

Water Sources and Related Treatment in Horticulture

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Water Source	Typical Treatment Flow Rates in GPM	Pathogen Contamination	Required Degree of Sanitation	Suitable Means of Sanitation Typically filtration + other means	Fertigation and Conditioning
Fresh water from Well , Surface, Public water supply	5 – 1000	low to medium	high	Filtration Oxidizers (Cl etc) UV, Ozone Copper ionization	Filtering solids De-mineralizing, R/O, Adjusting pH Adding Nutrients
Recirculating Water from Closed Irrigation Systems Flood Floors/Benches, Gutters → mostly greenh.	50 - 1500	low to medium	medium to high	Filtration Oxidizers Copper ionization	As needed to adjust nutrients, EC, pH
Leachate from closed drip and overhead watering (typical for vegetables) → mostly greenhouses	5 - 100	medium to high	high	Filtration UV, Ozone, Heat Micro/Nano-filtrati Oxidizers Slow sand filters	As needed to adjust nutrients, EC, pH
Tail Water from Overhead/drip irrigation, often collected in pond For Re-use → outdoors / greenhouses	5 - 100	high	medium to high	Filtration Artificial wetland Oxidizers UV, Ozone Copper ionization	As needed to adjust nutrients, EC, pH
Tail Water from Overhead/drip irrigation, of For discharge or intermediate storage and re-use after further treatment → outdoors / greenhouses	5 - 100	high	low to medium	Filtration Artificial Wetland Oxidizers Copper ionization	N/A Possibly algae control

