

BIOLOGICAL FILTRATION

Delco Water's groundwater biological filtration solutions are designed to remove iron, arsenic, manganese and ammonia, while offering outstanding pre-treatment characteristics to secondary membrane treatment. With no chemical usage and significantly lower backwash frequencies than alternatives such as greensand filtration, biological filtration provides the groundwork for a more sustainable future of the water industry. Because we are not introducing oxidant chemical, there are no risks of creating THM's during this treatment process.



Pretreatment or Stand Alone Treatment Options

Beyond the health and aesthetic concerns of iron and manganese, they can also cause fouling of other treatment equipment downstream, even at low concentrations. BioFx units are regularly used as pre-treatment systems to prevent this fouling, particularly for membrane systems. BioFx units can be used as a stand-alone treatment process for waters with a low concentration of Total Dissolved Solids (TDS), where the only treatment objectives are reduction of iron, manganese, and ammonia concentrations.

Longer Filtration Cycles

Our BioFX systems feature longer filtration cycles between backwashes. This is compared to alternative solutions such as greensand filtration. BioFX filtration cycles are estimated to be 10x the minimum cycle length of other solutions based on performance data.

Specialized Design & Environmental Consideration

Delco Water's biological filtration solution, BioFx, is designed and tailored to North America's cold environments. BioFX is effective performance at low water temperatures (<5 °C). The modular design also allows the solution to adapt to different water sources and water chemistry.

The Bio_{FX} Process

Biological filtration is a passive treatment that requires minimal operator involvement and focuses on the optimization of the environment. As not all bacteria from water sources are created equally, Delco Water's BioFx creates the optimal conditions for contaminant-reducing bacteria to thrive in. BioFx can be applied at any scale and is fully customizable to the needs of the client. Modifications of media, air, and other factors are tailored to the different stages of biological filtration. Our experience and specialization in biological filtration allow our team to find the most appropriate solution of the client.