The following design conditions define the limitations for the performance of the Alt ultrafiltration system designed by WesTech for SSWC Chatham WTP, project no. 2103

Design Parameters

This AltaFilter™ ultrafiltration system has been designed to treat well water, 2 mg/L forced draft aerator, 30 minute detention time to precipitate Fe and Mn, pump thro filters to UF system. Provided that the membrane feed water quality does not change exceed:

Design Temp	10 to 20°C
Turbidity	
Low	1 ntu
Peak	20 ntu
Raw Water pH	7.0-8.0
Raw Water Alkalinity	210-280 mg/L
Raw Water Hardness	230-250 mg/l
Raw Water Iron	0.1 – 2.6 mg/L
Raw Water Manganese	0.05 – 0.60 mg/L

The UF system will be capable of producing a net daily flow of 1.98 million gallo achieving a recovery ratio [net/gross] of 95% or higher and a minimum CIP interval of The maximum daily flow is 3.44 mgd net production.

If the feed water temperature falls below the minimum design temperature, the maximu flow rate will be limited to the maximum normalized flux of 62 gfd at 20°C, calc accordance with the methods set forth in the US EPA *Membrane Filtration Guidance M*

Installation Requirements

The AltaFilter is designed to be installed indoors. As a minimum the AltaFilter must be under a cover, protected from weather and direct sunlight.

The AltaFilter must be protected from extreme temperatures. The ambient tempera be maintained between 50°F and 95°F [10°C to 35°C].

The AltaFilter is designed to be installed on a flat, level surface designed to bear the weight of the equipment. It is the installer's responsibility to verify that the anchor secure the equipment to the foundation have been sized adequately to meet loca requirements.

Plant piping must be properly supported. The AltaFilter connections are not designe plant piping loads.

The piping between the pre-filters, AltaFilter skids, backwash strainer, and CIP skid