



U.S. Environmental Protection Agency

Environmental Response Laboratory Network (ERLN)

National Environmental Monitoring Conference

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USEPA Office of Emergency Management

CBRN Consequence Management Advisory Division



Chemical, Biological, Radiological, and Nuclear Consequence Management Advisory Division (CBRN CMAD)



CBRN CMAD is a Division within OEM, and one of EPA's four Special Teams (CMAT), which were designed to provide specialized capabilities during a response

- Prepare and support the emergency response community 24/7/365 during CBRN incidents and events involving other unique hazards
- Provide science-based solutions, advice, and response services during all phases of CBRN crisis and consequence management: **characterization, decontamination, clearance, and waste management**
- Provide direct support with **people** and **equipment** for EPA responses
 - Staff serve as force multipliers, deploying and providing unique technical expertise within the ICS structure
 - Airborne Spectral Photometric Environmental Collection Technology (ASPECT)
 - Portable High Throughput Integrated Laboratory Identification Systems (PHILIS)
 - Environmental Response Laboratory Network (ERLN)





What is the Environmental Response Laboratory Network (ERLN)?



- A comprehensive, all-hazard/all-environmental media laboratory network for analysis of chemical, biological, and radiological contaminants supporting the emergency response community
- Can be used to support incidents of any scale during preparedness, response, and remediation phases
- Provides a network of laboratories with known quality



What is the Interagency Consortium of Laboratory Networks (ICLN)?



- Established in 2005, the ICLN is a partnership of nine federal agencies chaired by the Department of Homeland Security
 - Charge: “[D]evelop and maintain a coordinated and operational system of laboratory networks that provide timely, high quality, and interpretable results for early detection and effective consequence management of acts of terrorism and other events requiring an integrated laboratory response.” *
 - Scope: “[P]rovides a venue for the efficient coordination of analytical laboratory services for chemical, biological, and radiological events through inter-network strategic and operational planning, identification of accountabilities, communication and information sharing, resource optimization, and resource and response coordination.” *

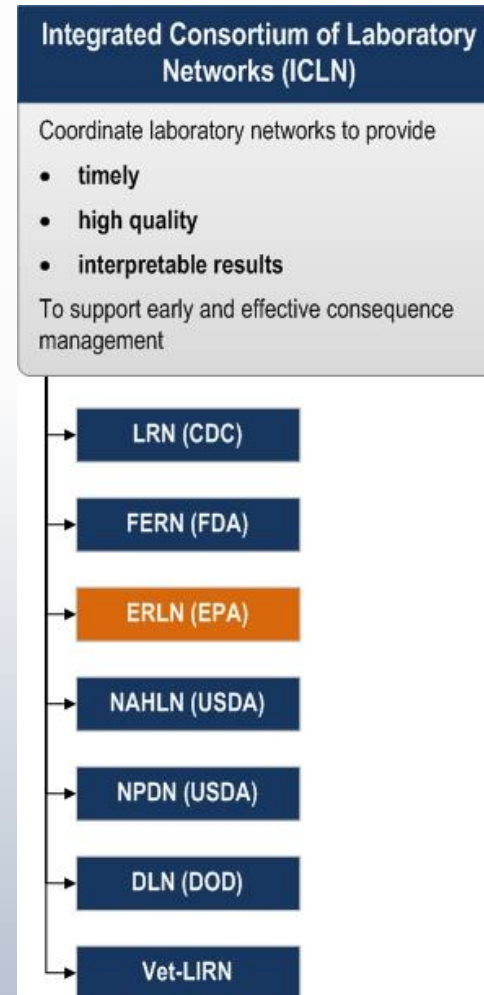
* Interagency Consortium of Laboratory Networks Signed Charge and Charter, 2008



ERLN's Role in the ICLN



- The ERLN is one of seven CBRN lab networks in the ICLN
 - Primarily responsible for environmental and drinking water matrices
- ICLN lab networks, including ERLN provide:
 - Data of known quality
 - Surge capacity support for wide-scale incidents
 - Consistent data exchange across lab networks to support information sharing and decision making



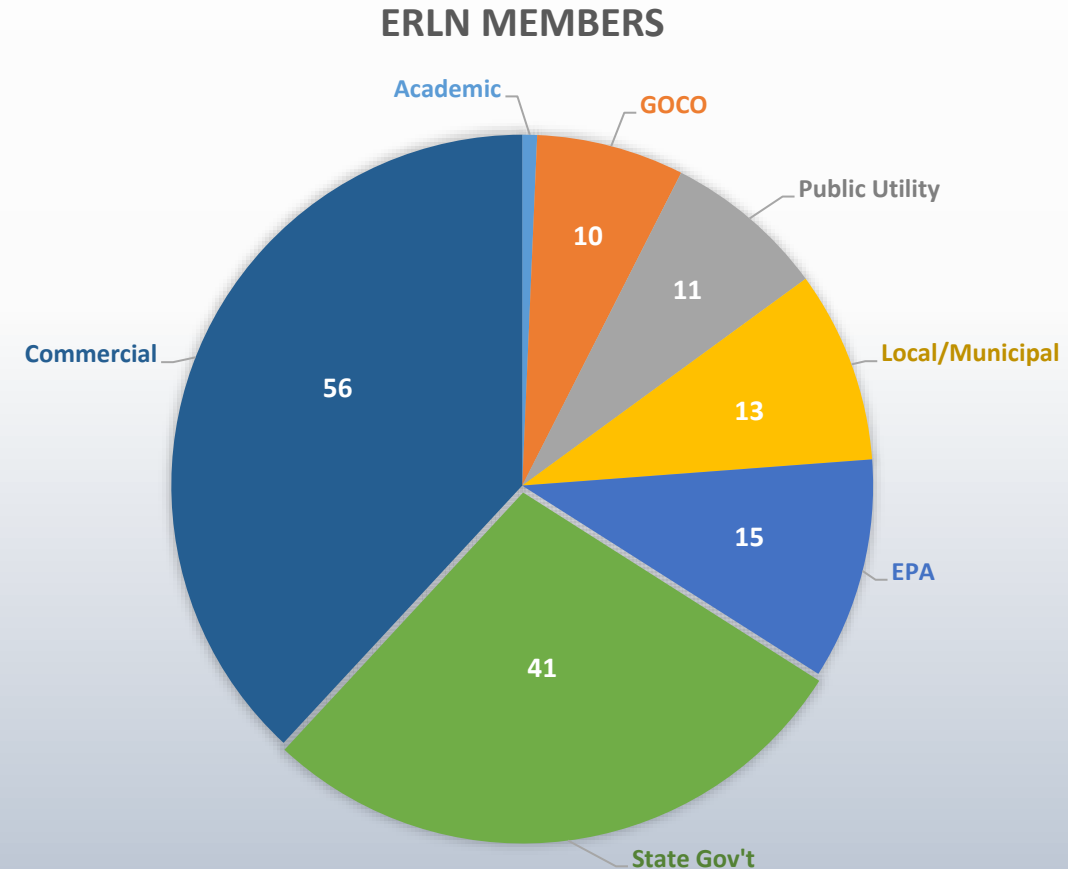
Laboratory Support to Response Phases

	Monitoring/ Surveillance	Incident Response	Remediation	Forensics
Human Clinical	HHS	HHS	HHS	FBI
Environmental	EPA	EPA	EPA	FBI
Food	USDA/ HHS	USDA/ HHS	USDA/ HHS	FBI
Animal	USDA	USDA	USDA	FBI
Plant	USDA	USDA	USDA	FBI
Drinking Water	EPA	EPA	EPA	FBI



ERLN Membership

- ERLN membership requirements established in 2009
- Current membership base includes public and private labs with chemical, biological, radiological, and special chemical warfare agent capabilities
- Current membership total: 147 labs (141 WLA labs)
- ERLN Partners:
 - EPA Office of Groundwater and Drinking Water (Water Laboratory Alliance – WLA)
 - EPA Office of Research and Development (Center for Environmental Solutions and Emergency Response – CESER)
 - EPA Office of Radiation and Indoor Air (National Analytical Radiation Environmental Lab – NAREL)
 - Association of Public Health Laboratories (APHL)





ERLN & WLA Benefits



To EPA/Responders

Access to vetted labs with a broad spectrum of analytical capabilities

Streamlined, paperless process to assess reliable analytical data of known quality from multiple labs

Designed to reduce project cost and improve data delivery and management

To Member Labs

Basic Ordering Agreements with EPA allow for direct funding without subcontracting

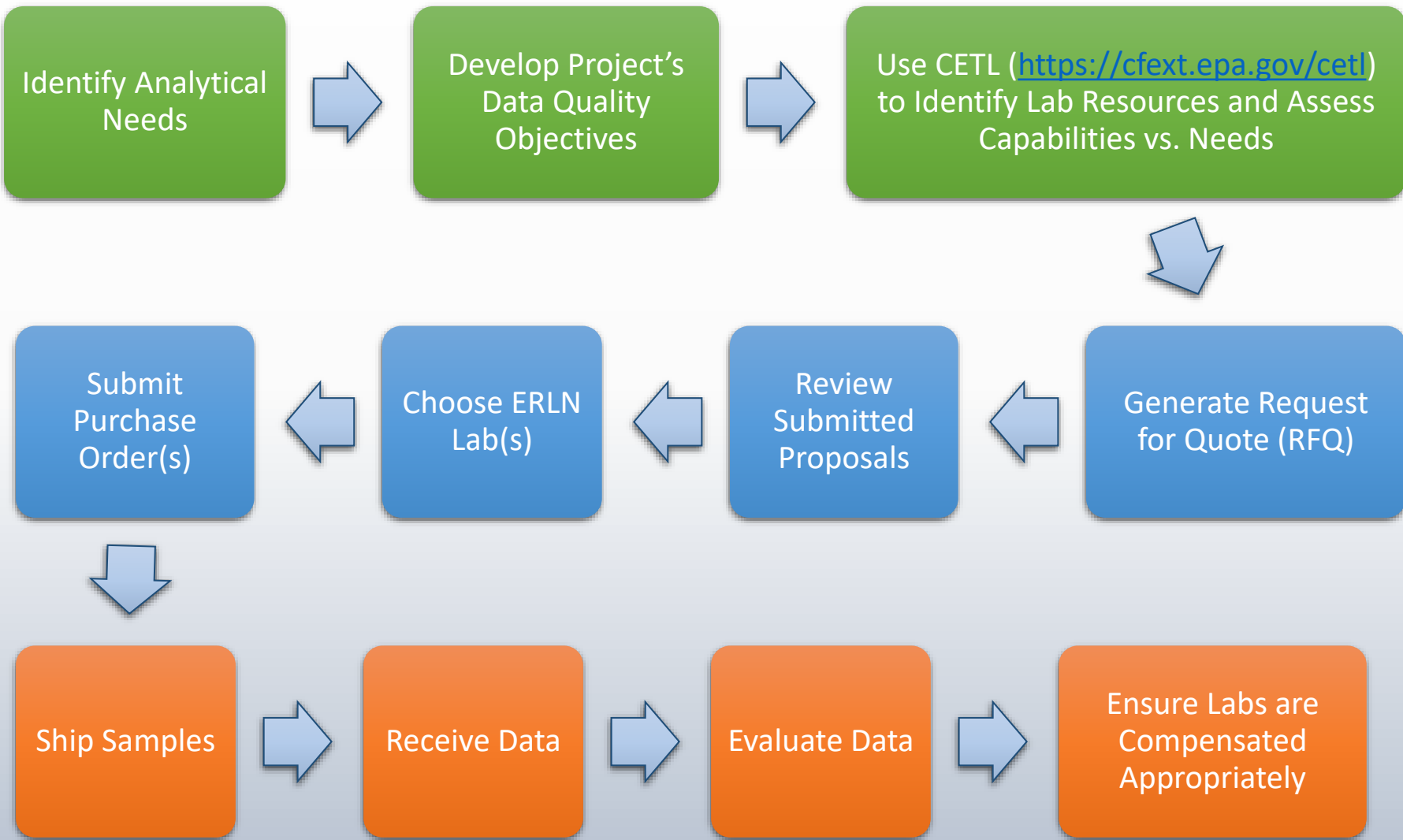
Access to emergency response exercises and training opportunities

Priority status for analytical support during emergency response actions

Relationships with peer labs with similar or complementary capabilities



ERLN Operations





Compendium of Environmental Testing Laboratories (CETL)



- <https://cfext.epa.gov/cetl/lblogin.cfm>
- Searchable compendium for rapid identification of ERLN and other laboratory resources
 - Capabilities
 - Capacities
 - Certifications
 - Instrumentation
 - Personnel
- CETL searches are customized for the situational analytical need
- CMAT verifies capabilities and capacities of identified labs
- Focused on homeland security-related analyses, but also documents additional capabilities

The screenshot displays the 'EPALABCOMPENDIUM' search interface. It includes a navigation bar with 'home', 'search by location', 'search', 'manage', and 'glossary'. Below the navigation bar, there are search filters for 'Lab Name', 'Lab Type', 'Region', 'Location (State)', 'ERLN Member', 'WLA Member', 'Mobile', 'Matrix', 'Analytical Capabilities', 'Support Services', and 'Special Sampling Handling'. A map of the United States is shown on the right, with a tooltip for 'EPA's Compendium Search by Location' that includes a link to 'Washington DC, Puerto Rico, American Samoa, Guam, Virgin Islands' and a search radius of 5 miles.



Data Exchange: MyEXES



- The Electronic Data Exchange & Evaluation System (EXES) is a web-based data assessment and management tool used by the Superfund Contract Lab Program (CLP)
 - Efficiently evaluates analytical data regardless of the input format
 - Flexible and scalable to support large monitoring programs involving laboratory analysis
- The MyEXES tool is the non-CLP feature – allows for standardized data exchange from multiple ERLN labs to the data user
- EXES Data Manager (EDM) is a centralized data management tool that stores all lab deliverables and results of data validation
 - Validation reports outlining identified issues and spreadsheets that include data and qualifiers ready for upload to databases and mapping tools
 - Allows users to edit and regenerate all reports
 - Provides an audit tracking log of all changes made
 - Limits access to data or reports based on data user's role

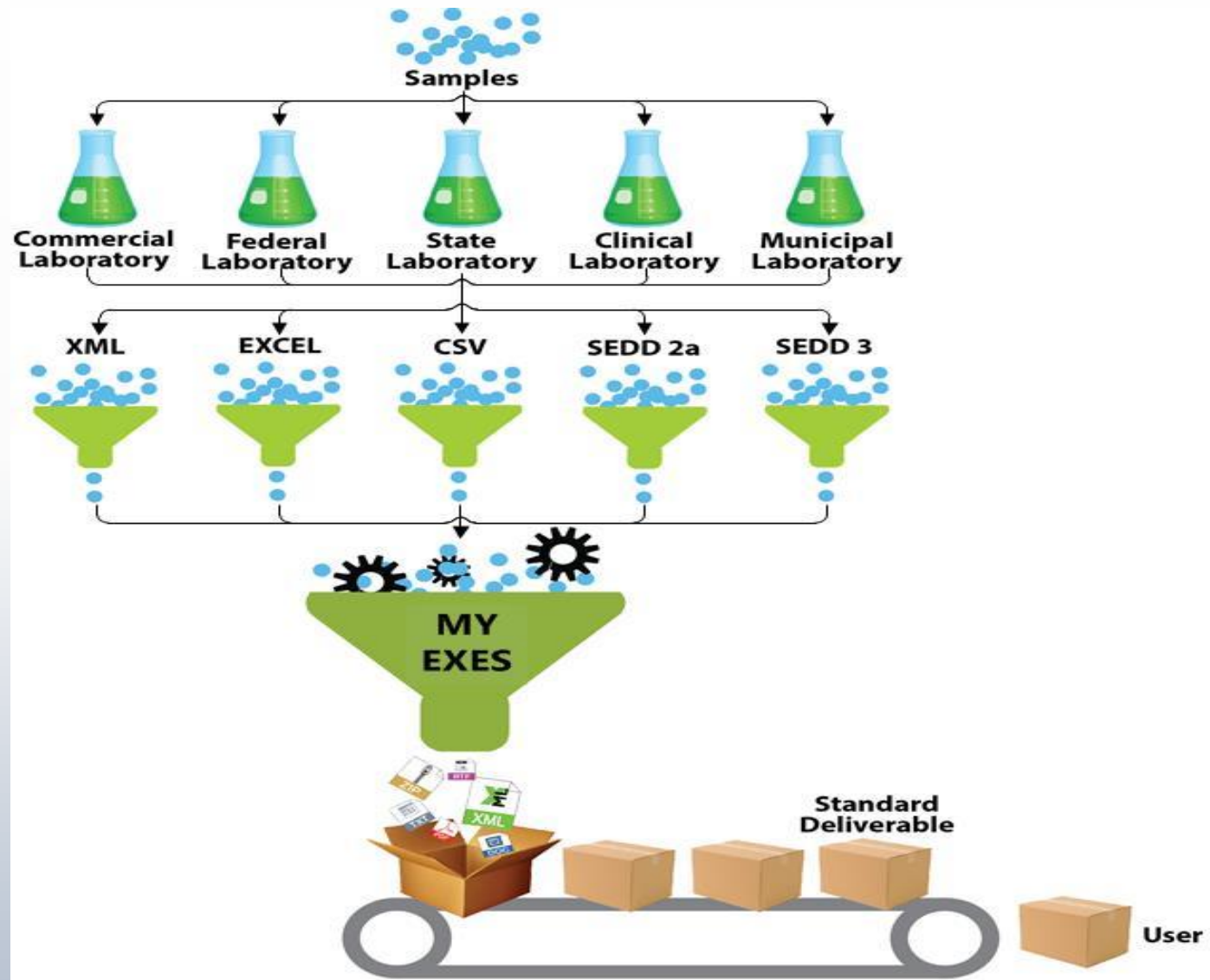


MyEXES Process

Analytical Results

Electronic Data Deliverable

Standardized Data



SEDD = Staged Electronic Data Deliverable



Recent ERLN Projects



- 2019: PHILIS Deployment to Rocky Mountain Arsenal Wildlife Refuge
- 2019-2020: PHILIS project with Mackenzie Chemical Site
- 2020: SARS-COV-2 pilot project with U.S. Army CCDC CBC and LLNL
- 2021: PHILIS Fentanyl analysis projects supporting state of Nebraska and EPA ORD CESER





Future Plans for ERLN



- (Re) establish BOAs with ERLN member labs
 - 13 renewals and 2 new BOAs currently in-progress
 - Many BOAs expired in 2021 or will expire in the next year
 - Easy to renew – FedConnect solicitation open through September 2021
- Conduct an ERLN exercise
 - Verify CBRN analytical capabilities
 - Familiarize ERLN labs with MyEXES
 - Verify ERLN labs can generate compliant SEDD files
- CETL Modernization
 - Complete modernization of the system
 - Single Sign-on with response.epa.gov



Contact Us

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Readiness – **24/7/365 On-Call**

To Activate the ERLN, Call HQ EOC – **(202) 564-3850**