



Drinking Water Laboratory Response Preparedness Project

The Environmental Protection Agency (EPA) Office of Water is sponsoring an effort to improve drinking water laboratory preparedness at the regional, State, and local levels. This effort, the Drinking Water Laboratory Response Preparedness Project, is designed to assist the EPA Regions with improving intra-regional laboratory preparedness for response to actual or suspected water contamination incidents. The project, which is being developed in partnership with the EPA Regional Laboratories, State laboratories, and major drinking water utilities, responds to Homeland Security Presidential Directive 9 (HSPD 9), which directs EPA to develop a laboratory network to support monitoring, surveillance, response and remediation in the event of a water incident.

What is the Overall Goal of the Drinking Water Laboratory Response Preparedness Project?

The goal of the Drinking Water Laboratory Response Preparedness Project is to assist the EPA Regions with improving intra-regional laboratory preparedness for response to actual or suspected water contamination incidents. This goal is being met by the development and implementation of Regional Laboratory Response Plans (RLRPs) for each of EPA's 10 Regions. The plans provide each Region with a structure for a joint response by laboratories within the region. The plans also provide specific directions to meet the analytical needs of an event; including sample brokerage and tracking, communication, coordination of analyses, and analyte-specific methods. Ultimately, these plans will serve as the foundation for development of EPA's Water Laboratory Alliance (WLA).

What Activities are Anticipated and Who Will Participate?

The project is proceeding in four phases. Phases 1, 2, and 3 are complete.

1. Phase 1 - Development of a generic RLRP template. A generic RLRP template was developed under the direction of EPA's Office of Water and in partnership with EPA's Regional laboratories and other EPA offices. The Association of Public Health Laboratories (APHL) Environmental Laboratory Subcommittee and other experts within each of the regions contributed to the development of the template through review and comment on the draft template prior to its final release. The generic RLRP template was completed in August 2006.
2. Phase 2 - Development of region-specific laboratory response plans. The EPA, State, and major utility laboratories in each of EPA's 10 Regions worked together to customize the generic template and developed region-specific laboratory response plans. Each EPA Region held a meeting with experts from major drinking water utilities, State public health laboratories, and State environmental laboratories between October 2006 and March 2007 to prepare a customized RLRP. These meetings also included other EPA partners in the drinking water sector including emergency responders, public health officials, law enforcement, other Federal agencies, and technical experts.
3. Phase 3 - Table-top exercises. Table-top exercises have been conducted to evaluate each of the RLRPs. Participants included EPA, drinking water utilities, and State and local public health and environmental laboratories. Table-top exercises were completed in August 2007

for all 10 EPA Regions with an additional exercise in Hawaii. The RLRPs have been revised based on the lessons learned during the table-top exercises.

4. Phase 4 - Functional exercises. Week-long functional exercises were held at each EPA Region and an additional exercise in Hawaii between February 2008 and September 2008 to further test each of the regional plans. Participants included EPA regional, drinking water utility, public health, and environmental laboratories. The exercises included the analyses of “blind” biological and chemical samples, coordination among multiple laboratories to address capacity and capability issues, and generation and transmission of data. The region-specific laboratory response plans will be revised based on the results of the functional exercises, as necessary.

What are the Benefits to the Water Sector?

- The refined region-specific response plans provide an immediate mechanism to coordinate local, State, and Federal laboratory efforts to meet drinking water analytical needs that may result from actual or suspected water contamination incidents. With this tool at their disposal, laboratories will be able to respond more quickly and efficiently to an incident. The RLRPs are also intended to provide a tool for meeting potentially overwhelming analytical demands during the remediation phase of an event.
- The table-top and functional exercises increased the level of preparedness of laboratories to respond to drinking water contamination events by identifying improvements needed for regional plans and laboratory procedures. The exercises also helped strengthen relationships between laboratories, which will be critical for a successful response. The lessons learned can also be applied to EPA projects in other areas of emergency preparedness and laboratory response.
- The drinking water laboratory response preparedness project also serves as the foundation for the development of the WLA and Environmental Response Laboratory Network (ERLN) by addressing relevant issues such as sample brokerage, analytical method selection, and secure data transfer. The WLA will provide the water sector with an integrated nationwide laboratory network which has the analytical capabilities and capacity to support monitoring, surveillance, response, and remediation in the event of intentional and unintentional drinking water supply contamination involving chemical, biological, and radiochemical contaminants.

Where Do I Obtain More Information?

Laboratories should contact their EPA regional laboratories for more information regarding their RLRP. For more information on the Drinking Water Laboratory Preparedness Project, please contact Anand Mudambi, EPA Office of Water (Mudambi.Anand@epa.gov) or Rob Maxfield, EPA Region 1 (Maxfield.Robert@epa.gov).