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Rain For Rent Lewis Pit Upper Reservoir R-4 Reservoir Case Study

Creek water (in pipe) is pumped into the Lewis Pit Upper Reservoir for Pre-Treatment and then to the Lower R-4 Reservoir for treatment and recharge.

1 million gallons of water at 5.1 to 7.1 NTU is needed to be pretreated in the Lewis Pit Upper Reservoir before release into the R-4 Reservoir for additional treatment to reach recharge requirements (< 1 NTU).

1/4 of the recommended rate of FLOC Soc treatment (240 lbs.-24 Floc Socs) was installed in the Lewis Pit Upper Reservoir incoming creek water inlet pipe and underneath a 6" water line discharge pipe installed to circulate water in the Reservoir and create agitation, release and mixing of the FLOC throughout the Lewis Pit Upper Reservoir.

The NTU was immediately decreased from 7.1 (coming out of the pipe) to 4.6 for release into the R-4 Reservoir for final FLOC treatment.

Lewis Pit Reservoir Before FLOC Soc Treament





Lewis Pit Reservoir Being Treated with FLOC Socs





From the Lewis Pit Reservoir, the FLOC treated water at 4.6 NTU was then treated with the remainder of the FLOC Socs and filtered through the R-4 Treatment Plant which consists of 2 parallel sand filter tanks, one ½ micron 22 cartridge canister and two banks of UV lights. Water was circulated for 48 hours over the FLOC Socs and through the R-4 Treatment Plant. Final turbidity was 1.5 NTU.

R-4 Treatment Plant After Final FLOC Treatment





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