

Oklahoma Comprehensive Water Plan - Public Water Supply Planning Guide
 Table 4-12 (page 1 of 3): Membrane Treatment

System Name				
Date of assessment (mm/dd/yyyy)				
MEMBRANE GENERAL INFORMATION (MANUFACTURER) (additional forms if needed)				
		1	2	3
Common/Official Identification: ¹				
Overall rack dimensions	Length Width Height			
Process description				
Number of membrane filtration trains				
Permeate recovery rate				
Number of manifolds per train				
Number of pressure vessels per train				
Number of membrane elements per pressure vessel				
Membrane identification				
Length of membrane element				
Surface area per membrane element				
Instantaneous flux rate at 5°C				
Instantaneous flux rate per train at 20°C				
Spare membrane capacity				
Maximum allowable TMP				
Pressure vessel rating				
Pressure vessel diameter				
Base effective useful life (years)				
Estimated remaining effective useful life (years)				
Replacement within next 5 years?				
MEMBRANE FEED PUMPS (additional forms if needed)				
Number of pumps				
		1	2	3
Common/Official Identification: ¹				
Rated capacity of pumps				
Manufacturer				
Pump Specifications	Horsepower Voltage rpm			
Variable or constant speed				
Premembrane strainers				
Strainer capacity, each				
Installation date (mm/dd/yyyy)				
Base effective useful life (years)				
Estimated remaining effective useful life (years)				
Replacement within next 5 years?				
MEMBRANE BACKWASH PUMPS (additional forms if needed)				
Number of pumps				
		1	2	3
Common/Official Identification: ¹				
Rated capacity of pumps				
Manufacturer				
Pump Specifications	Horsepower Voltage rpm			
Variable or constant speed:				
Backwash pulse duration, frequency				
Installation date (mm/dd/yyyy)				
Base effective useful life (years)				
Estimated remaining effective useful life (years)				
Replacement within next 5 years?				

Table 4-12 (page 2 of 3): Membrane Treatment

AIR SCOUR SYSTEM (additional forms if needed)			
Number of blowers			
	1	2	3
Common/Official Identification: ¹			
Installation date (mm/dd/yyyy)			
Base effective useful life (years)			
Estimated remaining effective useful life (years)			
Replacement within next 5 years?			
Number of air compressors			
	1	2	3
Common/Official Identification: ¹			
Installation date (mm/dd/yyyy)			
Base effective useful life (years)			
Estimated remaining effective useful life (years)			
Replacement within next 5 years?			
CLEAN-IN-PLACE SYSTEM (CIP) (additional forms if needed)			
	1	2	3
Cleaning Solution (Common/Official Identification: ¹)			
pH range			
Temperature range			
Additional notes			
Heats of dilution			
Direction of flow for cleaning solution			
ACID CLEAN-IN-PLACE (additional forms if needed)			
	1	2	3
Type Used (Common/Official Identification: ¹)			
Maximum concentration in cleaning solution			
Minimum pH of cleaning solution			
Specific gravity of maximum concentration cleaning solution			
Concentrate			
Delivery options			
Installation date (mm/dd/yyyy)			
SODIUM HYPOCHLORITE CLEAN-IN-PLACE (additional forms if needed)			
	1	2	3
Type Used (Common/Official Identification: ¹)			
Maximum concentration in cleaning solution			
Minimum pH of cleaning solution			
Specific gravity of maximum concentration cleaning solution			
Concentrate			
Delivery options			
Installation date (mm/dd/yyyy)			

Table 4-12 (page 3 of 3): Membrane Treatment

CLEAN-IN-PLACE TANKS (additional forms if needed)			
Number of tanks			
	1	2	3
Common/Official Identification: ¹			
Type of tank			
Tank material			
Tank volume			
Diameter of tank			
Height of tank			
Assumed freeboard			
Tank inlet for permeate filling			
Tank inlet for alkaline solution filling			
Tank inlet for citric acid			
Tank inlet/outlet for cleaning solution			
Other outlets			
Tank heater type			
Heater capacity			
Heater material of construction			
Configuration			
Temperature range of cleaning solution			
Heating time			
Estimated tank weight (w/flange connections)			
Estimated fluid weight			
Total estimated live tank weight			
Installation date (mm/dd/yyyy)			
Base effective useful life (years)			
Estimated remaining effective useful life (years)			
Replacement within next 5 years?			
CLEAN-IN-PLACE FEED PUMPS (additional forms if needed)			
Number of CIP feed pumps			
	1	2	3
Common/Official Identification: ¹			
Type of CIP feed pump			
Rated flow and TDH			
Pump operating pressure			
Pump horsepower			
Motor horsepower			
Electrical service	Volts		
	Phase		
	Hertz		
Assumed efficiency			
Materials of construction			
Suction connection			
Discharge connection			
Installation date (mm/dd/yyyy)			
Base effective useful life (years)			
Estimated remaining effective useful life (years)			
Replacement within next 5 years?			
Perceived condition			

¹ How the equipment is normally referred to in this system, if applicable.