

WaterScope is designed to systematically categorize water usage by analyzing flow rate, consumption, and duration. The system collects data at one-minute intervals, comparing usage patterns to standard benchmarks such as typical toilet flushes, washing machine cycles, dishwasher cycles, or showers. Its primary goal is to distinguish regular water use from potential leak events, which can then be investigated and, if necessary, repaired promptly. This approach not only helps consumers reduce costs but also conserves valuable community resources. Since installation, numerous leaks have been identified and resolved, confirming the effectiveness of WaterScope. Although its benefits substantially outweigh potential drawbacks, there are circumstances under which WaterScope may erroneously indicate a leak when none exists. At present, cost-effective technological solutions are not available to enable small community water companies to markedly decrease the incidence of false reporting. False notifications are more likely to occur under boundary conditions, which may suggest small intermittent leaks or slow persistent leaks. Other conditions that may be difficult to distinguish from standard leak scenarios include water softener regeneration cycles and reverse osmosis filter systems. While receiving a notification does not definitively indicate a leak, each occurrence should be evaluated based on its usage context.