

## WHY PAY MORE AND FILTER LESS?

### Case Study: Filtration Performance - Turbidity & SDI Reduction, Particle Analysis Next-Sand vs. MultiMedia

#### Test Conditions

*Water Source:* Surface water (river water with silt and clay particles after a rain event in San Antonio).

#### Equipment Description

*MultiMedia System.* 36" bed depth comprised of #16 Garnet, #50 Garnet, 20x30 mesh sand and anthracite, operated at 12 gpm/ft<sup>2</sup>.

*Next-Sand System.* 1/4x1/8 gravel to cover hub and laterals, 36" bed depth of 14x40 mesh Next-Sand operated at 12 gpm/ft<sup>2</sup>.

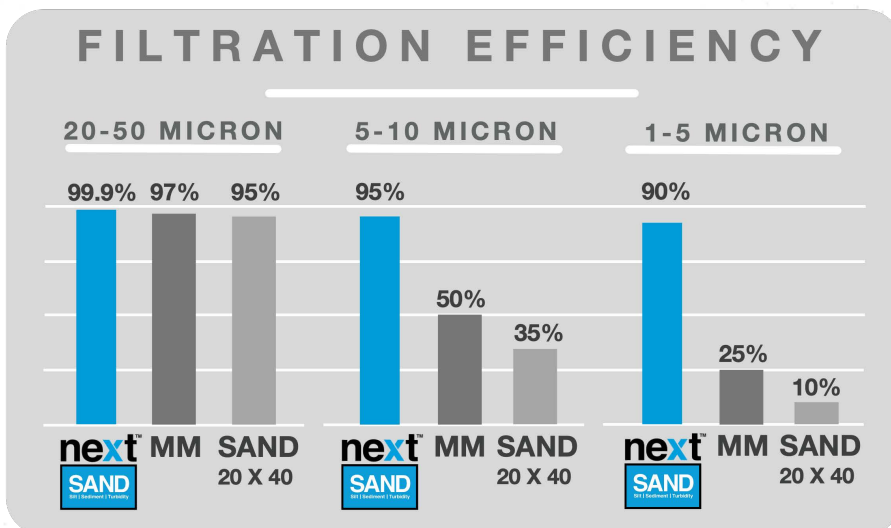
#### Test Description

The tests were conducted over a 6-day period. Samples were taken daily. The tests performed were Turbidity, SDI (Silt Density Index) and particle analysis to characterize the filtration performance relative to particle size.

#### Test Results

**Table I. Filtration Performance - Colloidal Removal (TSS and SDI<sub>10</sub>)**

	Feed	MultiMedia	Feed	Next-Sand
<b>TSS</b>	237 mg/L	171 mg/L	252 mg/L	<b>90 mg/L</b>
<b>SDI<sub>10</sub></b>	8.1	6.1	8.9	<b>4.1</b>



#### Conclusion

The particle analysis showed that Next-Sand media performed as well as or better than most 5-micron cartridge filters. Next-Sand operated at 1/2 the backwash frequency indicating twice the solids loading capacity of multimedia.