



American Structures, Inc.

Bolted Stainless Steel Tanks
Menomonie, WI

OVER 40
YEARS IN
TANK
MANUFACTURING

Oct / Nov 2019 Newsletter

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Newsletter is only intended to share current events, news and information and is not an endorsement of other brands, products or services.

DID YOU KNOW? According to the Ground Water Protection Council, about 27 Trillion gallons of groundwater are withdrawn for use in the U.S. each year.

The High Plains Aquifer is located under eight states including WY, SD, NE, KS, CO, NM, OK, TX & cover 175,000 miles.

According to the American Water Works Association, 26% of household water is used for flushing the toilet.

Water is the only substance on Earth found naturally in three forms—solid, liquid, and gas.

About 25% of all rainfall in the U.S. becomes groundwater.

Source: www.groundwater.org/get-informed

WHAT IS MBBR?

A moving bed biofilm reactor (MBBR) is a type of wastewater treatment process that was first invented by Professor Hallvard Odegaard at Norwegian University of Science and Technology in the 1980s.

The MBBR system uses special floating carriers that provide a greater surface area where a biofilm can grow. These MBBR carriers are placed inside a storage vessel, typically an aeration tank. The movement of liquid and floating MBBR carriers allows the biofilm to completely cover the carriers. Once a biofilm medium is collected it passes through a series of screens and is separated from the liquid and then the process starts all over.

MBBR carriers are used for a single-pass process to maximize the capacity of a smaller footprint storage tank and increased efficiency.

Just by looking at the outside of something doesn't always give you a clear indication of what's inside. Something to ponder next time you see a bolted, stainless steel storage tank.

Source: en.wikipedia.org/wiki/moving_bed_biofilm_reactor; wateronline.com/doc/moving-bed-biofilm-reactor

Test your knowledge of water

1. Where does water usually move the slowest?
— Aquifer — Precipitation — River — Faucet
2. What happens when more water is taken out of an aquifer than is put back in?
— Runoff — Flooding — Depletion — Saturation
3. What use withdraws the most total groundwater per day in the U.S.?
— Irrigation — Public Supply — Industry
4. How much water does it take to brush your teeth if you turn off the water while brushing?
— 5 gal. — 2 gal. — Less than 1 gal.

Source: groundwater.org; U.S. Geological Survey

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- (1) MBBR Tank (Dims. 30.77' x 30.16' Vol. 139,000 gal.)
- (1) Equalization Tank (Dims. 33.85' x 28.83' Vol. 182,500 gal.)
- (1) Sludge Storage Tank (Dims. 12.31' x 28.83' Vol. 22,200 gal.)

KanPak —Penn Yan, NY (3 Tanks)



Grampian Municipal—Grampian, PA

Reservoir Water Tank (Vol. 203,000 gal)

Dims. 30.77' x 36.5'



Water Quiz Answers:

1. **Aquifer.** Surface water flow is generally measured in cubic feet per second, while groundwater movement is measured in feet or inches per day.
2. **Depletion.** Overuse of groundwater can lead to depletion and lowering of the water table, and water quality concerns.
3. **Irrigation** uses 53.5 million gallons of water per day, public supply uses 14.5 million gallons per day, and industry 3.1 million gallons per day.
4. **Less than 1 gallon.** Turning the water off when you brush your teeth is an easy way to conserve water, along with taking shorter showers, and fixing leaky faucets.