



## Water Audits: Lessons Learned

Bill Stella, Director of International Sales, T&S Brass

Ken Gallagher, Vice President of Global Sales, T&S Brass



We Share We Support We Inspire

# Climate Change and Impact on Foodservice



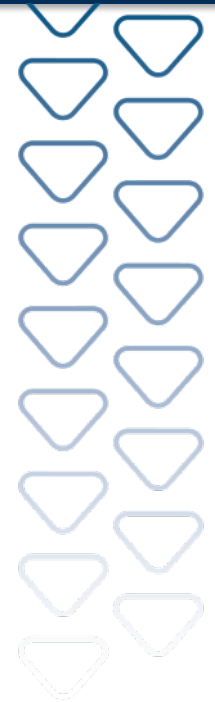
**Ken Gallagher**

*Vice President Global Sales  
T&S Brass*



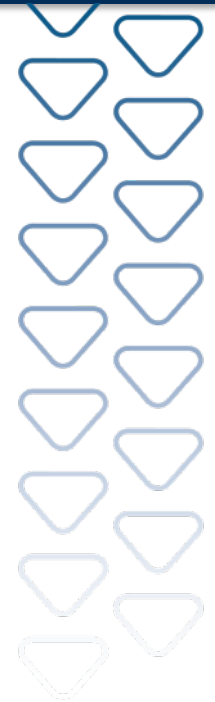
**Bill Stella**

*Director Of International Sales  
T&S Brass*



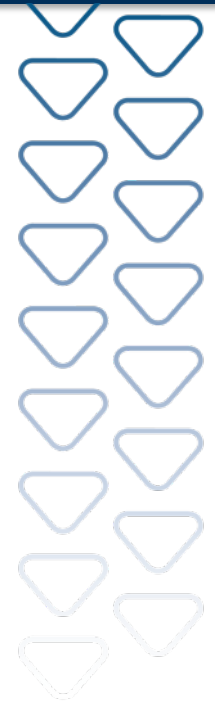
# FCSI Asia Pacific Seminar: Singapore

## Tuesday April 12, 2016



**T&S** RELIABILITY BUILT IN™

# Taking Care of the earth...Planting Trees



# Water availability





# Water Usage: Current Environment

RISING  
WATER  
COSTS

*Rates rising  
globally*

ENERGY &  
SEWER  
COSTS

*Tied to  
water use*

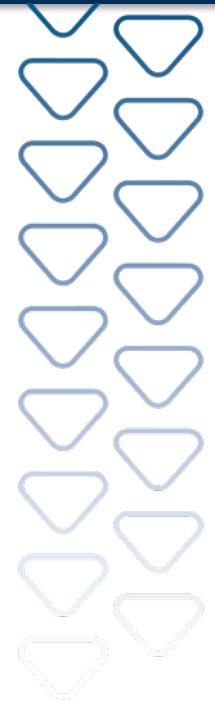
STRICTER  
REGULATIONS

SOCIAL  
RESPONSIBILITY  
TO  
CONSERVE  
WATER

# Water & Specification Audit



- What is it?
  - A Two-Step Process





# Water & Specification Audit

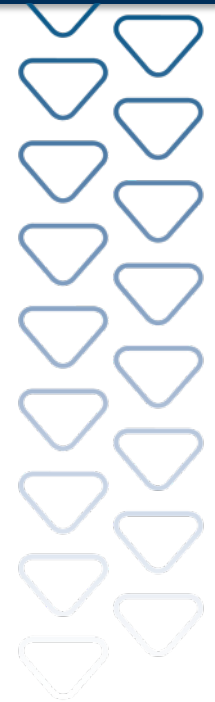


- Water Audit
  - A Proprietary T&S Program
  - Systematic & Validated Process
    - “Auditors” visit end-users
    - Measure & document plumbing fixture flow rates
  - Bottom Line
    - Reduce Water Usage (Energy & Sewage)
    - Show customers huge savings
- Specification Audit
  - Look for upgrades
    - Longer Warranties
    - Same Price
    - Lower Cost



## Water & Specification Audit

- Why are we doing this?
  - Provide a Value Added Service
  - Help lower end-user lifetime costs
  - *Doing our part...*

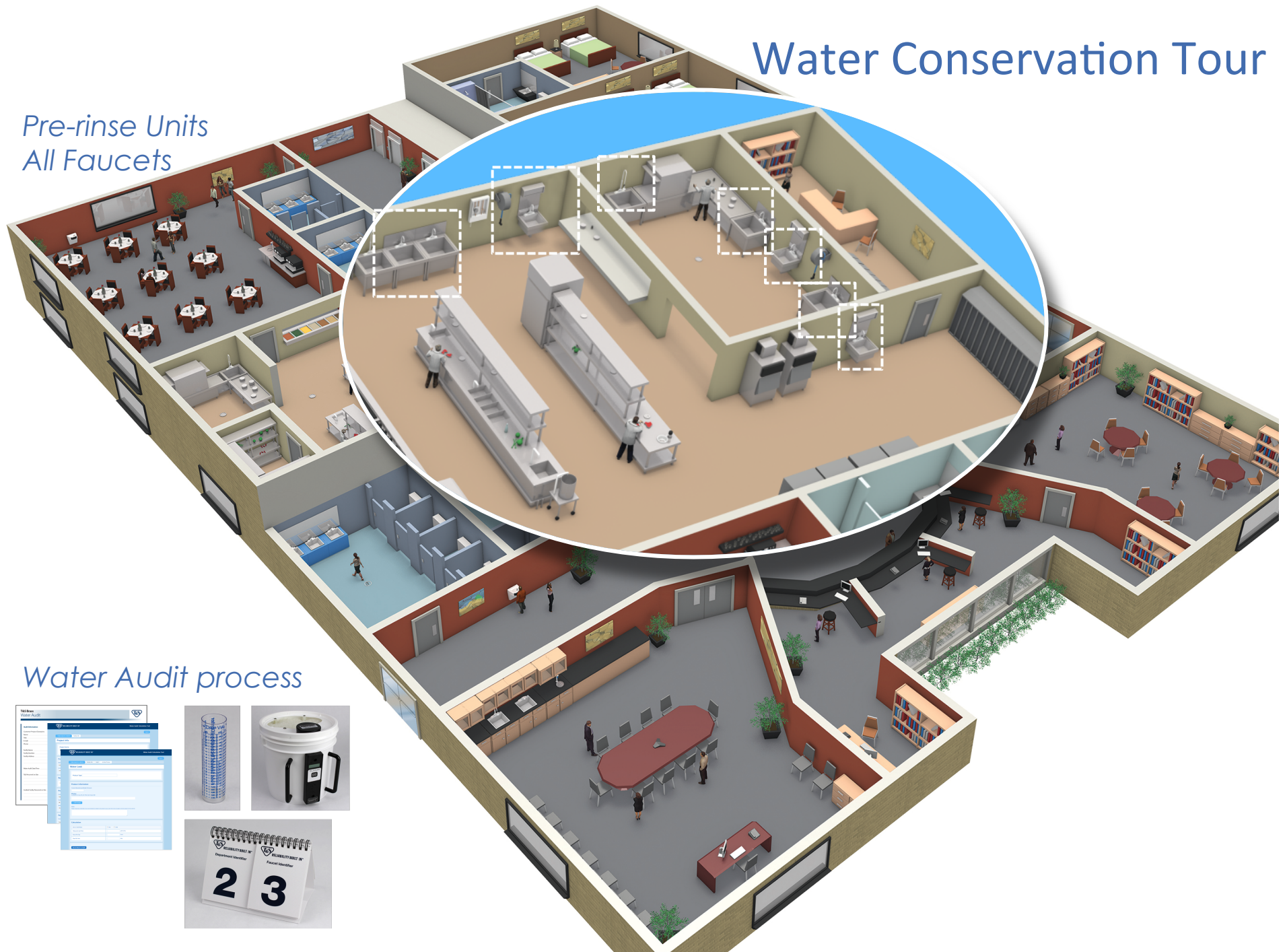


# Water Conservation Tour



# Water Conservation Tour

Pre-rinse Units  
All Faucets



Water Audit process



# Water Audit Report



CONDUCTED BY T&S BRASS AND BRONZE WORKS

Dear Kurt Miller,

We appreciate your interest in a water audit conducted by T&S Brass and Bronze Works, and we thank you for allowing our team to assess the water- and energy-saving opportunities throughout your facility.

We understand that your time is very valuable, and we hope the results of the audit reported in this document prove to be worthwhile for your facility's efficiency and profitability.

When our trained auditors enter a facility, they utilize a systematic, validated process while carefully assessing how each of your faucets and pre-rinse units is being used.

They also determine whether there are legitimate opportunities to conserve — for equipment used by both employees and customers. As you may know, lowering flow rates doesn't only lower your water bills — it can significantly impact energy and sewage costs as well.

Throughout this report, you will find T&S' findings regarding your current water usage, recommendations for product replacements and predicted savings opportunities based on the data provided. The first few pages address all collected data and assumptions for each product audited, concluding with a summary of projected savings.

Again, we thank you for your time and participation, and we look forward to helping you achieve maximum cost savings with your facility's plumbing fixtures!

Sincerely,  
T&S Brass and Bronze Works, Inc.

Please note the following disclaimers:

- T&S utilizes a flow rate measuring tool manufactured by a third-party, SpotOn. This company reports accuracy to +/- 1%.
- T&S assumes that the audited facility's personnel listed on this report carefully reviewed assumptions of utility costs and product usage. All assumptions are outlined within this report.
- Operator use varies product to product, day to day. This audit is based on data and observations collected during the audit.

April 3, 2016

The audit of your facility was

## COSTS DUE TO WATER LEAKS:

Total annual wasted:	\$0.00
Total water wasted:	\$0.00
Total energy wasted:	\$0.00
Total sewage wasted:	\$0.00

## PER FACILITY:

Total Annual Savings:	\$47,805.60
Total gallons saved:	1,704,939
Water savings:	\$4,558.66
Energy savings:	\$36,408.94
Sewage savings:	\$6,837.99
New equipment costs:	\$495.00
Savings less costs:	\$47,310.60
Payback period:	0.01 years

## TOTAL SAVINGS (FOR MULTIPLE LOCATIONS):

Total Annual Savings:	\$47,805.60
Total gallons saved:	1,704,939
Water savings:	\$4,558.66
Energy savings:	\$36,408.94
Sewage savings:	\$6,837.99
New equipment costs:	\$495.00
Savings less costs:	\$47,310.60
Payback period:	0.01 years

\*New equipment cost and ROI based on T&S List Price

## WOODMARK

CUSTOMER PROJECT CHAMPION

Name: Kurt Miller  
Title:  
Email: kurt@carillonprop.com

Irland, WA

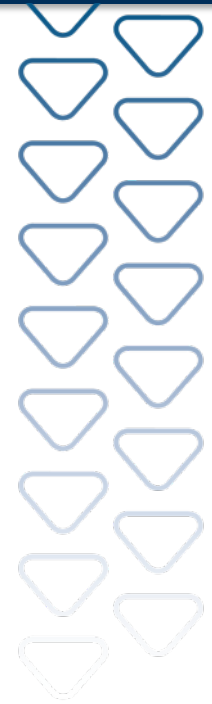
allagher, Alex



# Water Audit: Lessons Learned

## *Chili's Restaurant*

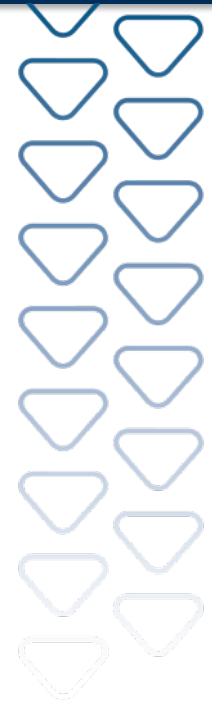
- Conducted water audits
  - Determine water usage and savings
  - *\$3,400 / Store Average*
  - Created model numbers to simplify retrofits
  - Installed low flow devices in hundreds of stores



# Water Audit: Lessons Learned

## *Safeway Supermarket*

- Conducted water audits
  - Determine water usage and savings
  - *\$20,000 / Store Average*
  - Created model numbers to simplify retrofits
  - Installed low flow devices in 963 stores



# Water Audit: Lessons Learned

## *Destination Hotels Water Audit Results*

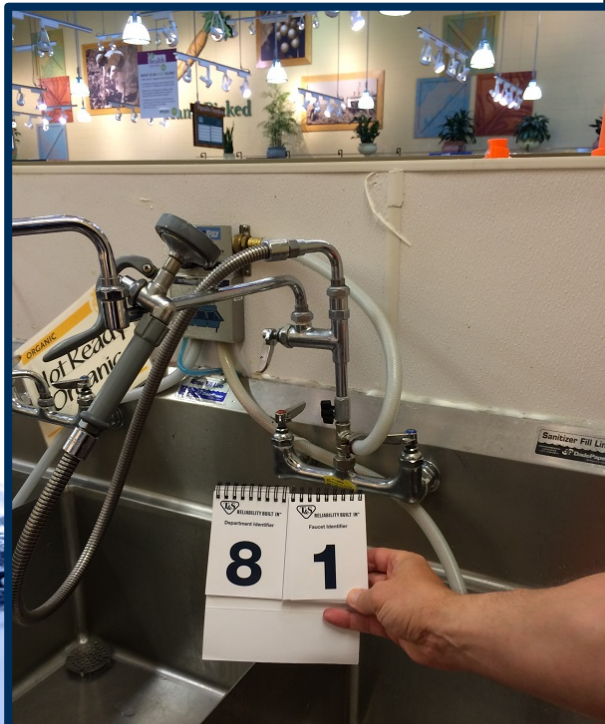
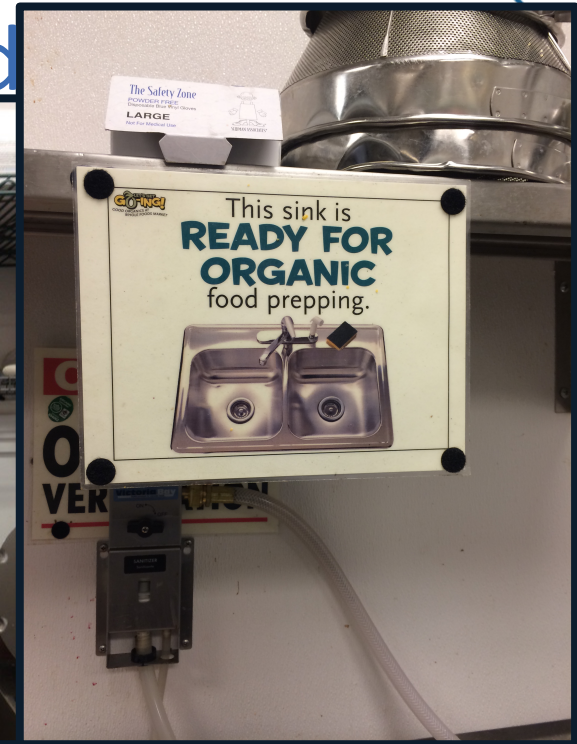
- Lansdowne Resort
  - \$25,412
- Woodmark Hotel & Spa
  - \$47,558
- Terranea Resort
  - \$124,332
- Miramonte Resort and Spa
  - \$14,580
- Motif Seattle
  - \$21,350





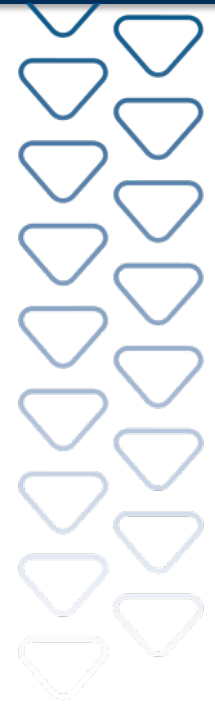
# Water Audit: Lessons Learned

- Important
  - Observe
  - Ask questions
  - *Take good photos*



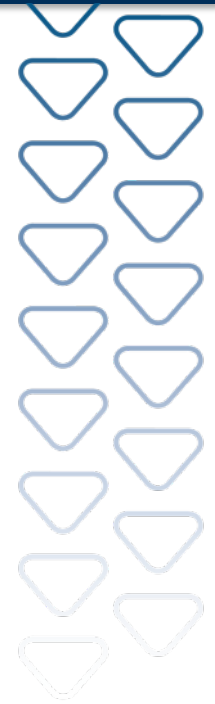
# Water Audit: Lessons Learned

## *Spray Valves*



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# Water Audit: Lessons Learned



# Spray Valves

## REDUCING FLOW RATES: SPRAY VALVES



- *Annual savings example:  
replacing only 1 spray valve that gets  
3 hours total daily usage*

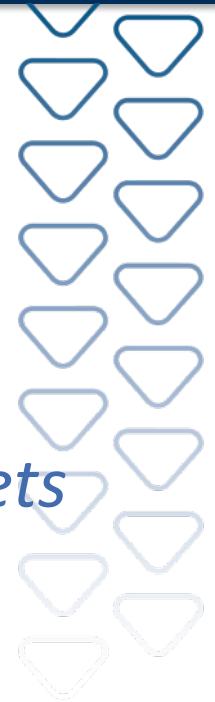
### Gallons Per Minute (GPM) Reduction

#### Single Unit

- 4.0 to 1.07      \$5,700
- 1.60 to 1.07      \$1,050

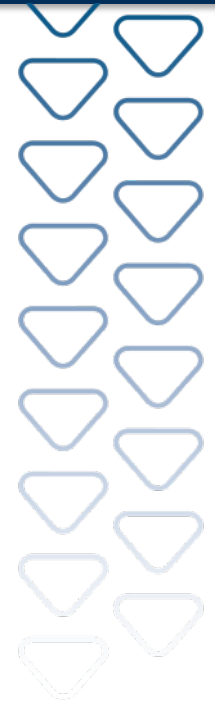
#### 5 Units

- 4.0 to 1.07      \$28,500
- 1.60 to 1.07      \$5,250

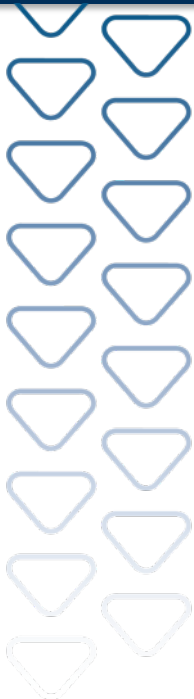


# Water Audit: Lessons Learned

## *Aerators*



# Water Audit: Lessons Learned



# Flow Control Devices - Aerators



## *REDUCING FLOW RATES: AERATORS*

- Annual savings example:  
20 employees per day (10/shift x 2 shifts)  
8 hand-washes per employee (1/hr, 8-hr shift)  
20-second hand wash

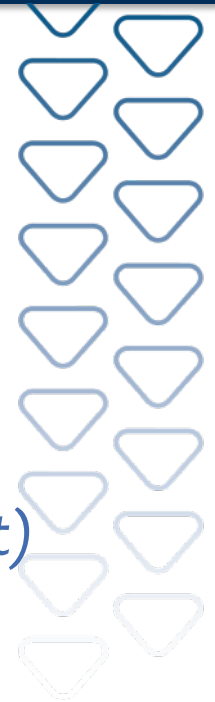
### Gallons Per Minute (GPM) Reduction

#### Single Unit

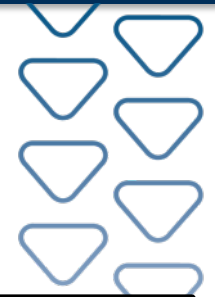
- 2.2 to 1.0      \$700

#### 5 Units

- 2.2 to 1.0      \$3,500



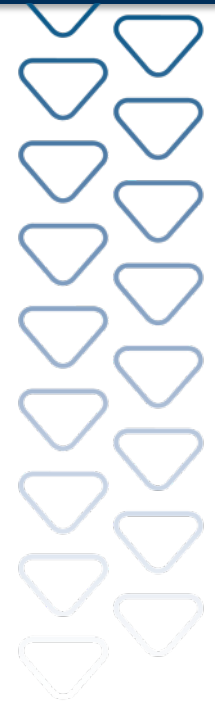
# Water Audit: Lessons Learned



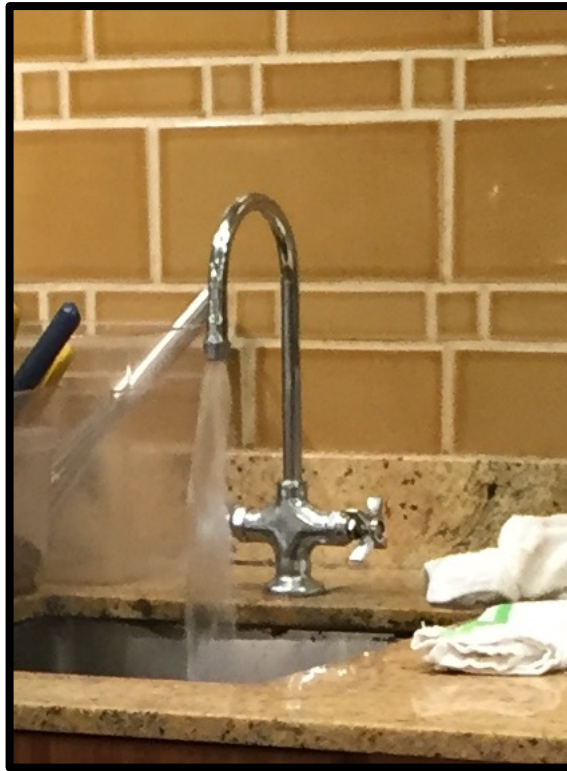
**T&S** RELIABILITY BUILT IN™



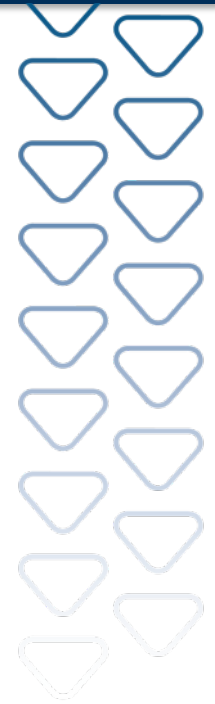
# Water Audit: Lessons Learned



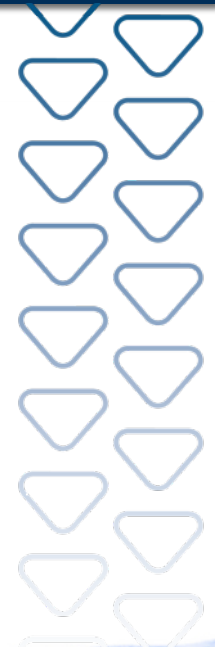
# Water Audit: Lessons Learned



# Water Audit: Lessons Learned



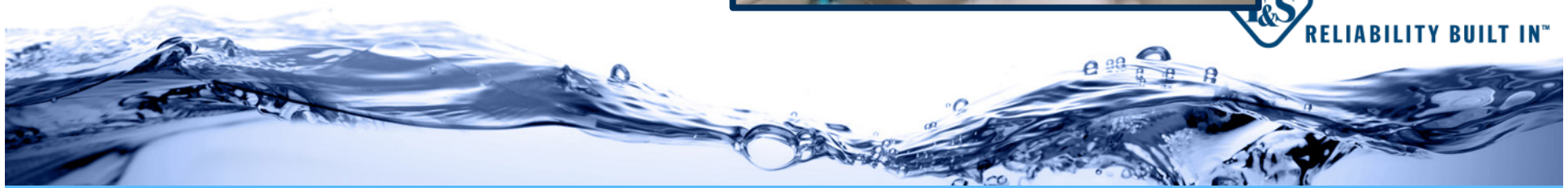
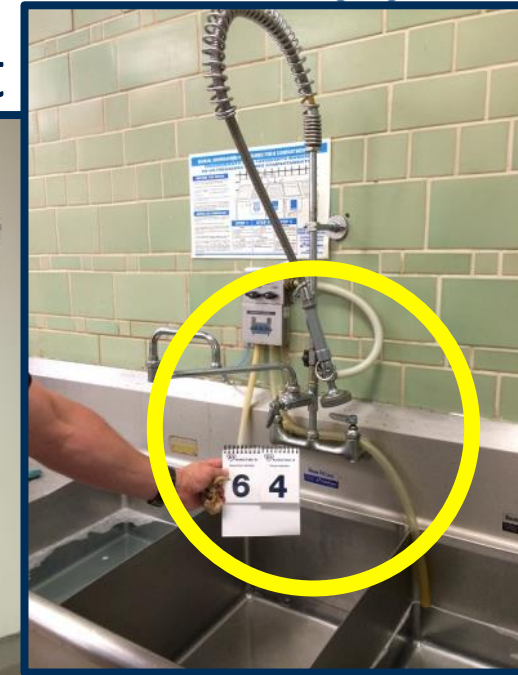
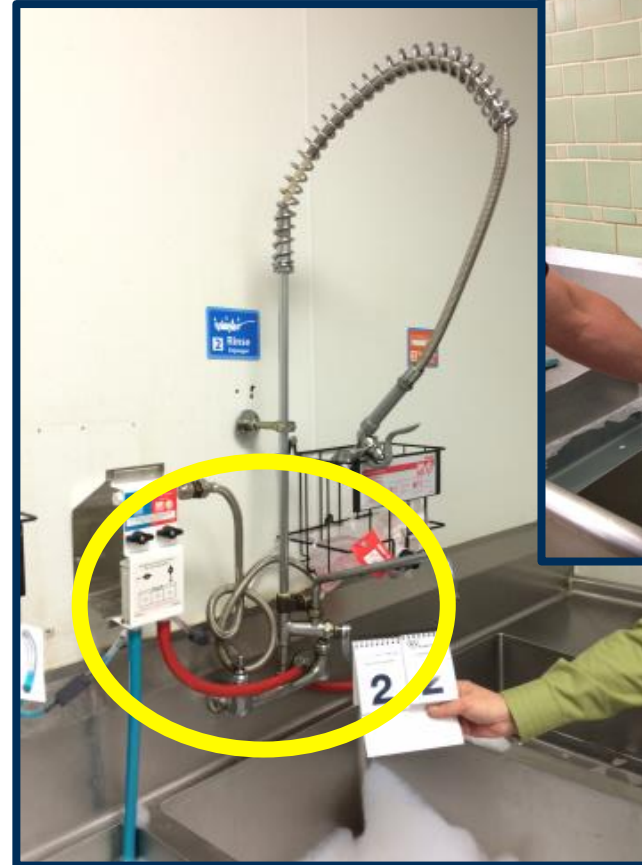
# Specification Audit



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# Pre-Rinse Tees

- Often, we see soap dispensers being cut pre-rinse units
- This voids the warranty, and if not done properly, can cause a leak in the riser
- Specify the PRU with the correct tee



# Dipperwell Faucets

- Specify 0.25 GPM
- Internal Flow Control
- 98% Reduction
  - Water
  - Energy
  - Sewage



REQUALIFYBUILT IN™

# Cartridges

- Specify Ceramic Cartridges
  - ¼ Turn
  - Lifetime Warranty
  - No Repair Parts
  - Interchangeable
  - Same Price



# PRU and Faucet Makeover

## SPRAY VALVES and PRE-RINSE UNITS

**APPLICATIONS**  
 • Meat / Deli / Bakery Depts.  
 • Kitchen Prep / Dish Area

**WATER SAVINGS**  
 ENERGY MONEY



**T&S pre-rinses and spray valves – quite simply, the industry standard.**

When T&S created the foodservice industry's first pre-rinse unit and low-flow spray valve, we had a vision for our customer's future needs. Today, as an industry innovator, we design for the foodservice future.

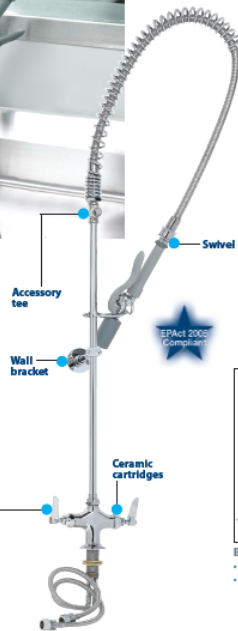
Our pre-rinse unit and spray valve lines offer unparalleled options for water- and energy-savings for many applications. We also have a line of compact pre-rinses designed for limited spaces. Our low-flow spray valves have flow rates from 0.65 GPM to 1.42 GPM, well below the EPA's 2005 requirement.



MPZ-2DLN06  
 • Compact pre-rinse unit



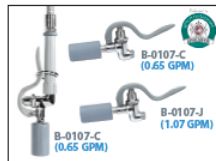
B-0133-CRBJST  
 • Same model but wall-mount base faucet



B-0133-CRBJST Pre-Rinse Unit  
 • Deck-mount base faucet  
 • Ceramic cartridges  
 • Wall bracket  
 • Low-flow spray valve (B-0107-J)  
 • Swivel, accessory tee



B-0133-CR-C  
 • Low-flow spray valve (B-0107-C)  
 • Ceramic cartridges



B-0107-C (0.65 GPM)  
 B-0107-J (1.07 GPM)



B-0133-CR-J  
 • Low-flow spray valve (B-0107-J)  
 • Ceramic cartridges



B-0107-035 (1.42 GPM)  
 B-0107 (1.42 GPM)





# Pre-Rinse Unit Spec Makeover



RELIABILITY BUILT IN™

Introducing...

The T&S Solution To Add-On Accessory Tees in the Kitchen

Need an additional water source from your EasyInstall T&S pre-rinse unit or mixing faucet? Finding it hard to install? The T&S solution – a B-TEE-RGD designed for use with T&S pre-rinse, or B-TEE-EZK, designed for use with T&S mixing faucets.

**Tee Application**

Tees on pre-rinse units and mixing faucets are used to supply water to accessory applications such as chemical injectors (for cleaning jobs, etc.). They are **not** intended to introduce chemicals into the T&S pre-rinse unit or mixing faucet. A backflow prevention device should be installed if not included with the accessory device.

**T&S Pre-Rinse Tee Models**

We have four new T&S pre-rinse models which include a B-TEE-RGD:

- B-0113-A12B-TEE PRL, 1/2" add-on faucet, wall bracket, right fire
- B-0113-B-TEE PRL, wall bracket and rigid tee
- B-0133-A12B-TEE PRL, 1/2" add-on faucet, wall bracket, right fire
- B-0133-B-TEE PRL, wall bracket and rigid tee

The B-TEE-RGD can be easily retrofitted to an existing T&S pre-rinse, ordered separately or used to modify a new pre-rinse unit. Ex: B-0123-B modified with a B-TEE-RGD.

**T&S Mixing Faucet Tees**

The B-TEE-EZK can be easily retrofitted to an existing T&S mixing faucet, ordered separately or used to modify a new faucet. Ex: 78-0230 modified with a B-TEE-EZK.

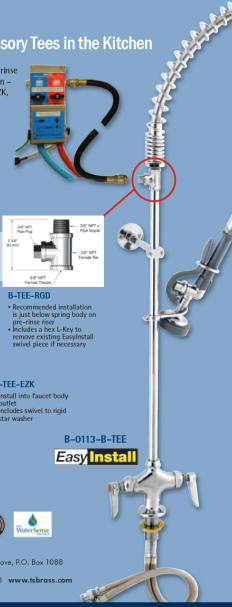
**T&S Tee Features**

- Chrome plated brass
- Low-lead compliant (d brass)
- Easy installed on an existing T&S pre-rinse unit and mixing faucet

\* PLEASE NOTE: Adding a non-T&S Tee voids the T&S warranty on your pre-rinse unit or mixing faucet.



T&S Brass and Bronze Works, Inc. 2 Saddleback Cove, P.O. Box 1088  
Travelers Rest, SC 29690 • 800-476-4103  
Sims Valley, GA • 800-423-0150 • Fax 864-834-3310 www.tbross.com



Introducing Our New

## T&S Brass Mini Pre-Rinse Line

The T&S Pre-Rinse Solution For Limited Kitchen Space

In 1947, we introduced the market's first pre-rinse unit to the foodservice industry. Today, T&S pre-rinse units remain the industry standard.

Leading the way in innovation, we are pleased to introduce our new line of T&S Mini Pre-Rinse Units, designed to fit in compact kitchens and in tight spaces.

All T&S Mini Pre-Rinse Units include many of the same high-quality components and features you already find with our standard-sized pre-rinse:

- B-0109-01 6" Wall Bracket for added stability
- Add-On Faucet with Swivel Nozzle for pot and kettle filling convenience

**Valves**

• Faucet with your choice of Cartridges

• Flexible Stainless Steel

**Easy**

• T&S Mini Pre-Rinse Unit  
• what you need:



Helping You Save Money.

One Gallon at a Time.

The NEW B-0107-J Low Flow Spray Valve has CLEANING POWER!

1.07 GPM



Introducing the NEW B-0107-J with a 1.07 GPM Flow Rate!

We're proud to introduce a new low flow spray valve to the market – the T&S Brass B-0107-J – with a 1.07 GPM @ 60 PSI flow rate. The B-0107-J features significant water- and energy-savings while making pre-rinse tasks easier with its powerful cleaning capability. Tough baked-on foods will come off faster when using the B-0107-J.

**B-0107-J Features:**

- Its intensified power rinsing quickly gets rid of tough baked-on foods
- Consumes 33% less water than other EPAel 2005 compliant valves (at 1.6 GPM)
- Is AB1953 & ANSI/NSF Standard 61 compliant
- The same great T&S reliability and performance
- Is interchangeable with Fisher spray valves

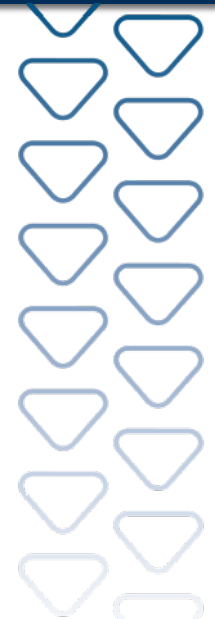


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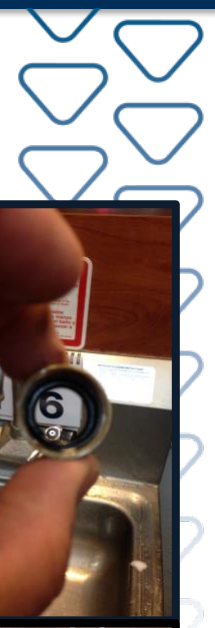
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# Water Audit: Lessons Learned

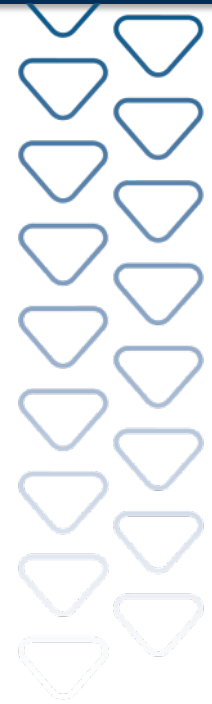


**T&S** RELIABILITY BUILT IN™



# Water Audit: Lessons Learned

- Water conservation measures are needed
- Costs are rising
- Opportunities for Savings are Huge
- Visit Customer Locations and Observe Use
- Ask Questions about Usage
- Review Flow Rate Specifications
  - PRU Spray Valve
  - 3-Comp Sink
  - Hand Sink
  - Dipperwell
- Look at Products Providing Longer Warranties





THANK YOU!  
QUESTIONS?

*[kgallagher@tsbrass.com](mailto:kgallagher@tsbrass.com)*

*[bstella@tsbrass.com](mailto:bstella@tsbrass.com)*