Achieving the Perfect Flushing System: What the City of Burlingame is Doing to Improve Operations

Modernizing an Aging System The City of Burlingame and SRT Consultants are moving to achieve a greatly improved water distribution flushing system and compose developments to cleanse the city's water more thoroughly. Located on the San Francisco Bay peninsula, the city was due for a major flushing update. The Burlingame Water Department's choice to utilize a comprehensive Unidirectional Flushing (UDF) program in 2006 was aimed to remove accumulated biofilm and scour sediment from the city's water mains, in order to decrease chloramine decay within the water. While the original project greatly improved conditions, it faced neglect over the following decade, accumulating mountains of written records without ever being revised. SRT sought to modernize and optimize the system, undertaking steps such as:

- 1. Assessing the City's existing flushing plan and H20NET model
- 2. Converting the model to Bentley WaterCAD
- 3. Updating the hydraulic model to reflect recent pipe records
- 4. Utilizing the WaterCAD UDF utility to create a completely new flushing plan
- 5. Conducting a detailed review and generating physical and digital copies

Setting the Water Scene The search for an optimal flushing system has long been a grueling process, but digital models developed with detailed maps have been found to be extremely effective in optimization. Maps of individual flushing routes, or reaches, accompanied by detailed record sheets for each reach are used to determine locations of all hydrants, valves, and customer tie-ins. Because these record sheets were developed by hand, there are copious paper records that document all historic flushing events, becoming burdensome to manage and leverage.