



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

Water Flow Innovations LLC

Flow Conditioning Device (FCD)
waterflowinnovations.com

Your case washing, propellant cooling, and HVAC all draw from the same supply — but your meter counts more than arrives. **Case wash demand, propellant cooling water cycling, and cooling tower makeup create the conditions for air, gas, and turbulence to form in the line at your meter — and you're billed for it.** The FCD (Flow Conditioning Device) corrects the measurement. Every process specification and safety protocol stays the same. 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 AMMUNITION WATER METERS OVER-READ

The Core Problem: The FCD Installs Just After the Municipal Supply Meter — Ahead of Every Process and Safety System

Ammunition manufacturing process water — case washing, propellant cooling, and HVAC — is all controlled downstream of the municipal supply meter. The FCD installs at the raw municipal meter before water enters any process system, correcting total intake without touching any MIL-SPEC parameter, ATF compliance requirement, or safety-critical system. Only billing accuracy changes.

THE THREE OVER-READING SOURCES UNIQUE TO AMMUNITION & ORDNANCE MANUFACTURING



Case Wash System Demand

Brass and steel case washing systems creating high-velocity demand events on every wash cycle — generating air, gas, and turbulence at the supply meter throughout every production shift and between production runs.



Propellant & Process Cooling

Propellant mixing and pressing cooling water cycling with production load creates variable high-velocity demand — compounding case wash over-reading throughout every production run and every operating shift.



HVAC Cooling Tower Makeup

Facility HVAC cooling tower makeup cycling with building load creates continuous variable demand — adding a third compounding over-reading source on top of case wash and propellant cooling every billing cycle.



Your ITAR Facility Water Balance & ISO 14001 Environmental Data Are Better Than Your Meter Shows

Ammunition facilities reference metered municipal intake for ISO 14001 environmental management records, facility environmental permits, and DoD contractor sustainability reporting. When the meter over-reads case wash and cooling demand, those records overstate intake. After FCD installation, metered intake reflects true use — improving the accuracy of ISO 14001 water intensity data and environmental permit for Vista Outdoor, Olin Winchester, and Northrop Grumman ordnance operations.

BEFORE & AFTER THE FCD

WITHOUT FCD

- ✗ Air, gas & turbulence billed as water volume
- ✗ Case wash demand inflates meter every cycle
- ✗ Propellant cooling compounds over-reading
- ✗ Environmental records overstate intake
- ✗ Sewer charge tied to inflated meter

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WITH FCD INSTALLED

- ✓ Metered volume reflects water actually delivered
- ✓ Case wash demand reads accurately
- ✓ Propellant cooling measured correctly
- ✓ Environmental records 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 MIL-SPEC parameter, ATF compliance requirement, process specification, and safety-critical system is effectively unchanged.