

Ross Valley Sanitary District

San Rafael, California

I. Respondent:

Stephen Miksis, Operations and Maintenance Manager, Ross Valley Sanitary District

Presenter:

Manny Vigil, Repair Supervisor, Ross Valley Sanitary District

II. Treatment Plant Characteristics:

- Wastewater Collections Facility
- 196 miles of pipe
- 34 employees
- 55,000 residents served

III. Innovation: Cured in Place Point Repair

A. Description

The cured in place point repair is a repair method used to surgically repair pipe from the inside of the sewer line without excavation. A 52-ounce fiber glass composite is wetted out with a two-part epoxy and then wrapped around a flow through inflatable carrier. Air is applied and the repair is locked into place creating a mechanical bond with the host pipe.

B. Type of Innovations

- Operations and Maintenance
- Optimization of Existing Resources

C. Motivation for Innovations

Cost was a major factor in starting the program at the District and the also the thousands of PACP Grade 4 and 5 defects. The District has saved over \$5 million doing the program in-house with highly trained and motivated staff

D. Barriers/Challenges

The pilot project had minimal equipment and budget and the Supervisor found unique ways to keep production going out of the back of a pickup. After proving the technology, they received a high-end CCTV truck and Harben Jet Truck and production took off!

E. What were the Benefits?

Millions of dollars in savings and countless sewer overflows were averted. Ongoing overflows were quickly stopped with this unique method of rehabilitation protecting the public and the environment. Other benefits include:

- Reduction in SSO and maintenance.
- Elimination of trouble spots for maintenance.
- Reduced service calls.
- Emergency repairs performed without the need of USA, requiring less equipment and less staff.
- Lines that used to have to be maintained every six months can now be maintained annually.

F. How did it effect staff training?

Our Competency Based Training System was implemented two years ago and there is a thorough SOP for installing the patches. Experience in the field is a must and that is where most of the learning takes place because every patch is different.

G. What were the lessons learned?

The District learned all kinds of valuable data and has restored (Removed PACP 4 and 5 Defects) from over 20 miles of pipe extended the life of the asset. We learned not to install point repairs during heavy rains because surcharging occurred because the flow through was inadequate. The team has learned all kinds of installation techniques that are unique and extremely creative.

Other information

Please contact smiksis@rvsd.org for a copy of the Point Repair SOP and for more information about our program.