



CASE STUDY



conserving water. protecting the environment



CASCADE, ID LOCATION:

CASE STUDY

Cascade, ID

PROJECT SCOPE:

Replace the city's entire water and wastewater system with HDPE - Cascade has a population of about 1000 and spans 4.2 square miles.

APPLICATION:

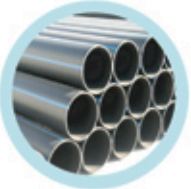
Close to 30,000 feet of HDPE – sizes ranges were 24-inch diameter and smaller.

PROJECT DATES:

Summer 2008

KEY CONTACTS:

R.W. Carter, Mayor of Cascade
Fred J. Ostler, P.E. - Project Engineering Consultants Ltd.
Brian Shields – High Country Fusion in Fairfield, ID



SUMMARY



The city of Cascade, ID, population of 1000 spanning 4.2 square miles, replaced the city's entire water and wastewater system with high-density polyethylene (HDPE) pipe. Cascade is a small lumber mill town with an aging water infrastructure. "Every kind of pipe ever invented over the years had found its way into our system," said Mayor R.W. Carter.



The city received funding from the Department of Agriculture, which prompted city leaders to research their options on what methods and materials they would use to replace the system. "We wanted to be equipped with a system that will last far into the future so that the people who choose to build their lives here will know that they are building their homes and businesses on top of a state-of-the-art system," said Carter. "And when I started talking to civil engineers about piping materials, the basic answer seemed to be, "if it's not HDPE, you're using the wrong material."



Fred J. Ostler, P.E., of Project Engineering Consultants Ltd. (PEC) was hired for this project. He was the past AWWA National Director for Utah and Idaho and also the water superintendent for the City of Pocatello, Idaho. PEC, based in the Boise area, has become heavily involved in trenchless forms of construction, and Ostler has become a huge proponent of HDPE. "A lot of the mindset in the past has been that water systems have to be ductile iron. I never accepted that mentality because as soon as you put ductile iron in the ground it starts to rust. Everything the industry said to do to stop corrosion fails over time and is an extra expense that could be avoided by using HDPE. But the added benefits with HDPE of zero maintenance and zero leaks blew me away."



"With fused joints, the pipe has no weak links so there are no leaks," says Brian Shields of High Country Fusion (HCF), which is based in Fairfield, Idaho. HCF supplied the HDPE pipe, McElroy fusion equipment and fusion training for the project. "HDPE pipe has proven itself over the last 30 years in the gas industry and is starting to make a big impact in the water industry. Cascade has even had enough forethought and wisdom to pass an ordinance that mandates that, whenever possible, HDPE is used."



Shields points out that because water is one of the highest priorities in the West, it is the area in which HDPE can make a major impact because of its conservation properties. "All together there is close to 30,000 feet of new HDPE in sizes ranging from 24-inch diameter and smaller. The entire system is fused together," said Shields. "Now Cascade has strong backbone of HDPE and it will give it the ability to deal with growth instead of chasing and fixing leaks."

See PPI's article for details: *Cascade, ID PPI article in the Case Studies section at www.pepipe.org*

*Please do not hesitate to contact the Alliance with any questions or comments.
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