



Issue Facing Customer: City has 1880 miles of drinking water pipes requiring periodic flushing. Typically, carried out by opening hydrant to flush water and settled solids out to drain. However, in a drought prone area, wasting water is not an option and the cost of water treatment makes it attractive to recycle this water. Therefore, city decided to use flush trucks to filter out the solids and re-inject back into the piping. However, cost of using bags and time needed to change them slowed both the process and incurred \$100's of thousands of dollars annually. A search was started to figure out how to get this done without bag filters.

Solution: Enter Epiphene with our silt separator, the CPH-16. We performed a proof-of-concept test that showed we could remove the lime and manganese solids plaguing the piping.



System Performance: Note in the truck bed above you will see an 8-unit CPH-16 System with a central inlet and outlet piping to allow connections to the hydrant and filter truck. The velocity in the pipe reached a velocity of 11 Feet Per Second scouring the settled solids from the bottom of the pipeline to be filtered out. To the left, you can see one of the CPH-16 Separators working in place...the water enters these units from the bottom, and you can see in that clear pipe section the scoured water is still relatively clean. But after separation the solids are dropped into the clear collection chamber, you can plainly see huge amount of solids removed and not visible is the clean water ported back to outlet

Results: The CPH-16 Separator Filtration Unit achieved our goal of removing all solids down to 1 ppm without the use of bag filters as shown by the NTU meter on the flush truck...it was still going down, but the requirement was only 4 NTU. We saved over \$1000 in 1-micron absolute filter bags. Tests to set up an optimized protocol process are ongoing.

