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Fall 2022

EPA United States Environmental Protection Agency

FSTRAC Newsletter

FEDERAL-STATE TOXICOLOGY RISK ANALYSIS COMMITTEE

What Is FSTRAC?

FSTRAC's mission is to strengthen relationships and cooperation among EPA, states and tribes through the exchange of technical information primarily regarding water-related human health and risk assessment and also share information on ecological effects related to water quality criteria. FSTRAC is composed of current representatives from governmental agencies (state, tribal, federal health and environmental agencies, and other regulatory authorities) and representatives from the Association of State Drinking Water Administrators (ASDWA) and the Association of Clean Water Administrators (ACWA). The goal of FSTRAC is to share information that supports the development of well-rounded, integrated approaches to effects assessment, risk assessment, risk management, risk communication, and standard-setting for drinking water, groundwater, and surface water contaminants. Specific objectives of FSTRAC include:

- To foster cooperation, consistency, and an understanding of goals and problems in human health and ecological risk assessment for contaminants in water.
- To allow the exchange of technical information, including toxicity/exposure data and analysis, and methodologies and assumptions related to the development and implementation of regulations, criteria, advisories, and other toxicity values under the Safe Drinking Water Act and the Clean Water Act, and other state and tribal rules and policies as applicable.
- To allow the exchange of information on research priorities and results.
- To share science policy concerns regarding water-related human health and ecological risk assessment.

Recent Webinars

FSTRAC holds several webinars each year to share information through presentations and discussions regarding human health risk analysis and water quality issues.

September 2022

Patterns of Occurrence of PFAS Compounds in Fresh Water Fish from Major U.S. Rivers (presented by Mr. John Wathen, OST/OW/EPA). Mr. Wathen presented information on the occurrence of PFAS in the fish tissue results from EPA's 2013–2014 National Rivers and Streams Assessment (NRSA). He noted that these fish tissue samples were analyzed for perfluorooctane sulfonic acid (PFOS) and other per- and polyfluoroalkyl substances (PFAS). Mr. Wathen mentioned that fewer PFAS are detected in fish than in water. He noted that 322 of the 348 fish tissue samples analyzed for PFAS in EPA's 2013–2014 NRSA contained both PFOS and up to five other PFAS (i.e., perfluoroundecanoic acid (PFUnA),

The purpose of this newsletter is to update Federal-State Toxicology and Risk Analysis Committee (FSTRAC) members on current developments in toxicology, risk analysis, and water quality criteria and standards. This newsletter also provides information on recent FSTRAC webinars and upcoming events. Please share this newsletter with those who may be interested in these topics. If you are interested in joining FSTRAC, please contact the FSTRAC Co-Chairs, Dr. Shamima Akhter (Akhter.Shamima@epa.gov) or Ms. Katie Fallace (Katie.Fallace@state.mn.us).

perfluorodecanoic acid (PFDA), perfluorododecanoic acid (PFDoA), perfluorononanoic acid (PFNA), and perfluorooctanesulfonamide (PFOSA)). He mentioned that the PFOS tissue consumption screening level of 46 ng/g (calculated using EPA's current reference dose of 0.00002 mg/kg/day) was exceeded in 28 of the 348 fish samples. Mr. Wathen noted that on a large scale, PFAS in fish occured in repeatable patterns with basic SUDo (PFO**S** + PF**U**nA + PF**D**A + PFD**o**A) variants comprising 46 percent of EPA's 2013–2014 sample set, and that there have been comparable patterns of detection of these compounds in fish collected from streams and lakes in New Jersey.

Evaluating Chemical Contaminants in Biosolids: A Collaboration Between EPA's Center for Computational Toxicology and Exposure and EPA's Office of Water (presented by Dr. Caroline L. Ring, CCTE/ORD/EPA). Dr. Ring mentioned that the Clean Water Act requires EPA's Office of Water (OW) to evaluate chemicals and microbes that occur in biosolids for harm to human health and the environment. She noted that EPA OW has a need to fill data gaps to more efficiently evaluate biosolids contaminants. Dr. Ring mentioned that researchers from EPA's Office of Research and Development (ORD), Center for Computational Toxicology and Exposure (CCTE) are working with EPA OW to provide data and tools to support biosolids chemical prioritization and screening, including curating a list of chemicals found in biosolids, adapting a Public Information Curation and Synthesis (PICS) prioritization workflow (that originally was developed in the context of Toxic Substance Control Act (TSCA) prioritization) for biosolids, and developing a high-throughput consensus model to predict biosolids chemical concentrations.

National Biosolids Data Project (presented by Ms. Janine Burke-Wells, North East Biosolids & Residuals Association). Ms. Burke-Wells mentioned that the first National Survey of Biosolids Regulation, Quality, End Use and Disposal was conducted in 2004 and that the second survey (consisting of a biosolids coordinators survey and a wastewater reclamation facility (WWRF) survey) was conducted in 2018. The 2018 survey topics included general information, sewage sludge and biosolids, septage received, energy, economic data, trends, and the top five pressures on the Biosolids Management Program. She noted that the survey trend results from 2004 to 2018 indicated that there was a slight decrease in biosolids being produced, more pressures and incentives to divert from landfills, and a decrease in total solids used or disposed in the United States. Ms. Burke-Wells mentioned that survey results are available at http://www.biosolidsdata.org, including state-specific data, costs for biosolids use or disposal, and what crops are grown with biosolids. She described the benefits of recycling biosolids (e.g., enhancing soil health, recycling nutrients, reducing fertilizer and pesticide use, strengthening farm economies) and concerns with recycling biosolids (e.g., odors, over-applying of nutrients, and trace contaminants (e.g., PFAS)).

PFAS in Soil and Groundwater Following Historical Land Application of Biosolids (presented by Dr. Gwynn Johnson, Portland State University, Civil and Environmental Engineering Department). Dr. Johnson provided an overview of biosolids application as a soil amendment, including patterns and techniques for land application of sewage sludge. She noted that biosolids contain inorganic and organic materials, as well as metals, pharmaceuticals, persistent and emerging pollutants, flame retardants, steroids, and PFAS. Dr. Johnson mentioned that risks in long-term land applications of biosolids include heavy metal mobility through the soil profile and off-site migration, persistent "forever" organic pollutants (e.g., PFAS) accumulating and migrating in the soil sludge zone, and organic toxins found in groundwater and in dairy products on farms. She presented the results from her study on a 4,600-acre farm to which biosolids had been land-applied since the mid-1990s. Dr. Johnson mentioned that PFOS and PFOA had migrated through the soil profile at the farm, the soil burden of PFOS > PFDA > PFOA at all sampling locations, and PFOS and PFOA measured in shallow groundwater were 2- to 4-orders of magnitude greater than EPA's corresponding interim HA levels for drinking water.

Field Study of Perfluoroalkyl Substances (PFASs) in WWTP Influent, Effluent and Biosolids—Preliminary Data from Hawaii (presented by Dr. Roger Brewer, Hawaii Department of Health). Dr. Brewer described two types of laboratory tests used to assess the leachability of PFASs from the biosolids. He noted that the Method 1314 soil column leaching test in theory provides data most directly comparable to the HDOH water action levels, but that additional modification of the test was needed to allow

for a larger sample volume size and to reduce the number of analyses carried out on the leachate generated. He noted that the Synthetic Precipitation Leaching Procedure (SPLP) is most properly used to estimate a sorption coefficient (Kd) for individual PFASs, rather than direct comparison to action levels. The sorption coefficient can be used to estimate the tightness to which the compound is bound to the biosolids and the overall leaching risk. Dr. Brewer presented a summary of the study results, noting that the PFASs makeup of influent and effluent was variable among WWTPs and that PFOS and PFOA were not necessarily the main compounds of concern. The PFASs makeup of biosolids was, in contrast, similar and dominated by fluorotelomer carboxylates, for which toxicity factors are not available. The HDOH drinking water and aquatic toxicity action levels were not exceeded in influent or effluent at any of the WWTPs. Sorption coefficients calculated based on SPLP test data for biosolids suggest that most PFASs are tightly bound to organic material and clays in the biosolids and do not appear to pose a significant leaching problem. Additional Method 1314 soil column leaching studies are needed to better understand this issue, however. Sample collection at five additional WWTPs is anticipated in late 2022 and 2023.

July 2022

EPA's Drinking Water Health Advisories Developed for Four PFAS (PFOA, PFOS, GenX, PFBS) (presented by Dr. Carlye Austin and Ms. Czarina Cooper, OST/OW/EPA). Dr. Austin and Ms. Cooper provided an overview of EPA's four PFAS Health Advisories (HAs) that were published on June 15, 2022. First, Dr. Austin presented the information and process used to develop the interim HAs (iHAs) for PFOA and PFOS. Interim or provisional HA values can be developed to provide information in response to an urgent or rapidly developing situation. EPA has developed interim HAs rather than final HAs for PFOA and PFOS because the input values used to derive the iHAs are currently draft values and EPA has identified a pressing need to provide information to public health officials prior to their finalization. Specifically, the interim HAs were derived using draft reference dose (RfD) and relative source contribution (RSC) values that were developed in draft PFOA and PFOS assessments that have recently undergone Science Advisory Board (SAB) review and are being revised in response to SAB comments. She noted that the iHA values for PFOA and PFOS are 0.004 parts per thousand (ppt) and 0.02 ppt, respectively. Because the interim HAs are based on draft values, they are subject to change. Second, Ms. Cooper presented the information and process used to develop the HAs for PFBS and GenX chemicals. The final HAs for PFBS and GenX chemicals are 2,000 ppt and 10 ppt, respectively. They indicated that each PFAS HA document includes an analytical methods section and a treatment technologies section. The HA documents also include a brief section summarizing approaches to the assessment of health risks of PFAS mixtures, and an example applying EPA's *Draft Framework for Estimating Noncancer Health Risks Associated with Mixtures of Per- and Polyfluoroalkyl Substances (PFAS)* using the Hazard Index approach to assess the potential noncancer risk of a mixture of PFOA, PFOS, GenX chemicals, and PFBS. Dr. Austin and Ms. Cooper emphasized that EPA's HA levels are non-enforceable and non-regulatory.

Additional information:

- Interim Updated PFOA and PFOS HAs (available at www.epa.gov/sdwa/drinking-water-health-advisories-pfoa-and-pfos)
- Final PFBS and GenX Chemicals HAs (available at www.epa.gov/sdwa/drinking-water-health-advisories-genx-chemicals-and-pfbs)

Risk Assessment

Drinking Water

Contaminant Candidate List 5 – CCL 5

The Contaminant Candidate List (CCL) is a list of contaminants that are currently not subject to any proposed or promulgated national primary drinking water regulations but are known or anticipated to occur in public water systems. Contaminants listed on the CCL may require future regulation under the Safe Drinking Water Act (SDWA). With the announcement

of the Draft CCL 5 on July 19, 2021, EPA provided a period for public comment and consulted with EPA's Science Advisory Board (SAB). Following revisions to address public comments and SAB's review, EPA published the Final CCL 5 on November 14, 2022.

The CCL 5 includes 66 chemicals, three chemical groups (per- and polyfluoroalkyl substances (PFAS), cyanotoxins, and disinfection byproducts (DBPs)), and 12 microbes, which were selected from a universe of chemicals used in commerce, pesticides, biological toxins, disinfection byproducts, and waterborne pathogens. The development of CCL 5 is based on the existing framework used for the previous Contaminant Candidate List 3 (CCL 3) and its carryover, the Contaminant Candidate List 4 (CCL 4). In developing the CCL 5, EPA implemented improvements to the CCL process to better identify, screen, and classify potential drinking water contaminants. These improvements resulted in a CCL 5 that can better support prioritization of contaminants for regulatory decisions and research efforts.

More information on the final Fifth Contaminant Candidate List (CCL 5).

Hawai'i Department of Health

The Hawai'i Department of Health is carrying out laboratory studies to better assess the chemical makeup and toxicity of dissolved-phase petroleum contaminants in drinking water. Multiple types of petroleum fuels will be included. This in part follows the inadvertent release of several thousand gallons of JP-5 jet fuel into the drinking water system of Joint Base Pearl Harbor Hickam in November 2021. Much and in many cases most of the risk posed by exposure to neat and dissolved-phase petroleum fuel is posed by non BTEX (benzene, toluene, ethylbenzene and xylenes) or PAH (polycyclic aromatic hydrocarbon)-related aromatic and aliphatic compounds and/or degradation products of both sets of compounds. Toxicity factors have been available for both for some time, but a detailed understanding of the mixture of these groups of compounds has been lacking. The results of the study, anticipated to be completed in early 2023, will allow calculation of more refined, risk-based screening levels for non-specific mixtures of "Total Petroleum Hydrocarbon (TPH)" in drinking water as well as mixtures of petroleum-related degradation compounds, collectively referred to "Hydrocarbon Oxidation Products" or "HOPs."

Clean Water

2022 Draft Aquatic Life Criteria for PFOA and PFOS

As part of EPA's commitment to safeguard the environment from per- and polyfluoroalkyl substances, the agency announced the availability of Clean Water Act national "Draft Aquatic Life Ambient Water Quality Criteria for Perfluorooctanoic acid (PFOA)" and "Draft Aquatic Life Ambient Water Quality Criteria for Perfluorooctane Sulfonate (PFOS)" for a 30-day public comment period on May 3, 2022. On May 31, 2022, the agency extended the public comment period to allow additional time for stakeholders to provide comments. This extended public comment period closed on July 5, 2022.

These draft criteria reflect the latest scientific knowledge regarding the effects of PFOA and PFOS on aquatic life. The draft PFOA and PFOS criteria documents both contain water column-based acute and chronic criteria for freshwaters, and chronic tissue-based criteria for freshwaters, to protect aquatic life from PFOA and PFOS bioaccumulation. The chronic freshwater and chronic tissue criteria are intended to be independently applicable and no one criterion takes primacy. Once finalized, states and authorized tribes can adopt these recommended criteria into water quality standards to protect against harmful effects of PFOA and PFOS on aquatic life.

EPA also derived draft acute estuarine/marine benchmarks for PFOA and PFOS using available toxicity data supplemented with modeled estimates of acute toxicity, through application of a New Approach Method (NAM). The acute estuarine/marine benchmarks are also intended to be protective of aquatic life designated uses. Once finalized, the acute estuarine/marine benchmarks are also recommendations for states and tribes to consider as protective values in their water quality protection programs.

- Draft Aquatic Life Ambient Water Quality Criteria for Perfluorooctanoic Acid (PFOA) (available at https://www.epa.gov/wqc/aquatic-life-criteria-perfluorooctanoic-acid-pfoa)

- Draft Aquatic Life Ambient Water Quality Criteria for Perfluorooctane Sulfonate (PFOS) (available at https://www.epa.gov/wqc/aquatic-life-criteria-perfluorooctane-sulfonate-pfos)

Implementing the BEACH Act of 2000: 2022 Report to Congress

EPA's Implementing the BEACH Act of 2000: *2022 Report to Congress* documents the recent progress that states, tribes, territories, EPA, and other federal agencies have made to implement the Beaches Environmental Assessment and Coastal Health (BEACH) Act of 2000. Section 7 of the BEACH Act (33 U.S.C. § 1375a) requires EPA to publish reports to Congress on the implementation of the Act every four years.

Coastal beaches are one of our nation's natural treasures. They are important for recreation and connecting with nature and are an integral part of our national economy. According to the United States Census Bureau, 94.7 million people, or about 29.1% of the total U.S. population, lived in coastline counties in 2017. The United States Lifesaving Association estimated there were more than 400 million visits to U.S. beaches in 2019. Ocean-based tourism and recreation contributes an estimated $143 billion in gross domestic product to the national economy each year according to the National Oceanic and Atmospheric Administration.

The BEACH Act of 2000: *2022 Report to Congress* highlights EPA accomplishments since the 2018 BEACH Act Report to Congress:

- draft analytical methods for coliphage, an indicator of viral fecal contamination
- advances in qPCR methods providing same-day monitoring results
- the development of the Alternative Methods Calculator Tool
- recreational water quality criteria for cyanotoxins
- the development and release of the Sanitary Survey App, which is used to identify sources of fecal contamination and document harmful algal blooms
- the development of a web-based version of Virtual Beach software which predicts pathogen indicator levels
- a preliminary analysis to identify beaches near communities with possible environmental justice concerns

The BEACH Act of 2000: *2022 Report to Congress* also details numerous programs and projects employed by the 39 states, tribes, and territories that receive BEACH Act grants to monitor coastal water quality and keep the public informed within current budgets and staff levels, while facing challenges caused or exacerbated by the COVID-19 pandemic and climate change.

EPA's Implementing the BEACH Act of 2000: *2022 Report to Congress* is available on EPA's Data and Reports about Beach Health website.

Annual Beach Swimming Season Reports

EPA releases an annual report that contains national-level statistics of beach closings and advisories that states, territories, and tribes issued during the swimming season as well as beach data trends over several years. You can also create a report for any year from 2014 to the present that uses the most up-to-date information in EPA's database (that may have been updated after our reports were released) using the dynamic report. EPA's 2021 Beach Swimming Season Report (EPA 823-R-22-002) is available here: https://www.epa.gov/system/files/documents/2022-07/beach-report-2021.pdf

Model Quality Assurance Project Plan (QAPP) for Sanitary Survey

This model quality assurance project plan (QAPP) supports participatory scientists with the development of QAPPs for collecting environmental data and information using the EPA Sanitary Survey App for Marine and Fresh Waters. Use of the app requires a QAPP. The model QAPP provides a template that participatory science groups can tailor with their own project-specific information, when collecting data using the app and paper versions of the sanitary surveys. EPA's Model QAPP for the EPA Sanitary Survey App for Marine and Freshwaters is available here: https://www.epa.gov/beach-tech/sanitary-surveys-recreational-waters#model

Publications

The Fifth Unregulated Contaminant Monitoring Rule (UCMR 5)

UCMR 5 was published in December 2021 (86 FR 73131) and specifies monitoring by public water systems (PWSs) for 29 per- and polyfluoroalkyl substances (PFAS) and lithium. The five-year UCMR 5 cycle spans from 2022 through 2026, with preparations in 2022, sample collection between January 1, 2023, and December 31, 2025, and completion of data reporting in 2026. Starting summer of 2023, UCMR 5 monitoring results will be published quarterly to the public through the National Contaminant Occurrence Database (NCOD). EPA recently hosted four webinars in October 2022 (two for small PWSs [serving ≤10,000 people], two for large PWSs [serving >10,000 people]) to review key elements of the UCMR 5 program and the actions that PWSs must take to prepare for monitoring. The presentations and a recording of the webinars will be posted to the Meetings and Materials website. For more information, visit EPA's UCMR Website.

New NPS Resource for Land Trusts

EPA's Healthy Watersheds team has released a new resource to support watershed conservation: Advancing Watershed Protection Through Land Conservation: A Guide for Land Trusts. More information on the Healthy Watersheds Team and watershed protection can be found here.

Draft Method 1633 for 40 PFAS Compounds

EPA's Office of Water, in partnership with the Department of Defense's (DoD) Strategic Environmental Research and Development Program, has published draft Method 1633, a single-laboratory validated method to test for 40 PFAS compounds in wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue. This draft method can be used in various applications, including National Pollutant Discharge Elimination System (NPDES) permits. The method will support NPDES implementation by providing a consistent PFAS method that has been tested in a wide variety of wastewaters and contains all the required quality control procedures for the Clean Water Act (CWA). While the method is not nationally required for CWA compliance monitoring until EPA has promulgated it through rulemaking, it is recommended now for use in individual permits.

Multiple EPA programs have reviewed this draft method. DoD has begun a multi-laboratory validation study of the procedure, which is expected to be completed in 2022. DoD's multi-laboratory validation is proceeding in collaboration with the Office of Water, the Office of Land and Emergency Management, and the Office of Research and Development.

The Office of Water will use the results of the multi-laboratory validation study to finalize the method and add formal performance criteria. The method validation process may eliminate some of the parameters listed in this draft method. In the meantime, the Office of Water encourages laboratories, regulatory authorities, and other interested parties to review and use the draft method, with the understanding that it is subject to revision.

EPA's 2nd Draft Method 1633 Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC MS/MS is available on EPA's CWA Analytical Methods for Per- and Polyfluorinated Alkyl Substances website.

External Peer Review of Draft IRIS Toxicological Review of Perfluorohexanoic Acid (PFHxA) and Related Salts

EPA's draft *IRIS Toxicological Review of Perfluorohexanoic Acid (PFHxA) and Related Salts* underwent an independent external scientific peer review. The final external panel peer review report is available here.

Update on EPA ORD's Strategic Research Action Plans for Fiscal Years 2023–2026

EPA ORD's Strategic Action Plans have been finalized for the following six national research programs that collectively target the science and engineering needed to provide the scientific foundation for EPA to execute its mandate to protect human health and the environment:

- Air, Climate, and Energy (ACE)
- Chemical Safety for Sustainability (CSS)

- Health and Environmental Risk Assessment (HERA)
- Homeland Security (HS)
- Safe and Sustainable Water Resources (SSWR)
- Sustainable and Healthy Communities (SHC)

These Strategic Action Plan can be found here.

Evaluating Tribal Dietary, Lifestyle, and Ceremonial Exposures for Use in EPA Superfund Risk Assessments

The "Evaluating Tribal Dietary, Lifestyle, and Ceremonial Exposures for Use in EPA Superfund Risk Assessments" report was finalized last year and included as an EPA special collection document. This report includes information from the second year of intern projects to gather information from Superfund risk assessments and other sources such as state studies to obtain information on tribal exposures from food (plant and animal) not already included in the EPA Preliminary Remediation Goals for Radionuclides (PRG) calculator for radionuclides (https://epa-prgs.ornl.gov/cgi-bin/radionuclides/rprg_search). In this new report data is provided on over forty plant products and over twenty-five animal products that were not included in the PRG calculator, nor the two reports authored by the previous intern Grace Maley. While many of these species constitute entirely new additions, others provide clarity with regards to specific species or cooking preparations. All of these additions pertain to specific Indigenous communities. Lastly, this report also incorporates lifestyle and ceremonial tribal exposures. Examples include water consumption, soil ingestion, and inhalation rates.

This report is the product of an intern project overseen by Jon Richards of EPA Region 4 along with Stuart Walker and Michele Burgess of EPA's Office of Superfund Remediation and Technology Innovation.

U.S. Environmental Protection Agency. 2021. *Evaluating Tribal Dietary, Lifestyle, and Ceremonial Exposures for Use in EPA Superfund Risk Assessments*. EPA Special Collection Document. https://semspub.epa.gov/work/HQ/100002840.pdf

Hawai'i Department of Health

Dr. Roger Brewer, with the Hawai'i Department of Health, published a paper entitled "Fake Data? The Need for Theory of Sampling Concepts in Environmental Research and Investigations" as part of the 10th World Conference on Sampling and Blending held in Kristiansand, Norway, in May-June 2022. The conference was attended by representatives of the mining, agriculture, pharmaceutical, recycling and environmental industries, all of which rely on sampling intensive studies for critical decision making. The paper highlights dramatic differences in sampling methods and resulting data reliability between the economics-driven commodities industries and the risk-driven environmental industry and postulates on forces that cause the latter to lag so far behind the former. Approaches to improve data reliability and confidence in decision making for testing of contaminated soil, sediment, air and water based on "Decision Unit" and "Multi Increment" type sampling methods long employed in the commodities industry are presented. Links to a recording of the presentation and the published paper are available on the Hawai'i DOH DU-MIS webpage: https://health.hawaii.gov/heer/guidance/specific-topics/decision-unit-and-multi-increment-sampling-methods/

Fake Data? The Need for Theory of Sampling Concepts in Environmental Research and Investigations: Proceedings of the 10th World Conference on Sampling and Blending, TOS Forum Issue 11, 193–205 (2022), ISSN: 2053-969X, doi: https://doi.org/10.1255/tosf.149

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Upcoming Events and Conferences

Upcoming FSTRAC Webinar

The next FSTRAC Webinar is scheduled for spring 2023. Additional details, including the date of the next FSTRAC Webinar, will be provided to FSTRAC members in the coming weeks.

Upcoming EPA Fish Forum

The U.S. EPA, Office of Water, will hold a virtual National Fish Forum early next year on Contaminants in Fish to bring together interested stakeholders to discuss the many issues related to human health and contaminants in fish. The Forum will be all virtual and will take place during four days, two days each of the following weeks:

Week 1: February 28 and March 2, 2023
(12:00 - 5:30 PM Eastern Time)

Week 2: March 7 and 9, 2023
(12:00 - 5:30 PM Eastern Time)

Register for the Fish Forum at:
https://usepa.zoomgov.com/webinar/register/WN_h_jw0futQ1GjDim2P51Ubg

For more information, visit https://www.epa.gov/fish-tech/2023-national-fish-forum

Tribal Nonpoint Source Program Consultation

EPA seeks to better understand how the national NPS program can better support Tribes and Nations through action(s) in the CWA §319 program. Click here to learn more about the Consultation and Coordination on *Potential EPA Actions to Increase Tribal Capacity to Maintain and Expand Nonpoint Source Management Programs*.

Comment period 2 is open from October 24 to December 23, 2022! Submit comments via EPA's web form here.

Public Comment Period for the Draft IRIS Assessment of Hexavalent Chromium [Cr(VI)]

EPA's IRIS Program is announcing the release of the draft *IRIS Toxicological Review of Hexavalent Chromium [Cr(VI)]* for public comment and external peer review. The 60-day public comment period ends on December 19, 2022. Written comments should be submitted to docket (EPA-HQ-ORD-2014-0313) via Regulations.gov.

For more information on the draft IRIS Assessment of Hexavalent Chromium [Cr(VI)], including how to submit comments, visit the Federal Register or the EPA IRIS website.

SETAC North America Annual Meeting – Society of Environmental Toxicology and Chemistry

SETAC will be holding its 44th annual North America meeting on November 12–16, 2023 in Louisville, Kentucky. Additional information is provided on the SETAC website: https://www.setac.org/events/EventDetails.aspx?id=1514446.

SOT Annual Meeting – Society of Toxicology

SOT will be holding its 62nd Annual Meeting and ToxExpo in Nashville, Tennessee on March 19–23, 2023. Additional information is provided on the SOT website: https://www.toxicology.org/events/am/AM2023/index.asp

SRA Annual Meeting – Society for Risk Analysis

SRA will be holding its 2023 annual meeting in Washington, D.C. on December 3–7, 2023. Additional information is provided on the SRA website: https://www.sra.org/event/2023-sra-annual-meeting/

ASM Microbe – American Society for Microbiology

ASM Microbe will be holding its annual meeting in Houston, Texas, on June 15–19, 2023. Additional information is provided on the ASM website: https://asm.org/Events/ASM-Microbe/Home

ECOS – Environmental Council of the States

ECOS will be holding its 2023 ECOS Spring Meeting on March 27–30, 2023 in Arlington, Virginia. Additional information is provided on the ECOS website: https://www.ecos.org/events/.

ITRC Webinar – Interstate Technology Regulatory Council

ITRC is holding the following trainings in early 2023:

- January 24: Soil Background & Risk Assessment
- January 31: 1,4-Dioxane: Science, Characterization & Analysis, and Remediation
- March 2: Harmful Cyanobacterial Blooms (HCBs); Strategies for Preventing and Managing
- March 7: Microplastics
- March 9: Harmful Cyanobacterial Blooms (HCBs): Benthics

Additional information is provided on the ITRC website: https://itrcweb.org/events/calendar.

NDWAC – National Drinking Water Advisory Council

NDWAC Microbial and Disinfection Byproducts Rules Revision Working Group Meeting

EPA has requested that NDWAC provide the agency with advice and recommendations on key issues related to EPA's potential regulatory revisions effort for eight National Primary Drinking Water Regulations (NPDWRs) included in Microbial and Disinfection Byproducts (MDBP) rules. The NDWAC MDBP Rule Revisions Working Group will meet on **December 13, 2022 from 11:00 a.m. to 6:00 p.m., Eastern Standard Time**. Registration for members of the public to listen to this virtual meeting is available here.

EPA ORD Upcoming Events

EPA New Approach Methods (NAMs) Training Program

The NAMs training program outlined in the NAMs work plan to create courses and workshops for interested stakeholders is well underway. The NAMs Training website is online with a wealth of easily searchable information and training materials about EPA NAMs research and tools.

EPA Research Webinar Series

EPA ORD hosts several webinar series dedicated to providing the latest information and training on cutting-edge scientific research activities and results in order to provide assistance and solutions to environmental and public health issues. The webinars are free of charge and open to the public. Additional information, schedules, and registration can be found on the individual webinar series webpages here.