

Filtration: Reduce Your Commercial Farm's Utility Footprint



A properly designed water filtration process and associated water management strategy significantly contributes to a reduction in a farm's utility footprint. Silver Bullet Water Treatment has the knowledge and technical expertise to bring filtration's benefits to your farm.

Selecting The Proper Filtration System

Farmers may have many different issues with their water quality. Silver Bullet Water Treatment will guide farmers through the process of testing their water, consulting on the water metrics, and designing the appropriate filtration solution.

Factors that Silver Bullet takes into account when engineering the necessary filtration system for customers are:

- Source water options, availability, and quality
- Facility sustainability goals
- Reclaim and reuse plans
- Incentive, rebate, and accreditations available
- Discharge limitations or requirements
- Water and sewer rates
- Facility space, CAPEX, and OPEX limitations
- Water monitoring and data analytic goals



ASK THE EXPERTS!

Getting the most out of your production system is complex and challenging. Silver Bullet's expert staff specializes in holistic water treatment and process optimization for modern indoor and greenhouse cultivation facilities. When in doubt, or to learn more about water management innovations, reach out to the Silver Bullet Water Treatment professionals at info@silverbulletcorp.com.

WANT MORE INFO?

Silver Bullet has the resources and knowledge to be able to consult with farm operators on their specific situations.

CALL TO LEARN MORE!

(303) 552-2383



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Filtration FAQ

Q: Why is it important to evaluate source water quality prior to filter sizing?

A: Not all sources of water are the same. In fact, even if two wells are 100 feet apart, the difference in quality could be substantial. Evaluating water quality prior to filter sizing provides greater assurance that the effluent will meet the goals of the project. SBWT's in house laboratory allows us to determine sizing based on both quality and volume (demand) to reduce project costs.

Q: Why is it important to remove dissolved organic constituents from irrigation water?

A: To ensure proper nutrition is delivered to the plants and any residual organic chemicals are removed. Not removing dissolved organics from irrigation may result in plant damage and nutrient pollution into surrounding waters.

Q: How can sodium and chloride negatively impact production?

A: As the concentration of sodium and chloride (Na^+ and Cl^-) increase, serious osmotic stress inhibits water uptake from the roots. High concentrations of Na^+ can cause nutrient lockout, specifically for potassium and calcium, whereas high concentrations of Cl^- interferes with photosynthesis and chlorophyll production.



Q: How can chlorine and chloramines be removed?

A: Both chlorine and chloramines are added to municipal water supplies to combat harmful pathogens. Unfortunately for plants (specifically those being grown hydroponically), the ppm levels of either can quickly become toxic. Using granular activated carbon (GAC) is one of the most effective ways of removing chlorine or chloramines, although byproducts such as chloride ions, will occur.

Q: Why is filtration an important aspect of condensate reclaim?

A: While condensate water itself is extremely pure, contact with AC cooling coils, lead components, or other equipment can result in heavy metals leaching into the fluid. Along with the concern for heavy metals, condensate water has been shown to have high levels of organic compounds.

Q: How can RO systems provide 80% recovery?

A: There are many ways to improve the recovery rate of RO systems, but the primary factor controlling what is achievable is the influent water quality itself. Pretreatment, increasing temperature, advanced membrane technologies, and recycling / recirculating the concentrate (reject) are just some of the methods employed.

Filtration: Engineering Advantage

Silver Bullet Water Treatment is staffed with experienced engineers, scientists, and water treaters who develop custom designed agritech that match farm needs and expectations.

SBWT filtration system benefits include:

- Source, HVAC reclaim, Irrigation Reclaim and Irrigation discharge filter options
- Incoming and receiving tank level, water flow, pressure and water quality monitoring and control
- Skid and non-skid, multistage filtration options
- Integrated PLC controls features allowing facility integration, data analytics and UL compliance
- Engineering design details, installation documentation, onsite commissioning and training
- Ongoing service and support options, including routine water testing and proactive consumable replacement



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