2018 PRIORITIES WITH FOCUSED CONSTRAINTS • STATES POINT TO SHIFTING PRODUCT NEEDS

In 2018 the states were surveyed to understand the environmental issues and the technical constraints preventing solution. Approximately 45 states replied representing approximately 86% of our State Engagement Program.

What were the results? Priority results shifted very little since 2016, stronger themes in Remediation type issues arose. Remediation Plus input varied more. ITRC’s audience is shifting in terms of its preparation levels, current products are of high value but new platforms and technology could help reach a diversified audience.

Remediation Issues by Significance

1. Emerging Contaminants (PFAS/PFOA, 1,4-Dioxane, etc.)
   - Best management practices (BMPs) for assessing and determining the contaminant nature and extent of emerging contaminants (specifically PFAS/PFOA; 1,4-Dioxane; and nature and reactive potential of GENx).
   - Development of a national clearing house of applicable and acceptable detection limits and health base standards.
   - Research and guidance development on remediation approaches.

2. Contaminated Sites / Brownfields (Assessment and Cleanup Technologies)
   - Specific guidance development on new technologies for remediation:
     - High resolution site characterization
     - Cost effective discovery and removal options for chlorinated solvent plumes
     - Use of In-situ chemical oxidants / injectants and a long term cost feasibility study
     - Urban background contamination in additive to industrial releases
     - Personal-care products
     - Chloride – assessing anthropogenic inputs vs natural occurring

3. Vapor Intrusion / Petroleum Vapor Instruction
   - Science and guidance updates (including chlorinated vapor intrusion).
   - Evaluation and guidance on sub-slab depressurization systems vs passive systems.
   - Guidance on VI effects from sub-grade structures (including parking garages, etc.).
   - BMPs on mitigation system variations for industrial vs. commercial vs. residential structures.

4. Risk Assessment
   - Guidance on new methods for evaluating risk (especially from cross program perspectives).
   - Guidance on evaluating ecological risk (including compilation of data from eco-receptors and bioaccumulation).

5. Cleanup Regulations, Standards and Measures
   - BMPs on cross-program/state application consistency, constricted by:
     - Statistically low – broadly accepted laboratory detection limits
     - CWA and SDWA inconsistent cleanup goals
     - TCE guidance
     - Municipal treatment byproduct Chloroform management
     - State Specific vs RSLs
     - Resiliency considerations for at risk remedy projects
     - Development of sediment quality standards
     - Orphaned solvent cleanup goals
Remediation-Plus Issues by Significance

1. Public Water Supplies / Infrastructure / Aquifers
   - BMPs & guidance for measurable drinking water improvement models (including cost).
   - Guidance to address emerging contaminants in public water supplies.
   - Guidance to address pharmaceutical and personal care products in public water supplies.
   - BMPs for sustainable groundwater use and reduction of Big-agra extractions.
   - Guidance on lead monitoring/control in drinking water.
   - BMPs for disinfection methods for rural water, especially targeting trihalomethanes.
   - BMPs for regional planning of well head/aquifer protection & sewage disposal.
   - BMPs & guidance for GIS modeling applicable to demonstrate regional contaminant contributions.

2. Air Quality (pollution reduction, ozone transport)
   - Guidance on improved analytical methods for air quality sampling (including detection equipment overviews & training modules).
   - BMPs and assessment of field tools to verify combustor efficiency compliance with regulations.
   - Guidance on QA/QC requirements for continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS) data.
   - BMPs and guidance on greenhouse gas reporting, monitoring, and reducing.

3. Surface Water Quality
   - Guidance on control of nutrients, characterization and treatment harmful algal blooms (HABs).
   - Guidance on addressing environmental impacts from de-icing/road salt runoff including non-chemical additives/alternatives.
   - Guidance on addressing non-point source pollution from municipal storm water, agriculture, etc.
   - Guidance on resolving economic, cultural, and regulatory impediments to the use of sustainable agriculture and forestry practices to lower risk for water pollution.

4. Wastewater Treatment Plants Effluent / Septic
   - BMPs and guidance on effectively reducing nutrient levels in wastewater effluent.
   - Guidance on addressing aging infrastructure and costs to upgrade facilities.
   - Guidance on managing residual combined sewer and storm water discharges to meet water quality standards.
   - Guidance on the treatment of high strength wastes (i.e. septic waste, landfill leachate, food processing wash water, etc.).
   - BMPs and performance strategies for gravity fed, enhanced septic treatment systems.
   - Guidance on Advanced Integrated Pond Systems (including anaerobic treatment cells) for municipal wastewater treatment plants.
   - BMPs and evaluation of technical considerations and cost effectiveness of non-discharge evaporative waste pond systems for rural communities.

5. Resiliency and Vulnerability Assessment and Planning / Disaster Planning
   - Guidance and procedures to address resiliency planning for flooding and coastal flooding (and extreme weather events).
   - Guidance and procedures to address resiliency planning for wildfires.
   - BMPs and adaptation strategies for resilient cleanup remedy infrastructure and disaster planning for hazardous waste.
   - Guidance on sustainable infrastructure, including international summaries of existing decision frameworks for municipal and state regulators.
   - BMPs on incorporating disaster preparedness into long-term institution and engineering controls to maintain remedy resiliency.

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