PFAS: Regulatory Overview

PFAS Workshop

ASTSWMO

September 2022

ASTSWMO CEC Steering Committee

ASTSWMO Contaminants of Emerging Concern (CEC) Steering Committee

- Tracie White, Colorado (Chair); Kasey Kathan, Vermont (Vice-chair)
- Comprised of liaisons from each ASTSWMO subcommittee
- Focused on collaboration/coordination with federal partners; regular meetings with EPA HQ and DoD leadership
- Sharing CEC-related information with ASTSWMO membership
- CEC SC products:
    - ASTSWMO PFAS position paper (currently being revised)
    - “Considerations for Development of a State-led Contaminants of Emerging Concern Program” webinar and guidance document

Regulatory Overview: Current State

NEW - EPA Lifetime Drinking Water Health Advisories (released June 15, 2022):

- *Interim* drinking water health advisories for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) that replace the 2016 EPA LHAs
- *Final* health advisories for perfluorobutane sulfonic acid (PFBS) and hexafluoropropylene oxide dimer acid (HFPO-DA; i.e. “GenX”).

Health Advisories are not enforceable criteria and do not create requirements for cleanup actions under CERCLA and/or RCRA

Regulatory Overview: Current State

No federal maximum contaminant levels (MCLs) or groundwater cleanup standards for PFAS contaminants

- Proposed MCLs for PFOA and PFOS anticipated in December 2022 (USEPA PFAS Strategic Roadmap)
- Many states are promulgating state MCLs for drinking water

Enforceable standards, such as MCLs, are specifically considered in the cleanup process

Regulatory Overview: Current State

EPA Regional Screening Levels (RSLs) and Regional Removal Management Levels (RMLs) for 6 PFAS:

- PFBS (released 2014, updated 2021)
- PFOA, PFOS, PFNA, PFHxS, GenX (released May 18, 2022)

RSLs: Screening tools to identify sites that may be of potential concern. In the Superfund program, at sites where contaminant concentrations equal or exceed screening levels, further study or investigation may be warranted, but not necessarily cleanup.

RMLs: Help define sites that warrant a removal action (i.e. cleanup). Generic RMLs are generally higher than those selected as final cleanup levels, so they are **not** de facto cleanup standards.

Regulatory Overview: RCRA vs. CERCLA

Congress passed both RCRA and CERCLA to deal with cleanup of hazardous waste facilities:

- Resource Conservation and Recovery Act (RCRA) of 1976 was implemented primarily for waste treatment facilities operated after RCRA implementation (including currently in-use) and regulates hazardous waste generation, treatment, and disposal. RCRA Corrective Action addresses cleanup of contamination at RCRA facilities
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 was passed to cleanup uncontrolled or abandoned contaminated waste sites, as well as addressing accidents, spills, and other emergency releases of pollutants into the environment

Regulatory Overview: RCRA vs. CERCLA

- CERCLA 101 Presentation (Teresa Booeshaghi)
- RCRA 101 Presentation (Sonja Favors)

CERCLA 101

PFAS Workshop, September 2022

Teresa Booeshaghi

CERCLA Overview

- **C**omprehensive **E**nvironmental **R**esponse **C**ompensation and **L**iability **A**ct
  - Commonly known as “Superfund”.
  - Established in 1980 by an Act of Congress, amended and reauthorized in 1986.
  - Provides a federal “superfund” to cleanup uncontrolled or abandoned hazardous waste sites, accident, spills or emergency releases.
  - Provided broad federal authority to respond to releases or threatened releases of hazardous substances.
  - Gave authority to seek cost recovery from responsible parties.

CERCLA Goals

- Protect human health and the environment by cleaning up polluted sites.
- Make responsible parties pay for cleanup.
- Involve communities in the cleanup process.
- Return previously polluted land to productive use.

CERCLA Response

CERCLA response is triggered by:

- The release or substantial threat of a release of a "hazardous substance" from a facility into the environment.
- The release or substantial threat of a release of any "pollutant or contaminant" from a facility into the environment which may present an imminent and substantial danger to the public health or welfare.

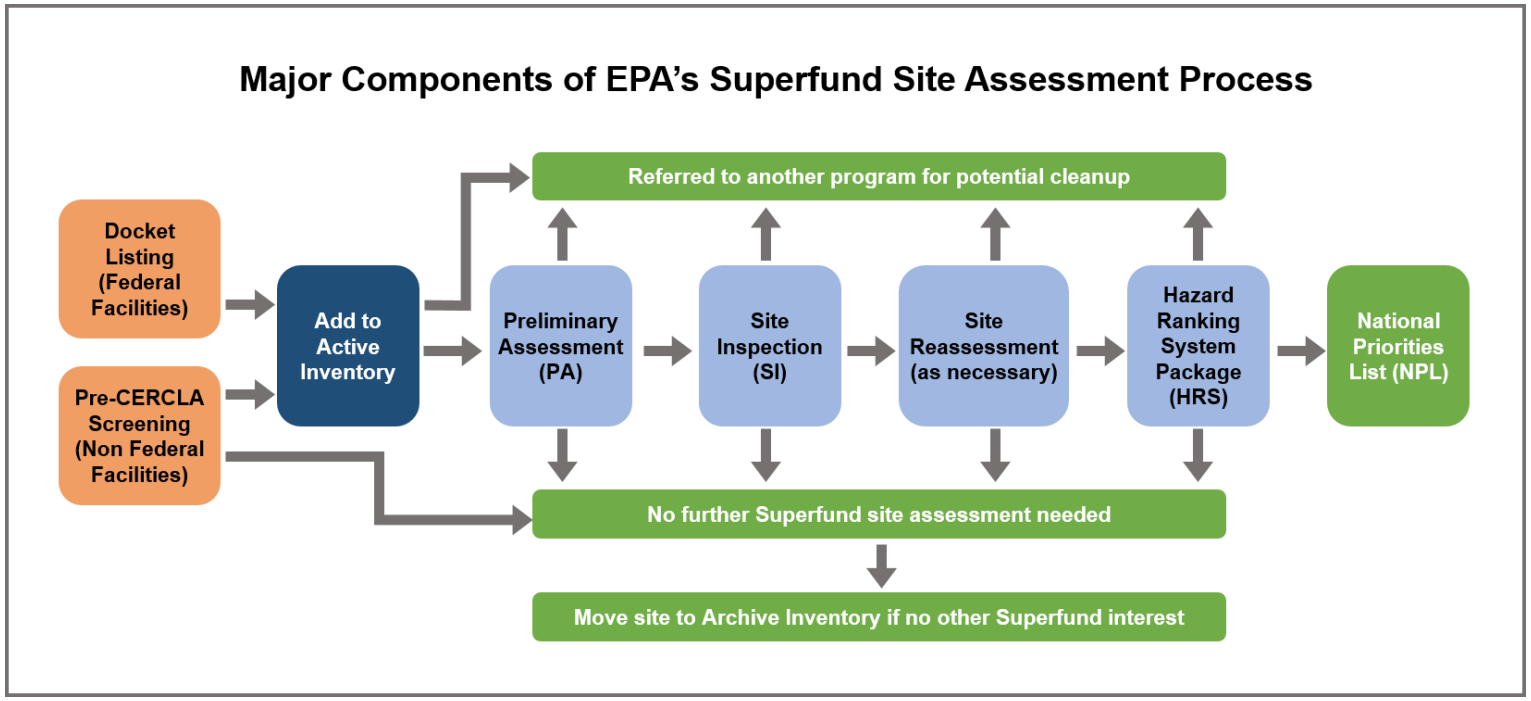
Hazardous Substance

- CERLCA 101(14)
  - Toxic or hazardous substance designated by the Clean Water Act, Clean Air Act, Resource Conservation and Recovery Act, or Toxic Substance Control Act;
  - Any element, compound, mixture, solution or substance designated pursuant to Section 102 of CERCLA.

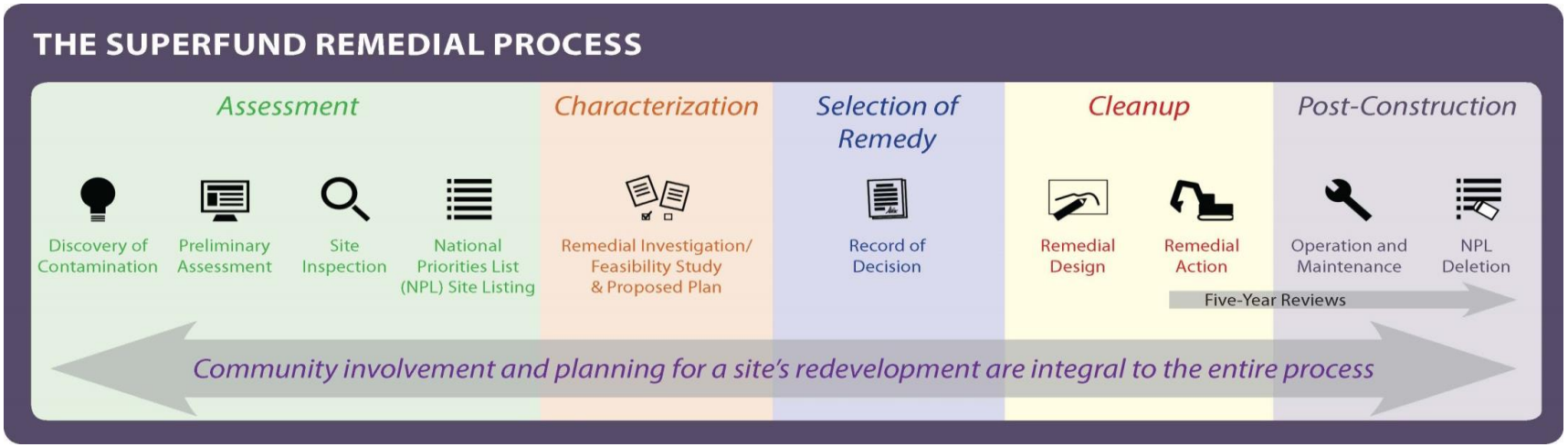
CERCLA Response Actions

- Removal Action
  - Emergency Response (action within hours)
  - Time-Critical (action within 6 months)
  - Non-time Critical (planning period more than 6 months)
- Remedial Action
  - Remedial Investigation/Feasibility Study
  - Remedial Design
  - Remedial Action (site cleanup)
  - Operation & Maintenance
- Enforcement Action
  - Identification of Responsible Parties
  - Cost Recovery

How Sites Qualify for Superfund



Superfund Remedial Process



RCRA 101

PFAS Workshop, September 2022
Sonja Favors

Resource Conservation and Recovery Act - RCRA

Enacted in 1976 due to the growing problem of pollution of the environment by ordinary household wastes, as well as hazardous commercial and industrial wastes.

Goals:

- Protect human health and the environment
- Conservation of energy and natural resources
- Reduction in generated wastes
- Environmentally sound waste management practices

Hazardous and Solid Waste Amendments (HSWA)

Promulgated in 1984 to amend RCRA. Addresses the management of hazardous waste as well as a release of hazardous constituents into the environment

Goal:

Expanded the scope and requirements of RCRA allowing the EPA and authorized state agencies to enforce corrective action

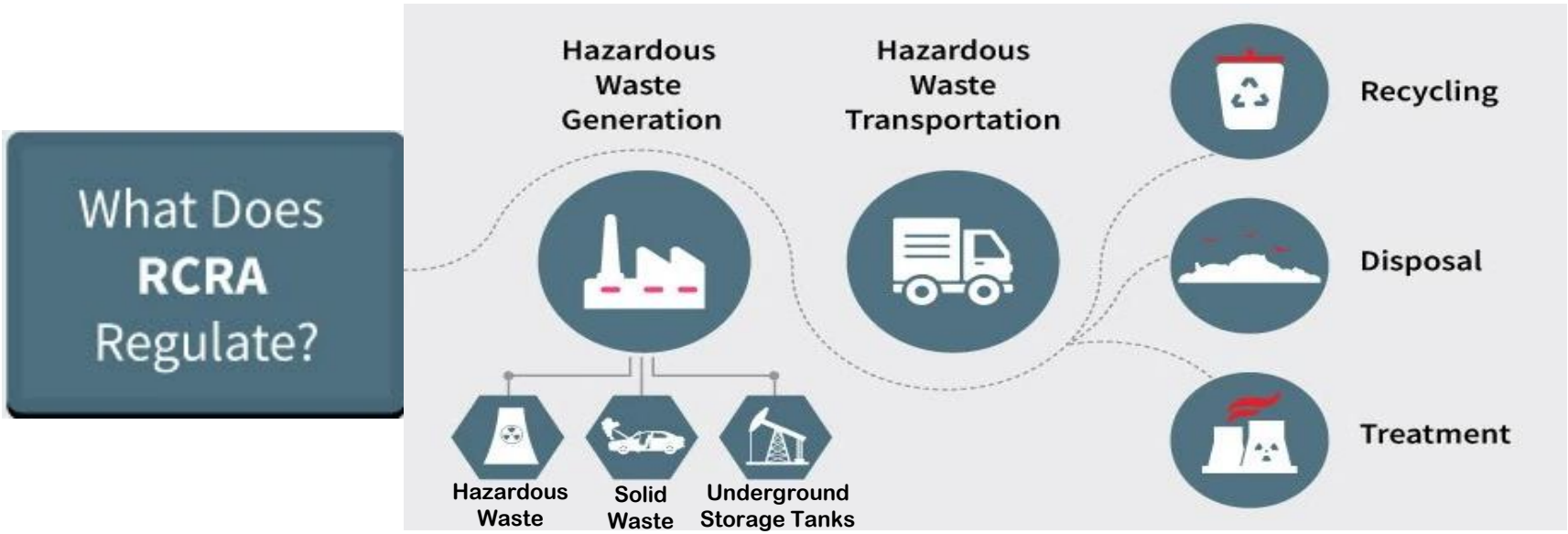
Corrective action is triggered by:

- Hazardous Waste Permit Application
- Release of hazardous waste

Corrective action can be imposed through:

- Permits
- Enforceable documents (e.g., Administrative Order)
- Voluntary corrective action

What is RCRA?



RCRA regulates the **generation, transportation, storage, and disposal** of hazardous waste. This law allows for the control and monitoring of hazardous waste from the "cradle to the grave". It has three major regulatory programs known as the Hazardous Waste Management Program (**RCRA Subtitle C**), Solid Waste Management Program (**RCRA Subtitle D**) and the Underground Storage Tank Program **(RCRA Subtitle I**):

- **RCRA Subtitle C** sets the national regulatory standards for hazardous waste management. It sets the criteria for hazardous waste generators and governs how states implement RCRA. Subtitle C also includes permit requirements, corrective action, or clean up to deal with waste that has been released to the environment.
- **RCRA Subtitle D** sets the national standards for solid waste management. This bans the open dumping of municipal waste and sets limits for industrial waste landfills including design, location restrictions. Subtitle D also includes financial assurance and closure requirements.
- **RCRA Subtitle I** monitor leaks from underground storage tanks to protect groundwater and bans the installation of unprotected steel tanks. It requires facilities that already own and operate underground tanks to perform effective leak prevention, detection, and release cleanup.

What is RCRA?

1. Management of solid waste (e.g., garbage), hazardous waste, and underground storage tanks
   - Hazardous waste determination
   - Ensures wastes that are land disposed meet either concentration based or treatment-based standards.
2. Creates “Cradle to Grave” liability of hazardous wastes for generators, transporters and treatment, storage and disposal facilities (TSDFs).
   - The generator is responsible for waste lifecycle management.

“Cradle-to-Grave” Waste Management

The waste generator is responsible for the entire “life cycle” of the waste until it’s ultimate disposal or treatment.

Hazardous Waste Management
Cradle-to-Grave System

Hazardous Waste Generation

Hazardous Waste Transportation

Hazardous Waste Disposal

Regulatory Overview: RCRA vs. CERCLA

Together, CERCLA and RCRA cleanups are part of a regulatory program that works to ensure waste is managed during its "cradle to grave" lifespan

- The two legislative acts use different terminology, but implement similar cleanup processes
- CERCLA authority to address "hazardous substances" is broader than RCRA's focus on "hazardous wastes"

CERCLA "hazardous substances" include "hazardous wastes" and pollutants/contaminants regulated under other environmental statutes (i.e. Clean Water Act, Clean Air Act, Toxic Substances Control Act, etc.)

Regulatory Overview: RCRA vs. CERCLA

- A CERCLA *hazardous substance* designation would not provide authority under RCRA as RCRA hazardous waste. (In September 2022, EPA issued a Notice of Proposed Rulemaking to designate PFOA and PFOS as CERCLA hazardous substances.)
- A RCRA *hazardous waste* designation would provide authority under RCRA and CERCLA, as CERCLA hazardous substance. However, a RCRA hazardous waste designation could make PFAS-containing carpets, mattresses, cookware, etc. "hazardous wastes" at time of disposal (unless they are coming from households)

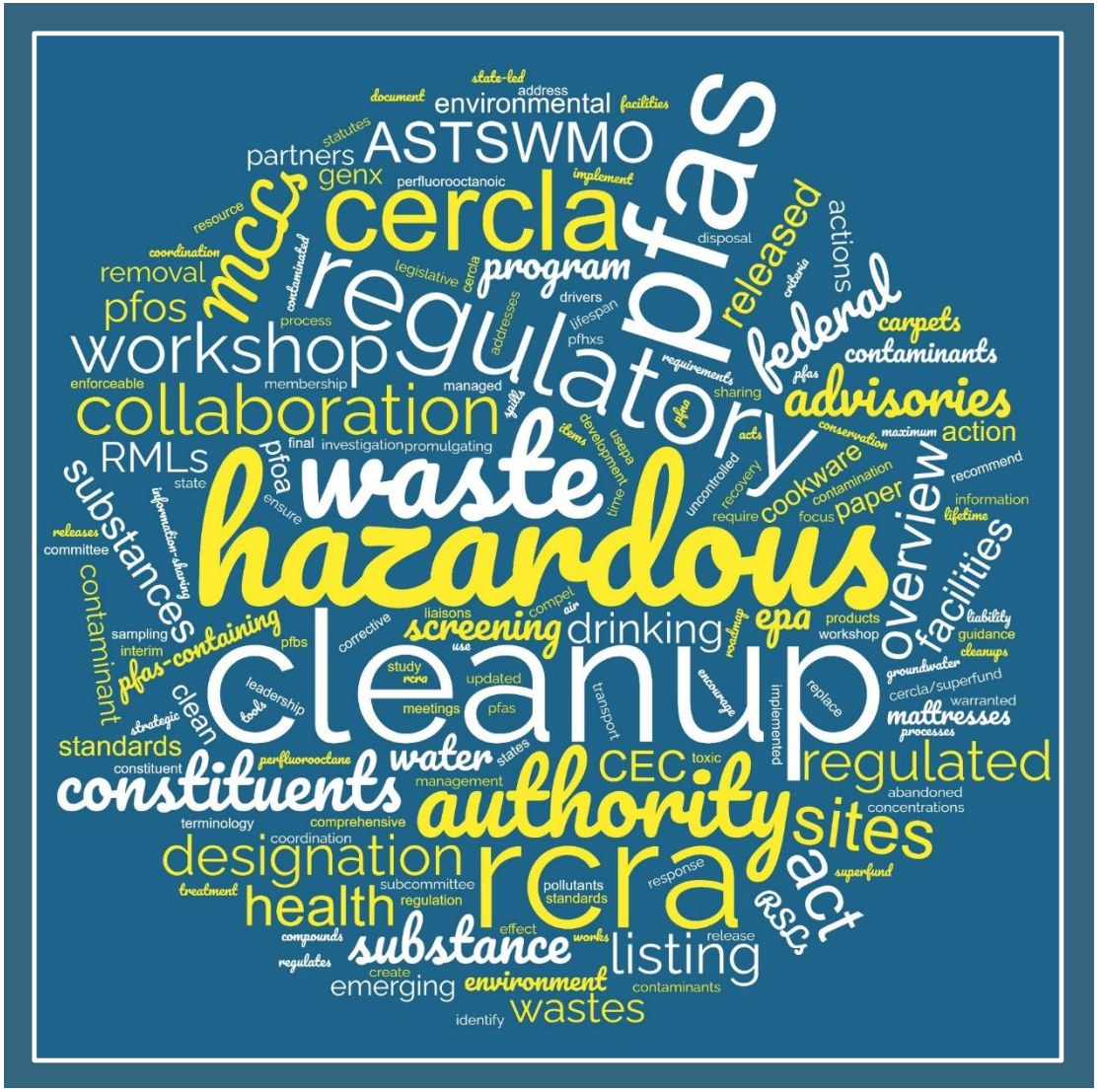
Regulatory Overview: RCRA vs. CERCLA

- A RCRA *hazardous constituents* listing would provide authority only under RCRA
  - PFAS-containing items such as carpets, mattresses, cookware, etc. would not be brought under full regulation (since they are not "wastes")
  - RCRA hazardous constituents listing does give authority to require sampling for PFAS at sites otherwise subject to cleanup under RCRA due to a hazardous waste release to the environment

Summary

- Currently no federal regulations to compel PFAS cleanup actions
- EPA Notice of Proposed Rulemaking to designate PFOA and PFOS as CERCLA hazardous substances
- Proposed MCLs for PFOA and PFOS anticipated in December 2022 (USEPA PFAS Strategic Roadmap)
- ASTSWMO CEC SC continues collaboration with federal partners to encourage coordination and information-sharing

Questions?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cleanups
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