

## Piping Information

### Leak Detection

Leak detection equipment will pay for itself very quickly when you consider how much water can be lost through a pinhole leak over a period of a month. "Unaccounted for" water is a major source of lost revenue for most utilities. Higher electrical and chemical bills also result from pumping and treating lost water.

Water loss as a result of a leak 0.63 cm diameter (1/4") can mean a loss of 14,952 gallons a day. If undetected for a period of 34 days, over 1/2 million gallons are lost, plus resultant water damage or underground water undercutting. Besides reducing operating expenses, in many cases you can delay or eliminate capital expenditures for expanding water supplies by stopping your losses. The following table shows leak sizes and their approximate loss in gallons from a pressurized 60 psi pipeline.

PIPE LEAK SIZE	GALLONS LOST	
	PER DAY	PER MONTH
●	360	11,160
●	3,096	95,976
●	8,424	261,144
●	14,952	463,512

Water main and water service leaks that do not come to the surface often find their way into a nearby sewer. A starting point in locating "hidden" leaks is, therefore, to watch for unusually high flow in sewers.

Small leaks generally produce a high pitch sound that is easily detected with an electronic amplifier. Listening can be done on the ground surface, or a probe pushed into the ground, or in contact with valves and hydrants.

The most accurate means of leak detection uses transducers that are placed on adjacent valves and hydrants to detect sounds. The information is transmitted to a computer (called a correlator) for analysis. The computer takes into account the type of pipe, pipe size and other factors to pinpoint a leak very accurately.