

Valley Water

Coyote Pump Station

Morgan Hill, California

I. Presenter:

Benjamin Gonzales, Senior Plant/Pipeline Mechanical Technician

II. Treatment Plant Characteristics:

- Raw Water Pumping Station & Conveyance
- 6 employees

III. Innovation:

A. Description

Our most recent innovation that has been implemented in our system is the acoustic fiber optic (AFO) line from PSV to BIF and from Calero Dam to Vasona Pump station. AFO monitors the acoustic degradation of wires that support the Pre-stressed concrete cylinder pipe (PCCP) as they slowly corrode and brake due to hydrogen embrittlement.

B. Type of Innovations

- Optimization of Existing Resources

C. Motivation for Innovations

Large pipeline brake at Reach #1 Pacheco Conduit, due to Hydrogen embrittlement

D. Barriers/Challenges

We had to schedule a pipeline shutdown which forced the treatment plants to alter their normal treatment process to accommodate a different blend of source water. We also had to enter the pipeline to install the AFO.

E. Benefits

We can preventively take a section of pipeline off-line for further electromagnetic scanning to determine the condition of the pre-stressed pipe wires. This will help us prevent major emergency pipeline breaks.

F. Effect on Staff Training

This system has slightly altered normal PM procedures. Training and awareness was required.