December 6, 2021

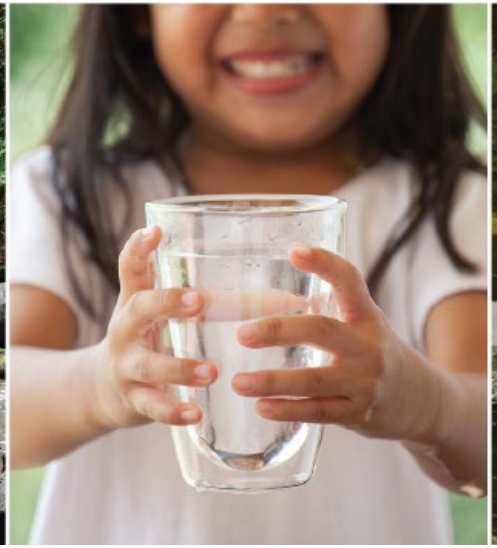
Alignment between the EPA PFAS RoadMap & DEQ Emerging Contaminants Framework

Sushma Masemore
DEQ Assistant Secretary for the Environment

EPA PFAS Roadmap (2021 – 2024)

EPA
United States
Environmental Protection
Agency

PFAS Strategic Roadmap:
EPA's Commitments to Action
2021–2024


The Agency's Approach

Consider the Lifecycle of PFAS

EPA will account for the full lifecycle of PFAS, their unique properties, the ubiquity of their uses, and the multiple pathways for exposure.

Get Upstream of the Problem

EPA will bring deeper focus to preventing PFAS from entering the environment in the first place—a foundational step to reducing the exposure and potential risks of future PFAS contamination.

Hold Polluters Accountable

EPA will seek to hold polluters and other responsible parties accountable for their actions and for PFAS remediation efforts.

Ensure Science-Based Decision-Making

EPA will invest in scientific research to fill gaps in understanding of PFAS, to identify which additional PFAS may pose human health and ecological risks at which exposure levels, and to develop methods to test, measure, remove, and destroy them.

Prioritize Protection of Disadvantaged Communities

When taking action on PFAS, EPA will ensure that disadvantaged communities have equitable access to solutions.

EPA PFAS Roadmap (2021 – 2024)

Goals and Objectives

EPA's comprehensive approach to addressing PFAS is guided by the following goals and objectives.

RESEARCH

Invest in research, development, and innovation to increase understanding of PFAS exposures and toxicities, human health and ecological effects, and effective interventions that incorporate the best available science.

Objectives

- Build the evidence base on individual PFAS and define categories of PFAS to establish toxicity values and methods.
- Increase scientific understanding on the universe of PFAS, sources of environmental contamination, exposure pathways, and human health and ecological effects.
- Expand research on current and emerging PFAS treatment, remediation, destruction, disposal, and control technologies.
- Conduct research to understand how PFAS contribute to the cumulative burden of pollution in communities with environmental justice concerns.

REMEDIATE

Broaden and accelerate the cleanup of PFAS contamination to protect human health and ecological systems.

Objectives

- Harmonize actions under all available statutory authorities to address PFAS contamination to protect people, communities, and the environment.
- Maximize responsible party performance and funding for investigations and cleanup of PFAS contamination.
- Help ensure that communities impacted by PFAS receive resources and assistance to address contamination, regardless of income, race, or language barriers.
- Accelerate the deployment of treatment, remediation, destruction, disposal, and mitigation technologies for PFAS, and ensure that disposal and destruction activities do not create new pollution problems in communities with environmental justice concerns.

RESTRICT

Pursue a comprehensive approach to proactively prevent PFAS from entering air, land, and water at levels that can adversely impact human health and the environment.

Objectives

- Use and harmonize actions under all available statutory authorities to control and prevent PFAS contamination and minimize exposure to PFAS during consumer and industrial uses.
- Place responsibility for limiting exposures and addressing hazards of PFAS on manufacturers, processors, distributors, importers, industrial and other significant users, dischargers, and treatment and disposal facilities.
- Establish voluntary programs to reduce PFAS use and release.
- Prevent or minimize PFAS discharges and emissions in all communities, regardless of income, race, or language barriers.

EPA PFAS Roadmap (2021 – 2024)

The Roadmap lays out:

- Enforceable drinking water limits
- A hazardous substance designation.
- Timelines for action on Effluent Guideline Limitations for 9 industrial categories.
- A review of past actions on PFAS taken under the Toxic Substances Control Act.
- Increased monitoring, data collection and research.
- A final toxicity assessment for GenX.
- Continued efforts to build the technical foundation needed on PFAS air emissions.

North Carolina Emerging Contaminants Framework

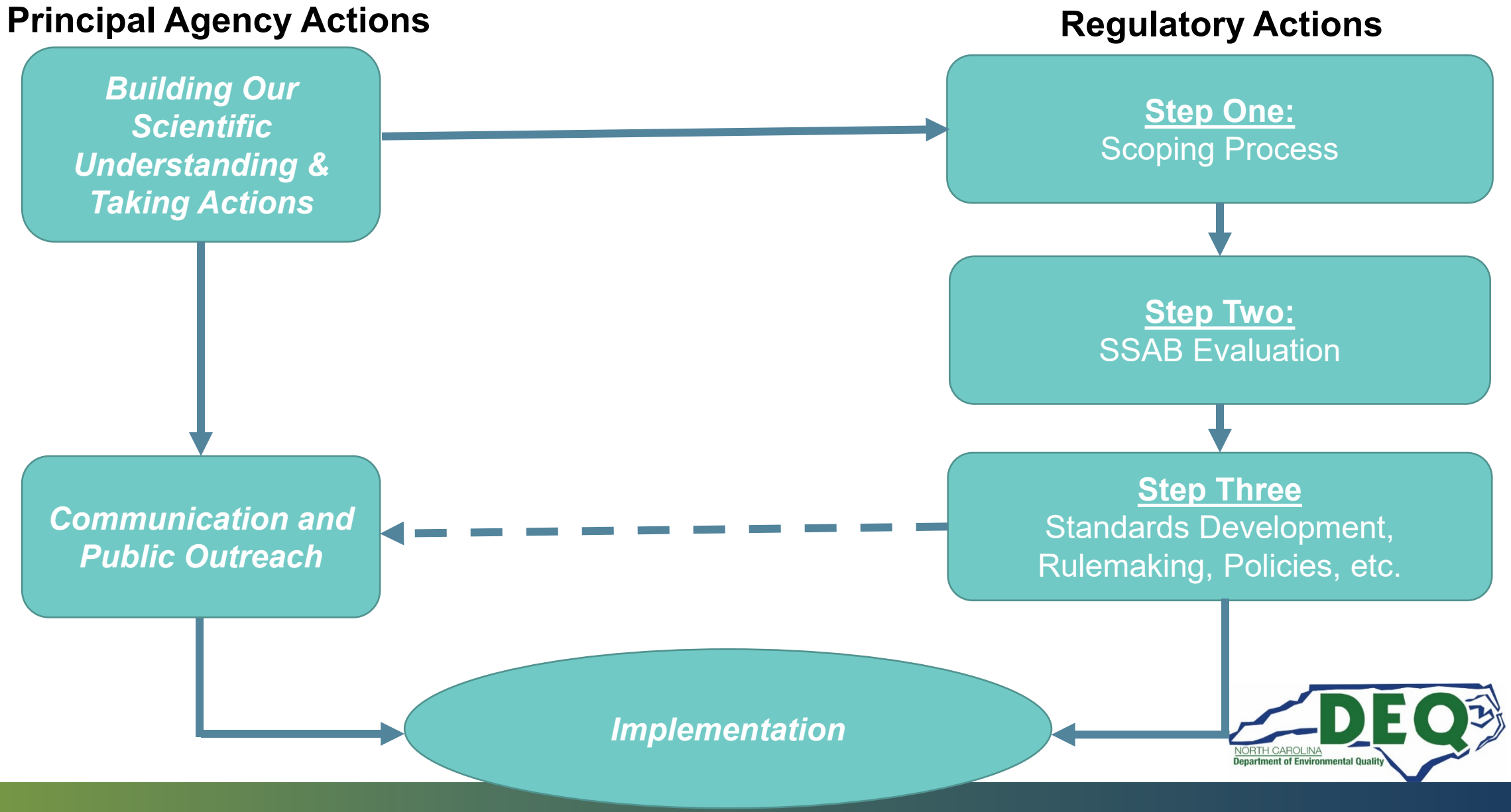
Goal Statement:

- Protect North Carolinians from sources of emerging compounds and related exposures using an established transparent and science-based decision-making process.

Objectives:

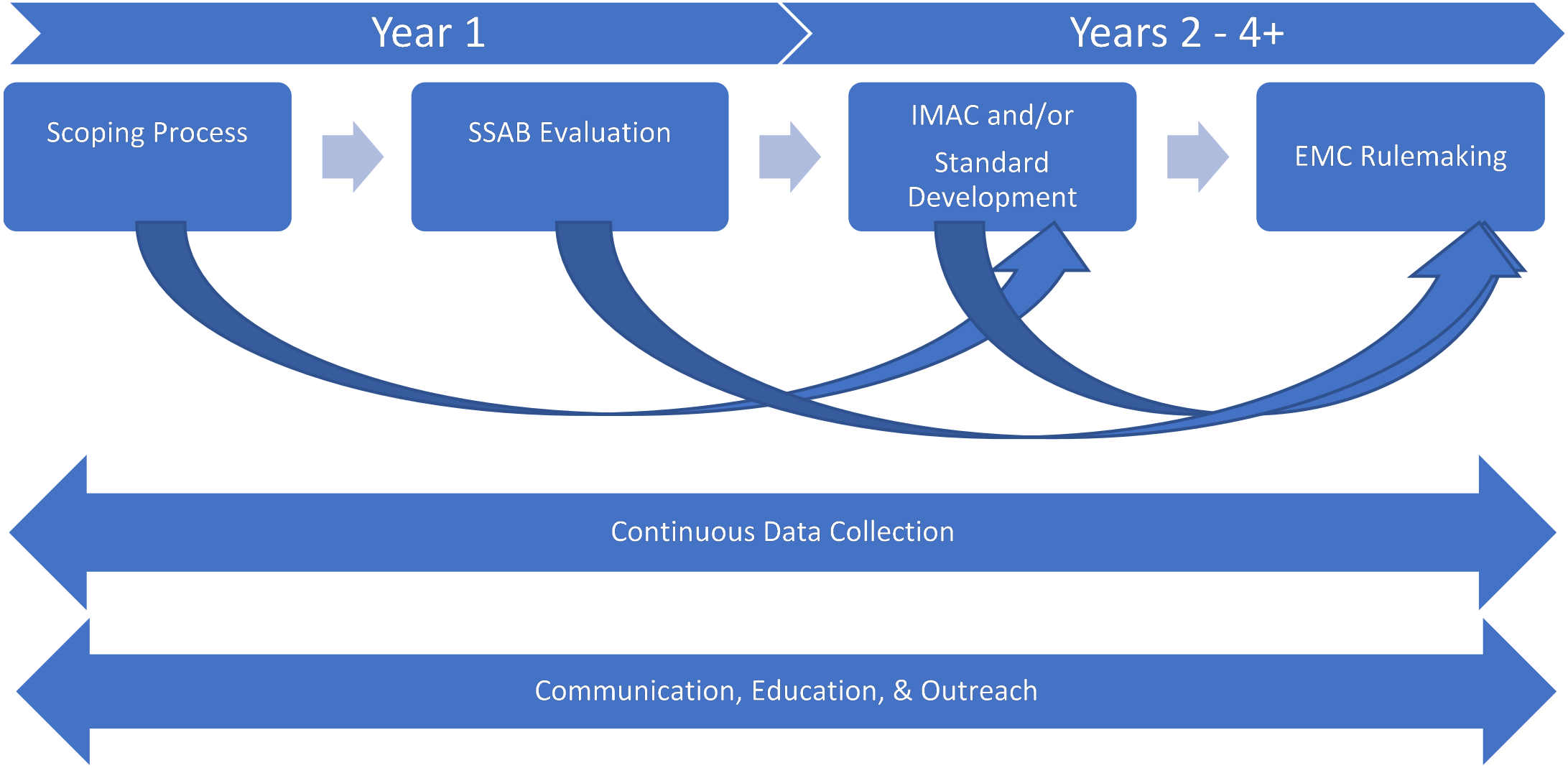
- **One Year (2021-2022) –** Use currently available data, scientific findings, and advice from experts to initiate actions within DEQ's authority to protect the environment and public health.
- **Beyond 2022 –** Utilize new and developing scientific data and other findings to address emerging contaminants from both point and non-point sources to reduce exposures and protect public health.

Key Components of the Framework



Emerging Contaminants Timeline

A conceptual timeline indicating the estimated times of each step in the Framework, arrows indicate concurrent activities.



Emerging Contaminants Framework: Current Work Areas

1. **Chemours Consent Order Implementation**
2. **Environmental PFAS Foam Work**
3. **AFFF PFAS Foam Work**
4. **Regulatory Options Outside Rulemaking**
5. **1,4-Dioxane**

Emerging Contaminants Framework: Current Work Areas

1. Chemours Implementation

- On and Off-site Assessments and Providing Clean Drinking Water
  - Expand assessments in downstream counties
  - Integrate the impact of the revised GenX reference dose
- Toxicity Assessment Progress
  - Aquatic toxicity Letter and Comments
  - Rodent toxicity protocol review
- Remediation Actions (air, water)
- External Collaborations - Ensure science supports regulatory activity
  - NC Policy Collaboratory
  - EPA
  - Others

Goal:
Ensure that communities are protected through the implementation of Chemours Special Order by Consent.

Emerging Contaminants Framework: Current Work Areas

2. Environmental PFAS Foam

- Designed a Standard Sampling Procedure
  - Includes instruction for sampling and returning samples
- Designed Standardized Sample Collection form
  - Provides consistent information for all samples
- Creating a database for foam data analysis
  - Will allow multiple analyses to be conducted
- Devising multiple foam sampling methods
  - Sampling both near- and far-foam
- Statewide Foam Observation Survey & Sampling Study
  - Survey conducted from Sept 1 – Oct 31, 2021; citizen-science
  - Assimilate citizen observation survey data and present data

Goal:

Understand frequency, distribution and chemical characteristics of foam statewide.

Emerging Contaminants Framework: Current Work Areas

3. AFFF PFAS Foam

- Prioritized work and investigations for:
  - Facilities that make or blend AFFF (2 in NC)
  - Fire fighter training facilities
  - Air travel facilities
  - Department of Defense (DOD) military facilities
- Working with responsible parties to ensure that receptors are protected
  - Conducting environmental sample collection and facility inspections

Goal:
Understand how AFFF is related to PFAS in the environment, and determine potential protective measures.

Emerging Contaminants Framework: Current Work Areas

4. Regulatory Options Under Current Authority

- Use existing drinking water, surface water and groundwater monitoring data to identify sources of PFAS discharges
- Identify data gaps
- Collaborate with regulated entities to identify, monitor for, develop test methods for, identify safer alternatives, and use all available tools to prevent contamination.
- Require additional monitoring, sampling, and/or self reporting to disclose PFAS in discharges
- Review existing permits and take actions as needed to meet environmental standards

Goal:
Identify contributing sources of PFAS and reduce discharges to meet water quality standards.

Emerging Contaminants Framework: Current Work Areas

5. 1,4-Dioxane

- Identifying point source dischargers using existing data
- Additional sampling to monitor discharges as needed
- Taking permitting actions for contributing dischargers
- Implementing Special Orders by Consent (SOC)
- Working on a faster testing method to get real-time results

Goal:
Use existing data and continually monitor potential sources to take permitting and other actions as required.