

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/ft².

Next-Sand System. 1/4x1/8 gravel to cover hub and laterals, 36" bed depth of 14x40 mesh Next-Sand operated at 12 gpm/ft².

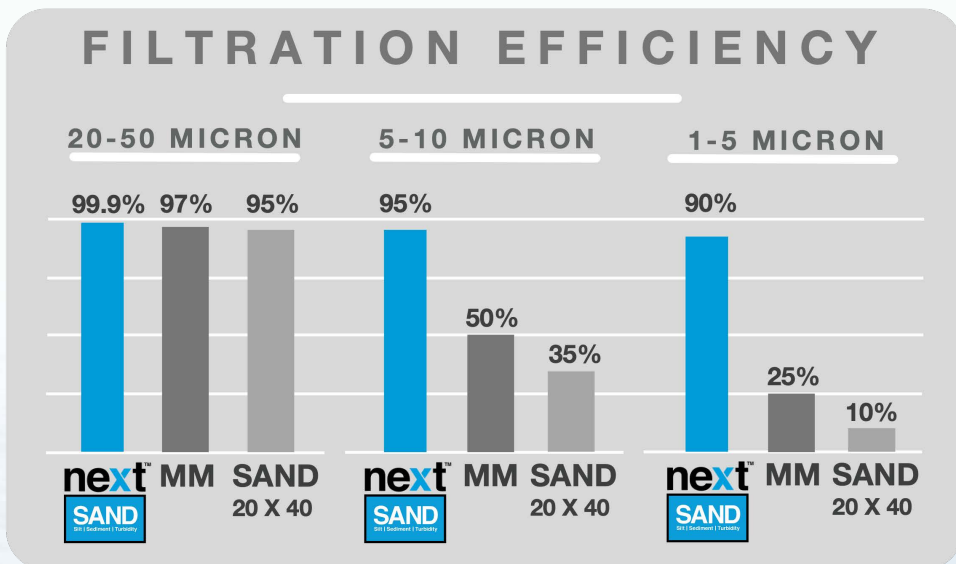
Test Description

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 SDI₁₀)

	Feed	MultiMedia	Feed	Next-Sand
TSS	237 mg/L	171 mg/L	252 mg/L	90 mg/L
SDI₁₀	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.