



Commonwealth of Massachusetts  
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# Department of Environmental Protection

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## Comprehensive Review of Revised Water Management Act Permit Requirements, July 1, 2017

### Summary of Automatic Leak Detection Costs Referenced in Table 9.2 – Leak Detection

Leak detection is typically completed by one or two man crews, traveling throughout the water system listening to water mains at gate valves and hydrants. New technology is available to detect leaks automatically with permanently installed correlators. Echologics is one manufacturer of these systems. The EchoShoreDX system is designed to detect leak through a leak detection correlator installed inside a fire hydrant nozzle.

For this system to work, the correlators must be installed at 300 to 500 ft intervals on system with cast iron, ductile iron or AC pipe. Note that this system does not work with PVC pipe. The leak detection correlators are typically installed on 80% of the hydrants in the system or area of concern. Costs include the cost to purchase the correlator (\$1,000 each) and system monitoring costs which depends on the number installed.

Costs for these systems are approximated as follows:

- Small system: Assume 200 hydrants (for reference Leicester Water Supply District has about 200 hydrants); cost to purchase correlators for 80% of the hydrants is approximately \$160,000
- Medium system: Assume 1,000 hydrants (for reference Town of Kingston has 760 hydrants and Dennis Water District has 1,585 hydrants); cost to purchase correlators for 80% of the hydrants is approximately \$800,000
- Large system: Assume 6,000 hydrants (for reference City of Worcester has 6,100 hydrants); cost to purchase correlators for 80% of hydrants is approximately \$4.8 million.