

Title:

Hands and Eyes on Your Control Valves and DMA's: Understanding Control Valves and Using Them with an AMI System to Transform Pressure Zones into District Metered Areas"

Course Description for Program:

Water system purveyors and operators alike will learn the "ins" and "outs" of hydraulic control valve operation. In addition the City of Walla Walla will explain how to use control valves as an alternate approach to traditional management of district metered areas and the economic benefits of this approach. This course will cover valve function, applications, asset management, and maintenance. It will also include the use of electronic instrumentation to give districts "eye's" on their valves and district metered areas. The 6 hour course will include hands-on training and a field visit.

Agenda:

- 1) 8:00: Introduction; Why Control Valves.
- 2) 8:15am: Basic Principles of Control Valve Operation
- 3) 8:30am: Control Valve Main Body, Internals (Includes dissection of valve body)
- 4) 9:00am: Intro to Pilot Systems
- 5) 9:10am: Pressure Reducing Valves
- 6) 9:20am: Pressure Reducing Pilot Dissection + Flow Lab
- 7) 9:45am: Troubleshooting Pressure Reducing Valves
- 8) 9:55am: Electronic Controls for Control Valves
- 9) 10:15am: Break
- 10) 10:30am: Pressure Zone/DMA Solution Goals
- 11) 10:40am: Walla Walla Project Scope/Outline
- 12) 10:50am: Grant Opportunities to Fund Project
- 13) 11:00am: Hardware Integration
- 14) 11:10am: Hardware Testing and Deployment
- 15) 11:20am: Integration with AMI System
- 16) 11:30am: Valve Asset Management + Maintenance
- 17) 12:00pm: Lunch
- 18) 1:00pm: Site visit to fully functioning DMA metering valve
- 19) 2:00pm: Pressure Relief Valves + Surge Anticipation Valves
- 20) 2:30pm: Pressure Relief Pilot Dissection + Lab Work
- 21) 3:00pm: Pressure Sustaining Valves and Combo Pilot Systems
- 22) 3:15pm: Additional questions and conclusion

CEU Relevancy Statement:

Control valves and maintenance are a vital aspect of a functioning water system. Proper understanding, maintenance, and design practices will aid to ensure proper valve performance and prevent valve failure which affects system reliability, community safety, resource (water) protection, and resource conservation. As non-revenue water challenges continue to face our industry Walla Walla's DMA upgrade project has provided valuable data to streamline leak detection & meter testing programs while identifying problem areas. While Federal funding is available, it is critical for utilities to capitalize on this benefit. Taking a deeper dive into AMI systems showing the capabilities what a powerful analytics platform can provide.

Steve Causseaux Bio:

Steve has worked closely along side water and wastewater district operators, engineers, and independent engineering firms over the last 15 years to select valves and specific valve functions for the wide range of applications. With 33,000+ possible combinations of control valves available, engineers and operators often

need assistance in understanding valve capabilities, applications, maintenance, and troubleshooting. Cimco-GC Systems has been supporting the PNW water/wastewater industry for 47 years.

Adrian Sutor Bio:

Holding numerous certifications in water distribution and treatment, Adrian has 25 years of experience in the water industry. His mission is to inspire other utilities to push the envelope and explore what is possible. Currently, as the Water Distribution Supervisor for the City of Walla Walla, Adrian manages the distribution system, compliance programs, and the Advanced Metering Infrastructure (AMI).

His passion is really highlighted by the diversity of applications being used with the AMI platform to create a smart city.

Ryan Spooner Bio:

Ryan Spooner is the Electronics Engineering Manager for Cla-Val. Ryan has managed high-level valve design and support for the past 15 years. Ryan's primary focus is centered around the Cla-Val's electronic interaction with control valves and their deployment for smarter water systems. Ryan holds a degree in Mechatronics Systems Engineering

Robert Velasquez Bio:

Robert has been fielding valve design, sizing, and troubleshooting questions and requests from engineers and water districts, daily, since 2015. In addition to supporting project design, he spends plenty of time in vaults and pump houses rebuilding, maintaining, and troubleshooting valves. When he isn't writing valve specifications for projects throughout the Pacific Northwest, including Alaska, Rob enjoys remodeling his house and playing with his two young daughters and "little" son.

Patrick Miller Bio:

Patrick Miller has spent the last year in intensive training in valve dynamics and hydraulics. He works with the Cimco-GC Systems's Cla-Val Service Team rebuilding, inspecting, and troubleshooting control valves. He meets regularly with engineers to aid with valve design and selection. Patrick continues to support water and wastewater utilities with their specialty valves, pipe locating, and freeze protection.