

2020 ITRC Project Proposal

PFAS Team – Updating Information and Training

Proposal Date

5-10-19

Proposal Contacts

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Proposal Summary

Problem Statement

The state of the science and understanding of PFAS in all of the topic areas covered by the fact sheets and Technical and Regulatory Guidance Document (guidance document), is continuing to evolve rapidly and new peer-reviewed publications and science-based reports are being published even as the current PFAS Team completes their work. Unlike other environmental challenges, the pace at which new information is becoming available is rapid. As a result, there will be a need for an ITRC PFAS team to continue to track new information as it becomes available and provide appropriate updates to the document(s) and training materials to ensure these ITRC products maintain their value and relevance for users.

Specific Barriers being Addressed

The ITRC PFAS Team has produced seven fact sheets, drafted a (350-page) Technical and Regulatory Guidance Document; and conducted in-person training workshops in 10 locations (from April 2018 to April 2019) involving 1200 attendees. Approximately five additional training workshops are planned in 2019. Training workshops have been in high demand in 2019. The fact sheets, regulatory table updates, and training have been highly complimented and are very credible resources that are being used and referenced by our target audience members of state environmental project managers, as well as others from the professional environmental community.

As the knowledge and practice of PFAS site assessment and treatment evolve quickly, newer information should be provided in a timely manner to the agencies and practitioners. The goal of this new PFAS project team is to continue the work of providing up-to-date technical resources for our target audience of state environmental project managers and consultants, industry and federal project managers and stakeholders.

Project Summary

Work components of this new PFAS project team include Training Videos, Workshops, Guidance Document Updates, Fact Sheets Revisions, Web-based Database for Guidance Values Information and PFAS Podcasts.

Training Videos: The team is beginning work on training videos to accompany the publication of the guidance document. The videos will be developed in modules of about 30 minutes in length and paired with the content of the guidance document. The team intends to begin with the in-person workshop slides and tailor the actual video content to the finalized guidance document. The video format is currently being finalized, but the plan is to have slides with a video of the speaker presenting the materials. A first example video has been developed (April 2019) based on the Boston PFAS training workshop. During the current project, the plan is to develop videos for some of the topics below, depending on the development and approval time for this new training product. Videos for additional video topic modules could be developed during the new project. The current topics include the following:

- Introduction to PFAS
- Sources, Naming Conventions, Chemistry and Site Characterization
- Sampling and Analysis
- AFFF
- Fate and Transport
- Treatment Technologies
- Toxicity, Exposure and Risk Assessment
- Risk Communication

Workshops: The team expects there to be demand for additional in-person workshops during the new project period. Team-member suggested locations include Texas (San Antonio), Florida, Las Vegas, and Vermont. In addition, it was suggested that the PFAS team consider short (<1-2 hours) training sessions on special, detailed topics such as the following:

- Background/History and Use
- Regulatory Issues including Toxicity and Risk Assessment
- Sampling and Analysis
- Fate and Transport
- Remediation
- AFFF-specific issues
- Risk Communication (This may be of interest to DoD)

An additional suggestion is that we consider separating the workshops into an introductory class and then a more advanced class. The team would work with ITRC/ECOS to determine how to prioritize additional workshop locations and content.

Guidance Document Updates: The team is currently working to complete the web-based guidance document with a publication date of March 2020. The state of the science and understanding of PFAS in all of the topic areas covered by the fact sheets and guidance document are continuing to evolve rapidly

and many publications have been produced during the current project. USEPA, SERDP and ESTCP have funded research with results that can be incorporated into revised Fact Sheets and the web-based guidance document during 2020 and 2021. We anticipate that the following areas of the Fact Sheets and guidance document may require new or expanded information going forward:

- New Information
 - Address newly-identified sources of PFAS and discuss best practices to minimize releases to the environment
 - Modeling of PFAS fate and transport in the environment, including precursor transformation
 - Life cycle assessment of PFAS treatment
 - Information about sampling and analysis of PFAS in human blood and any advances in understanding of what PFAS serum concentrations indicate.
 - Fingerprinting tools for PFAS source identification and any advances in PFAS forensics (if available).
 - The adequacy of scientific information on the toxicity of PFAS mixtures, including methods to evaluate PFAS mixtures in human health risk assessments.
 - Advances in grouping similar PFAS for toxicological evaluation, analysis, or remediation.

- Expanded or Updated Information
 - Human and ecological toxicity data
 - New regulations (e.g., pending US EPA classification of certain PFAS as hazardous substances or hazardous waste, possible new US EPA drinking water advisories for other PFAS)
 - The chemistry of short-chain “replacement” PFAS
 - Occurrence and background concentrations (all media)
 - Improved understanding of PFAS fate and transport
 - Regulatory changes, with the continued production of updates of “Tables 4-1 and 4-2” and periodic updates to the “Section 5” Tables. See also the Values Database discussed below.
 - Impacts of regulatory changes (e.g., how site characterization and remediation strategies will change if PFAS are classified as hazardous substances or hazardous wastes by the US EPA)
 - Improvements and innovations in remediation technologies and/or risk management strategies
 - Collection of additional data for the treatment case studies table
 - Waste management and disposal protocols, to prevent further release of PFAS or toxic by-products such as HF.
 - Changes in analytical methods (published and in development)
 - Advances in data review and validation (published guidance anticipated during timeframe of project)
 - Advances in air sampling and analysis, occurrence
 - Site investigation techniques
 - More information about what PFAS are currently in commerce

Fact Sheets Update: During the new project, the team could re-visit the fact sheets and determine what streamlining could be done, given the web-based guidance document would be published and available online. The fact sheets would be shorter than they are now and link to the guidance document. We could call them Fast Facts. In addition, the team could consider a Fact versus Fiction FAQ document.

Values Database: During the new project, the regulatory values spreadsheet tables could be converted to a web-based database that would be searchable for users and could also include an information intake form that would allow users to supply new information. The website could include links to the state and other agency websites for the sources of the values. This would make the updating of the data tables more streamlined going into the future.

PFAS Podcast: A new idea is to have a regular Podcast feature where the team experts could be interviewed, and a short podcast file could be generated on different topics and made available through the PFAS document web site. This might be an opportunity to address some of the Fact versus Fiction information.

Primary Project Deliverables

The new team would begin in January 2020. The team would collect updates to the web-based guidance document to implement after the initial publication in March 2020. The team would work on the fact sheet streamlining after the guidance document is published. Work on the video modules would continue once the format and review process is finalized. In-person training workshops could be scheduled as needed. The team would plan to complete the work on videos, updated fact sheets, document revisions and the web database tool for the regulatory values by December 2021.

IIRC PFAS products to be produced:

- Training – continued training workshops, expand online video training
- Update to Existing IIRC Documents – provide updates to keep pace with new information, provide new information in some areas.
- Continued updates to the Regulatory Guidance and Values Spreadsheets– consider web-based database
- Fact Sheets – revision to the existing fact sheets to provide more streamlined documents with the latest information, Fast Facts.
- Case Studies – possible additions to the treatment case studies table

Proposed Team Composition

- Identify at least 2 possible state team leaders – Bob Mueller, NJ DEP (mentor, possibly retiring in the project timeframe); Sandra Goodrow, NJ DEP; and we expect that another team leader would come from the active state members, some of whom are writing subgroup leaders.
- The current (5-6-19) team membership is 475 people:
 - State and local – 117 (from 41 different states)

- Academic - 22
- Stakeholders - 8
- Federal - 73
- International - 13
- Private Sector - 242
- The team includes 296 members and 179 interested parties.

Additional Information

Support will be solicited from the following sources:

Air Force or Navy

Department of Defense via SERDP and ESTCP program