



## WaterSentinel Initiative

As part of the President's proposed Fiscal Year 2006 budget, EPA is launching the WaterSentinel Initiative, a demonstration project to design, deploy, and evaluate a model contamination warning system for drinking water security. The project, which is being developed in partnership with a utility and laboratories, responds to a Homeland Security Presidential Directive that charges EPA to develop surveillance and monitoring systems to provide early detection of water contamination.

A contamination warning system involves the active deployment and use of monitoring technologies/strategies and enhanced surveillance activities to collect, integrate, analyze, and communicate information. Timely warning of potential water contamination incidents allows for immediate response actions that can minimize the public health and economic impacts of contamination.

### **What is Homeland Security Presidential Directive 9 (HSPD-9)?**

HSPD-9 is the directive that charges EPA to develop robust, comprehensive and fully coordinated surveillance and monitoring systems to provide early detection and awareness of water contamination. In order to support the monitoring and response to an incident, HSPD-9 also directs EPA to develop nationwide laboratory networks that integrate existing federal and state laboratory resources.

### **What is the overall goal of WaterSentinel?**

The overall goal of the WaterSentinel Initiative is to design and demonstrate an effective system for timely detection and appropriate response to drinking water contamination threats and incidents through a pilot program that would have broad application to the nation's drinking water utilities. WaterSentinel demonstrates the concept so that drinking water utilities of all sizes and characteristics can adopt and implement an effective contamination warning system.

### **How would WaterSentinel detect a contamination incident?**

Although we are continually refining our conceptual design for the program, WaterSentinel uses a four-fold approach to detecting contamination involving:

- monitoring of water quality parameters;
- direct monitoring and laboratory analysis of high priority chemical, biological, and radiological contaminants;
- integration of water system data with existing public health surveillance systems; and
- active surveillance of customer complaints;
- physical security enhancements.

In addition to other critical sources of information, such as intelligence threat analysis and reports from local law enforcement, WaterSentinel harnesses and leverages an array of data streams in support of a robust contamination warning system.

### **How can I participate in WaterSentinel?**

EPA will identify a utility, laboratories and supporting partners to pilot WaterSentinel. In addition to these pilot locations, EPA envisions collaborating with its partners in the water sector (e.g., water utilities, laboratories, states, emergency responders, public health officials, law enforcement, federal agencies, technical experts, among others) to solicit input for WaterSentinel throughout the design and implementation of the project. For example, water sector partners can provide guidance on the design of

the model contamination warning system, identify the dual use benefits at the various stages throughout the pilot study, participate in the development of performance measures, participate in the technical review and evaluation of guidance documents and materials, and in some cases, participate in training and table-top exercises. Broad involvement in WaterSentinel will enable non-pilot utilities, laboratories and others to take home what is learned in WaterSentinel to implement a contamination warning system in their own communities.

### **How do I get involved if I'm a technology manufacturer?**

WaterSentinel will rely on the Technology Testing and Evaluation Panel (TTEP) program in our Office of Research and Development for analysis of technologies that could be candidates for deployment in a contamination warning system. Through TTEP, EPA will continue to evaluate existing detection and sensor equipment, as well as data management integration software, among others, to determine which technologies could have application for WaterSentinel.

### **What is EPA's timeframe for completing these activities?**

The WaterSentinel pilot initiative began in Fiscal Year 2006. EPA launched this project by building on existing efforts. Throughout Fiscal Year 2005, EPA worked with the water sector on activities that could lay the groundwork for WaterSentinel. Such activities included the design of a model contamination warning system, analysis of contaminants that could be effectively monitored for a timely response, the development of consequence management protocols for response to a potential incident, and research into technologies that could be candidates for deployment.

### **Where do I get more information?**

We recommend that utilities frequently visit EPA's Water Security Web site, which is continually updated to reflect new information on training, tools, and the latest scientific advances to protect drinking water and wastewater utilities. The website is: [www.epa.gov/watersecurity](http://www.epa.gov/watersecurity)