

Case Study

**Filtration Performance: Turbidity & SDI Reduction, Particle Analysis nextSand 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>.

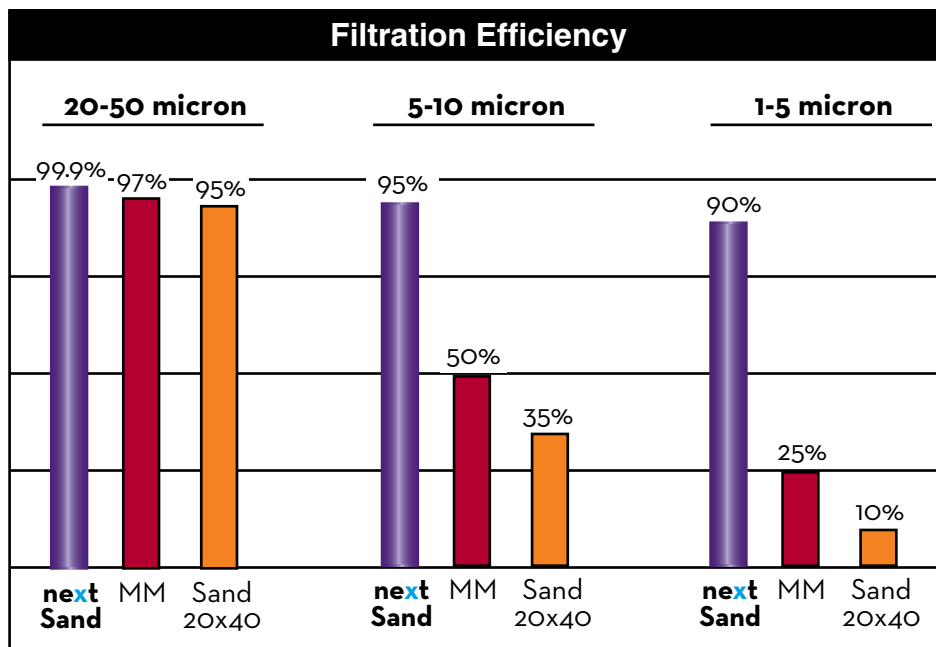
**Test Description.**

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 1. Filtration Performance-Colloidal Removal (TSS and SDI)**

	Feed	MultiMedia	Feed	next-Sand
<b>Turbidity</b>	237	171	252	90
<b>SDI<sub>10</sub></b>	8.1	6.1	8.9	4.1



**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.