



TONKA EQUIPMENT COMPANY

Project Profile

TRINITY BAY CONSERVATION DISTRICT (WEST) Water Treatment Plant – Anahuac, TX

TRINITY BAY CONSERVATION DISTRICT

Contact: R. Kit Jones
(409) 267-3111

DESIGN ENGINEER

Carroll & Blackman, Inc.
Contact: Toby J. Davis, P.E.
(409) 833-3363

TONKA REPRESENTATIVE

Environmental Improvements, Inc.
Contact: Bucky Richardson
(713) 461-1111



APPLICATION:

- Turbidity Removal
- Flow: 1680 gpm
- Water Source: Trinity River

TONKA PROCESS EQUIPMENT:

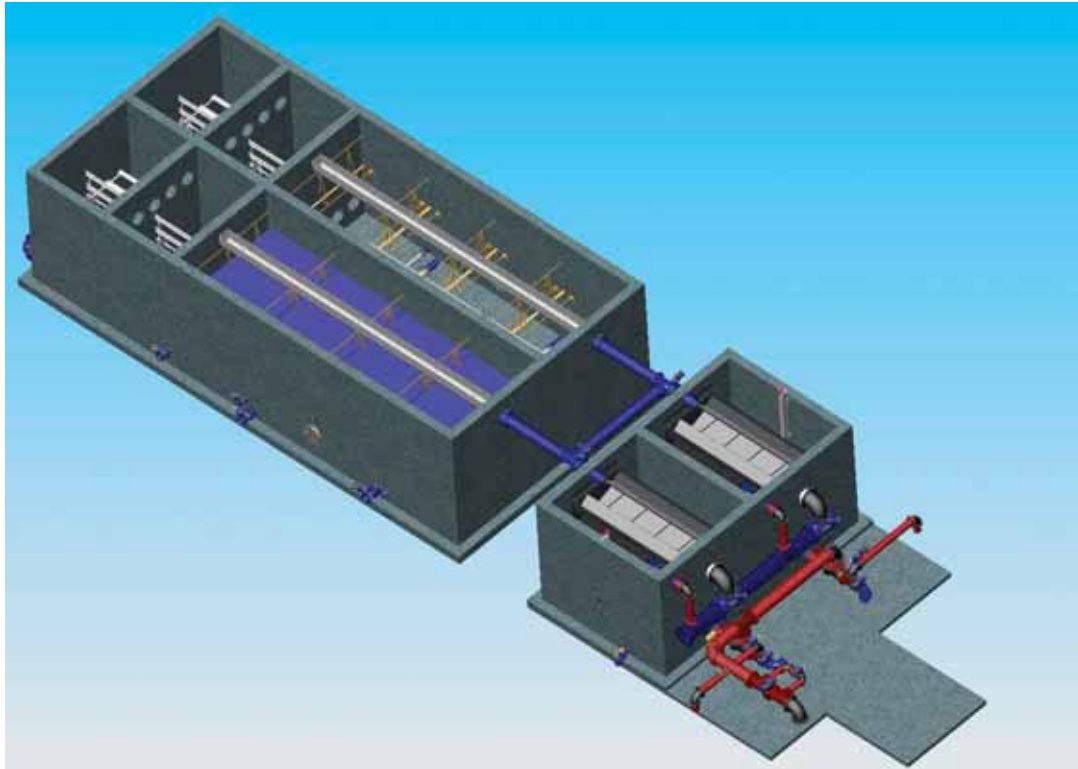
- Two (2) Tonka UTS™ Surface Water Treatment Units

PROJECT

The Trinity Bay Conservation District, in collaboration with Carroll & Blackmann, Inc., designed an upgrade to the District's deteriorating water distribution and plant infrastructure. In addition to elevated storage and distribution piping improvements, new water treatment plants were required to meet the district's future growth.

PROCESS

Tonka furnished two Unitized Treatment System (UTS™) surface water treatment plants. Each plant is rated for 840 gpm and consists of an integral two-stage flocculation compartment, tube settling compartment, and filter compartment. Alum is added prior to the flocculation zone to assist in turbidity removal. Following flocculation, the water travels through high-efficiency tube settlers, which remove much of the solids prior to filtration. The filter beds consist of garnet sand, silica sand and an anthracite cap, and utilize 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. 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.



This model shows the Trinity Bay UTS water treatment system supplied by Tonka.

PERFORMANCE

The water treatment plant as designed brings current state-of-the-art technology to maximize treatment plant production and minimize operating costs. The Trinity Bay Conservation District is very pleased with the performance of the Tonka UTS Plants. The Tonka treatment equipment supplied on this project is extremely efficient in delivering high quality drinking water as indicated below.

Constituent	Raw Water	Post Clarifier Water	Finished Water
Turbidity	60-280 NTU	<1.5 NTU	0.03 NTU

FOR ADDITIONAL DETAILS, CONTACT:

Tonka Equipment Company

¹Amirtharajah, 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