



# Do you want to prevent unnecessary water loss at your facility?

## Would you like to improve this process in the following areas?

- **Meet environmental compliance regulations.** Reduce water consumption and wastewater disposal. Improve energy efficiency. Media areas are water and wastewater.
- **Improve workers' safety and health.** Reduce likelihood of property damage from water leaks which improves safety and health conditions.
- **Increase productivity.** No change to current operations.
- **Save money.** Reduce water and energy utility costs.



Leak Detection Survey

*Detecting and repairing leaks in water distribution systems is an effective way to conserve water. Water conservation projects save money, project a positive image, and help preserve the environment. It is estimated that nonvisible water leaks can account for losses of as much as 250,000 acre-feet per year in California alone. Causes of leaks include improper installation or maintenance, settlement, overloading, and other factors. Detecting and repairing these leaks saves money for the utility, including reduced power costs to deliver water and reduced chemicals to treat water. Conducting a leak detection survey also helps distribution personnel become familiar with the distribution system, including the location of mains and valves. This familiarity helps the utility respond more quickly to emergencies, such as main breaks. Performing leak repair in the water distribution system also helps to reduce the likelihood of property damage and safeguards public health and safety.*

## How can you achieve these improvements?

Perform a leak detection survey and leak repair of the water distribution system.

## How does this system work?

Leak detection is a survey of the distribution system to identify leak sounds and pinpoint the exact location of hidden underground water leaks.

## How will this system save you money?

Reduced water loss will reduce water-related utility costs. Additionally, reducing water loss may defer the construction of new water facilities, such as wells, reservoirs, or treatment plants. Also, repairing leaks in the distribution system can prevent property damage and reduce future maintenance costs.

How can this method eliminate or reduce pollution?

Leak detection programs conserve water resources. Implementation will result in the following pollution reductions:

- Reduce the volume of water loss.
- Reduce the amount of chemicals used to treat water.
- Reduce energy consumption related to water distribution and treatment.

Which applications can benefit most from this method?

Leak detection and repair programs of water distribution systems can be performed at all Navy shore installations.

How can this method reduce regulatory compliance concerns?

Leak detection programs allow Navy facilities to reduce water loss and improve energy efficiency. Implementation will result in the following regulatory compliance benefits:

- Helps facilities meet water conservation and usage reduction requirements of the Energy Policy and Conservation Act and Executive Orders 12902 and 13123.
- May help facilities comply with Executive Order 13123 (*Greening the Government through Efficient Energy Management*) requiring agencies, by 2010, to reduce energy consumption in Federal buildings by 35% (based on 1985 usage levels).



#### **Achieving Environmental Compliance Through Pollution Prevention**

Every day the Navy faces the challenge of operating and maintaining the fleet while complying with environmental regulations. This burden can be reduced by using pollution prevention technologies and methods to reduce compliance requirements. This fact sheet is one in a series designed to encourage activities to use pollution prevention technologies and methods. The overall goal of this series is to promote sustained environmental compliance at the lowest life-cycle cost.

For additional information, contact:

More information can be found in the American Water Works Association Manual of Water Supply Practices, *Water Audits and Leak Detection, AWWA M36, 1990.*

**Program POC:**

(805) 982-5318, DSN 551-5318

E-mail: Fact.Sheet.ProgramPOC@nfesc.navy.mil

**Technical POC:**

(805) 982-3529, DSN 551-3529

