

## What the Water Professional is Asking About

This training is a direct result of over a hundred requests for training petitioned from the Water Industry

### Introduction (5 Minutes)

- Introduction & Goals of the class
  - Even if you already know many facts – let us focus on "sharpening skills"
  - Training designed from Water Professionals feedback
  - Don't discount your importance and take pride on delivering Water – it is Life Sustaining
- History (Brass 1856 to Present)

### DISTRIBUTION SYSTEM (25 minutes)

#### Pipe Materials (DS1)

- Three Categories (Transmission Mains, Water Mains and Services)
  - Definitions
  - Advantages and Disadvantages

#### Repair (DS2)

- Call Before You Dig
- Safety and Traffic Control
- Boil Water Advisory
- Restraints and Concrete Backing
- Repair Clamps and Sizing
  - Proper Installation demo (TECK Advantages)
- Backfill (Importance at main and for corporation valve, service and curb box/meter box)
  - Proper goose neck of material out of corporation.

#### Leak Detection and Non-Revenued Water (DS3)

- Benefit of leak detection for repairs and for water audit studies
- UFR (Video or demo)

#### Tapping (DS4)

- Direct vs Saddle
- Types of Saddles,
  - Proper installation, Dos and Don'ts, Field Tricks

- Torque Wrench Required and how to use (Torque Demo)
- Cold & Hot Effects on Plastic
- Bit (Sharpening importance)
- Corp to home position (refer to stress when backfilling)

## **Water Service and Appurtenances (30 minutes)**

### **Backflow Prevention (WSA1)**

- Backflow is Real
  - Incidents and Stories
- Types of Devices
  - Air Gap, RP, RPDC, DC, DCDA
  - ASSE Non-testable - Advantages of checks in/at Meter Setters (Rebuild/replace demo)
- Thermal Expansion

### **Water Meters (WSA2)**

- Types of Meters
- Meter Boxes
  - Box frame and cover, coil Meter Pits (advantages to installer and changing out parts),
    - Coiled meter setters – why the tops can get out of round
  - Proper Installation
  - Prefab Options (Demo live and Photos)
- Meter Setters
  - Setter part numbers and variety of configurations (Slide Showing Steps to Build Unit needed)
  - Setter quality and beefiness of casting and ample wrenching flat areas provided.
  - Change out 3" and larger meters to 2" and smaller - LL difference issue
  - Advantages to setters and proper installation
    - Standard configuration for the Utility (Easier for Technicians working on meter)
    - All fittings (valves, checks, etc.) pre-assembled (fast initial install) and pressure tested at factory (Detail process)
    - Stress of Meters and reduction of plumbing issues during repairs/change-out
    - Save time on change out
    - Can do layout to best fit your Utility/Customer
  - Demo Meter Setters and Installation
- Unrevenue Water specific to loss at the meter
  - UFR innovative option (Do Demo if not done during Distribution Presentation)
- Meter Change Out Programs
  - Complete Change out or prorated amount annually

## All Things Brass (55 Minutes)

### Advantages of Brass (B1)

- Cut away of fittings
- Inside Diameter and flow
- Stainless Steel
- Plastic Options
  - Thermal expansion effect on plastic fittings

### Plug vs Ball (B2)

- Pressure Difference
- Life Cycle and easy to turn
- Have customer install two types (Corp and/or Curb stop) and see difference in cut out

### Reclaimed Systems color and Markings (B3)

- Awareness of purple handle and caps where potable and reclaim systems exist

### Threads and Connections (B4)

- Types and Definitions
- Compression collars differences – where collars are interchangeable
- Nut/Thread Match Up

### Lead Copper Update (B5)

- Background
- 2017 White Paper
- Some AWWA discussions

### Galvanic Corrosion (B6)

- Definition
- Need for protection
- Options

### Product Demo, Dos and Don'ts, Ticks and Warranted Installation (B7)

- i.e.: Don't tighten across valve, smooth jaw used and where, stiffener critical of plastic, poly crimp ring taller/longer than PEX crimp ring, ...
- Detail how to read all markings and shipping information
  - Use of Web tools

- Proper installation of compression fittings.
  - Difference of lead compression on Mac Pack Compression
- Importance of stiffeners
- Education on cutting, deburring, resizing, and re-rounding the copper when putting on a fitting.
- How to determine if "Shark Bite" style products meet the AWWA C800 regulations
- Pull Out Strength of our products
- How to repair a check and dual check valve
- Leak paths most comment found and why
- Selection of proper compression style for various types of pipe or tubing (CTS, IPS, PVC, etc.).

### **Closing Remarks & Question and Answer (5 Minutes)**