village needed an updated treatment system with a reliable supply. GGC worked with Tonka to develop an efficient treatment process to replace the old concrete structure with three Tonka UTS™ modular surface water treatment units. Honey Creek water is now pumped to a reservoir system and then into the UTS treatment units after significant sedimentation has occurred. With improved influent turbidity levels, in the range of 3 to 23 NTU, a pilot study was conducted to ensure exceptional finished water quality which meets stringent Ohio EPA requirements. The new plant removes trace amounts of iron and manganese as well as turbidity.

PROCESS:

Each Tonka UTS™ surface water treatment unit is rated for 175 GPM and consists of an integral two-stage flocculation compartment, tube settling, and filter compartments. The design contains full system redundancy as two of the units can operate at the plant design loading rate, while one unit is out of service. Upstream reservoirs allow the water to settle prior to treatment, providing a more consistent influent water quality to the plant.



The filters contain a dual media of silica sand with an anthracite cap, and are supplied with Tonka's Simul-Wash™ backwash system. This unique backwash system uses air and water simultaneously, at sub-fluidization rates, to provide the most effective means of backwashing granular filter media.¹ The Simul-Wash™ backwash troughs enable the air and water backwash cycle to continue indefinitely without media loss. This results in optimal filter cleaning efficiency and prolonged filter runs, while saving approximately 50% of backwash wastewater compared to conventional backwash methods.

CONTROLS:

The Village of Attica wanted one main plant control system (PCP). The highly automated PCP provided by Tonka operates all aspects of the water treatment plant including water influent pumps, effluent pumps, chemical feed, chlorine analyzers, and filter backwash functions.

PERFORMANCE:

Attica has a modern, highly efficient plant producing high quality water with minimal operator involvement required.

	Raw Water	Finished Water
Turbidity	3 – 23 NTU	< 0.1 NTU

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.



TONKA EQUIPMENT COMPANY

763-55-WATER • 763-559-2837 • FAX: 763-559-1979 • www.tonkaWATER.com

P.O. Box 41126 • Plymouth, MN 55441-0126 • 13305 Watertower Circle • Plymouth, MN 55441