



Why Your Aquarium Pays More for Water Than It Should — and How to Fix It

Water Flow Innovations LLC

Flow Conditioning Device (FCD)
waterflowinnovations.com

Your life support systems, RO arrays, and saltwater evaporation makeup all depend on a steady municipal supply — but that supply meter is registering more than actually arrives. **RO pump startups, LSS demand variation, and large exhibit water changes create the conditions for air, gas, and turbulence to form in the line at your meter — and you're being billed for it.** The FCD (Flow Conditioning Device) corrects the measurement. Your animal care systems don't change. Your water bill drops — and so does your sewer bill, because sewer charges are calculated from the same inflated meter reading. One device. Two bills fixed.

WHY AQUARIUM WATER METERS OVER-READ

The Core Problem: Variable Demand from Life Support & RO Systems Creates Conditions Your Meter Can't Read Accurately

Municipal water meters measure total volume — water, air, gas, and turbulence combined. Every RO pump startup, every LSS demand surge, every large exhibit water change is a high-velocity open-valve event that creates air, gas, and turbulence in the line at the meter. Your meter registers it all as billable water volume. The FCD corrects that measurement without affecting a single animal care parameter downstream.

THE THREE OVER-READING SOURCES UNIQUE TO AQUARIUMS



RO High-Pressure Pump Startup

RO system pump startups create sudden high-velocity demand events — generating air, gas, and turbulence at the supply meter every time the RO array cycles on.



LSS Demand Variation

Life support system demand varies continuously as exhibit loads shift — creating the variable open-valve cycling that drives compounding meter over-reading throughout every operating day.



Saltwater Evaporation Makeup

Variable evaporation makeup demand from large saltwater exhibits creates repeated on/off demand surges — each one generating air, gas, and turbulence at the supply meter.



Your AZA Sustainability Water Data Is Probably Better Than Your Meter Shows

If your AZA sustainability reporting, donor communications, or corporate sponsor disclosures use metered municipal intake as the water consumption baseline, that figure is inflated by over-reading. After FCD installation, your reported water consumption drops — making your actual conservation performance visible for the first time. Every documented gallon of verified reduction is auditable directly from utility bills.

BEFORE & AFTER THE FCD

WITHOUT FCD

- ✗ Air, gas & turbulence billed as water volume
- ✗ RO pump startups inflate meter reading
- ✗ LSS variation compounds over-reading daily
- ✗ AZA water intensity metrics overstated
- ✗ Sewer charge tied to inflated meter



WITH FCD INSTALLED

- ✓ Metered volume reflects water actually delivered
- ✓ RO pump startups read accurately
- ✓ LSS demand variation measured correctly
- ✓ AZA sustainability metrics reflect true use
- ✓ Sewer charge based on real usage

5–30%

Average water & sewer bill reduction

46%

Highest documented single-site reduction

~1 Hour

Install time — water off about 1 hour

6-Mo

Money-back, no questions asked · install non-refundable

How the FCD Works — Four Steps

1

Installs between two pipe joints right after your water meter — water off about one hour

2

Creates a slight back-pressure that extends back through the meter, reducing air, gas, and turbulence

3

Delivers a laminar-like flow profile through the meter — the condition it was calibrated to read

4

Meter reads accurately. Bill drops. Every animal care system, RO parameter, and LSS setting is effectively unchanged.

FREE SAVINGS ESTIMATE

Instant estimate — takes 30 seconds, no contact info required.

waterflowinnovations.com/
[water-bill-savings-calculator](#)

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CERTIFICATIONS

IAPMO NSF/ANSI/CAN 61 KIWA GMP SQF

316L Stainless Steel · Made in USA
Under 0.8 psi pressure loss
Lifetime Transferable Warranty