Environmental Laboratory Response Network (eLRN)

- Laboratory response network focused on environmental sample analysis that is being developed
- Federal, state, local government, and commercial laboratories
- Toxic industrial chemicals, chemical, biological, and radiochemical agents
- National emergencies and naturally occurring events causing potential release of contaminated and/or hazardous materials
- Development of chemical warfare agent analytical capabilities

Laboratory Structure

- Reference Laboratories – Gold standard reference lab

- Confirmatory Laboratories

- Routine Monitoring

Membership Criteria

- Quality System
- Agreement to use eLRN methods
- Reporting requirements (SEDD)
- Data and information security
- Participate in proficiency testing program
- Submit to audits
- Meet lab specific health and safety requirements

Membership Benefits

- Opportunity to participate in vital homeland security efforts

- Assurance of mutual support during incidents of national significance

- Reimbursements under the Stafford Act for eligible activities during emergencies

- Potential marketing advantage for member labs

- Potential expansion of capabilities and capacities through grants and partnerships

- Training in incident response protocols

Membership Benefits (Cont)

- Access to homeland security methods and technical assistance
- Better preparedness to respond to in-state events
- Opportunities to collaborate with other laboratories and leverage capabilities
- Dual-use benefits that will support the non-emergency mission of environmental laboratories
- Participation in homeland security performance testing program

Response Protocol Toolbox Modules

- Module 1 – Water Utility Planning Guide
- Module 2 – Contamination Threat Management
- Module 3 – Site Characterization and Sampling Guide
- Module 4 – Analytical Guide
- Module 5 – Public Health Response Guide
- Module 6 – Remediation and Recovery Guide

Threat Response

- Planning and Preparation
- Threat Warning
- Initial Threat Evaluation
- Is Threat Possible?
- Immediate Operational Response Actions
- Site Characterization and Sampling
- Is Threat Credible?
- Public Health Response Actions
- Sample Analysis
- Is Incident Confirmed?
- Remediation and Recovery

Conceptual Site Model (CSM)

- Organize information that is known about the site and identify data gaps. Basic description on how contaminants entered the system, their fate and transport within the system, location where exposure to contaminants is likely to occur, and exposure routes of concern.

- Provides essential framework for assessing risks from contaminants, developing remediation strategies, determining source control needs, deciding how to address unacceptable risks.

CSM (Cont)

- **Identify the type of data needed**
  - information for models and risk assessment
- **Identify constraints on data collection**
  - resources or time constraints, access to sample locations
- **Determine the data quality needed**
  - useable data
- **Determine the quantity of data needed**
  - total number of samples/measurements
    - characterization team judgment
    - statistical sampling design

CSM (Cont)

- **Describe how, when, and where the data will be obtained and define the boundary of the study**
  - sample plans to support each stage of the system characterization and remediation process
- **Specify project quality assurance and quality control activities**
  - Quality Assurance Project Plans (QAPP)
- **Identify and select analytical laboratories**
  - Identify laboratories that have the capability to analyze the samples and meet the performance criteria established in the planning process

CSM (Cont)

- **Plan for data quality assessment**
  - project specific plans that describe methods for data analysis, evaluation and assessment against the intended data use and quality acceptance/performance criteria.

Water Laboratory Alliance (WLA)

- Provide analytical support for water system incident response.

- Designed to leverage Regional Laboratory Response Plans, other EPA programs, and CDC's LRN to provide expanded laboratory capabilities and capacity for drinking water analysis.

- Will support the EPA Water Security Initiative Contamination Warning Systems pilots and is part of EPA's response to homeland Security Presidential Directive 9

Drinking Water Laboratory Response Preparedness Project

- EPA Water Security Division is working with EPA Regions to develop Region-specific drinking water laboratory response plans

- EPA/Contractor prepared template to use for drinking water utility laboratories, federal and state environmental, and public health laboratories to develop regional plans

- Provide a mechanism to coordinate local, state, and federal efforts to meet drinking water testing needs in an emergency (terrorist event or natural disaster)

- Incidents that may require additional analytical support and a broader response than a typical drinking water incident

- Establish all-hazards approach to drinking water laboratory response

Drinking Water Laboratory Response Preparedness Project

- Create draft template
- Meet with EPA Regions and obtain input
- Send draft to labs for review
- Table-Top exercise in June 07
- Functional exercise based on the plan

Drinking Water Laboratory Response Preparedness Project

- Template
  - Administrative
  - Operations and Procedures

Drinking Water Laboratory Response Preparedness Project

- Analytical Results Reporting
  - EPA's Staged Electronic Data Deliverables (SEDD) – Stage 2 format – does not support biological or radiochemical data
  - Hard Copy Results with QC report

Drinking Water Laboratory Response Preparedness Project

- Mutual Support Laboratory (MSL)
  - Rapidly assesses available resources and provides timely realistic information on available support
  - Meets commitments to the PRL
  - Consults with PRL as changes occur and analytical information becomes available

Drinking Water Laboratory Response Preparedness Project

- Primary Responding Laboratory (PRL)
  - **The initial member laboratory contacted by the incident commander (IC) or first responder**
  - **Provide direction to field collection staff to assist with field screening and sample collection**
  - **Task other laboratories to function as Mutual Support Laboratories (MSL)**
  - **Be a communication conduit between MSL and IC and perform sample brokage**
  - **Coordinate data and report back to IC as PRL and/or MSL data becomes available**

Drinking Water Laboratory Response Preparedness Project

- Operations and Procedures
  - Sampling
  - Analysis
  - Quality Assurance
  - Data Reporting
  - Training
  - After Action Activities