SUSTAINABILITY STRATEGIES

# REDUCING WATER USE

## WHY IT PAYS TO RIGHT-SIZE SPRAY NOZZLES

Making sure nozzles are sized properly for the operation sounds simple. But, many processors tend to use higher capacity nozzles than required. Right-sizing nozzles is a simple change that won't disrupt operations but can deliver significant dividends.

# STEP 1

## KNOW THE FLOW

How much water flows through spray nozzles every day? Take a quick look at the math for a single nozzle below.

### How much water for a single nozzle?

The flow rate of a full cone spray nozzle* is:

- **2.8 gallons (10.6 liters) per minute** at 20 psi (1.5 bar)
- **1,344 gallons (5,087 liters) per day** (based on eight hours per day)
- **6,720 gallons (25,438 liters) per week** (based on five days per week)
- **336,000 gallons (1,271,898 liters) per year** (based on 50 weeks per year)

* 3/8" H FullJet®

### How much water for an entire operation?

Most manufacturers use hundreds of nozzles in various operations including cleaning, coating, lubricating, moisturizing, cooling and more.

For this example, we'll assume 150 nozzles are in use for a cleaning operation.

**336,000 gallons used per year**
**(1,271,898 liters)**

**x 150 nozzles**

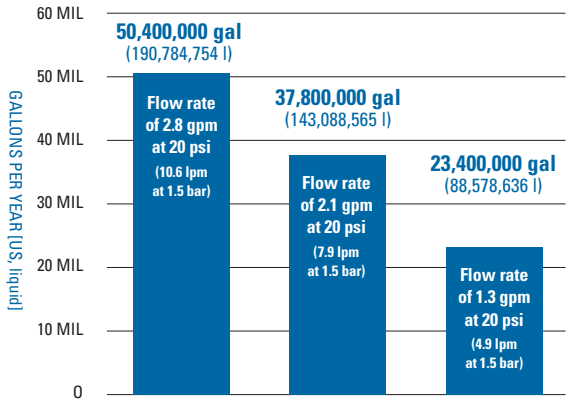
**= 50,400,000 gallons used per year**
**(190,784,754 liters)**

# STEP 2

## REDUCE THE FLOW

What if nozzles with a lower flow rate could be used in the same cleaning operation without compromising effectiveness? The chart below reveals what could happen.

**ANNUAL WATER USE**
SAME NOZZLE, THREE DIFFERENT CAPACITIES




Based on 150 full cone spray nozzles spraying eight hours per day, five days per week, 50 weeks per year. 3/8" H FullJet nozzle used for the comparison.

## RESULTS

**12,600,000 gallons saved**
**(47,696,188 liters)** per year simply by using a slightly smaller capacity nozzle — a 2.1 gpm (7.9 lpm) full cone nozzle spraying at 20 psi (1.5 bar)

**23,400,000 gallons saved**
**(88,578,636 liters)** per year by using an even smaller capacity nozzle — a 1.3 gpm (4.9 lpm) at 20 psi (1.5 bar)

# STEP 3

## SUSTAINABLE SAVINGS

Spraying Systems Co. will perform an on-site Sustainability Assessment and show precisely how much you can save. To learn more, visit **spray.com/sustainability-assessment**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ABOUT THE

# SUSTAINABILITY ASSESSMENT PROGRAM

## WHAT IS A SUSTAINABILITY ASSESSMENT?

The Sustainability Assessment Program from Spraying Systems Co. will help your operations become more efficient, productive, sustainable and safe. It happens on-site with no disruptions to production.

## HOW DOES IT WORK?

During the assessment, our team of spray technology experts will visit your plant to evaluate essential spraying applications such as cooling, coating, cleaning, drying, mixing and others.

Our experts will identify actionable ways to:

- Reduce water, chemical and energy use
- Reduce scrap and waste
- Improve worker safety


A few weeks after the assessment, we will share the findings. You'll see how much more efficient you can be and how much you can save. It's all prepared for you in a customized report with the facts, figures and outcomes clearly documented.

## WHAT ARE THE RESULTS?

Here are average outcomes from recently completed assessments.

| | |
|---|---|
| Number of gallons (liters) saved annually: | 83,170,981 (314,836,412) |
| Water savings: | US$211,902 |
| Average water savings: | 46% |
| Sewer savings: | US$465,592 |
| Energy savings: | US$666,955 |
| ROI: | 21 weeks |

## FIND OUT HOW MUCH YOU CAN SAVE

Spraying Systems Co. will perform an on-site Sustainability Assessment and show precisely how much you can save. To learn more, visit spray.com/sustainability-assessment


*Spraying Systems Co.*®
Experts in Spray Technology

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