

# Massachusetts Toxics Use Reduction



## TURA Administrative Council April 25, 2024



# Agenda

- Welcome and Introductions
- Vote to Approve December 20, 2023 Meeting Minutes
- Vote to Add 2024 US EPA Toxics Release Inventory (TRI) Additions to TURA List
- TURA Program Strengthening Ad Hoc Committee Next Steps
- TURA Program Update
- Adjourn

Note: Public comments/questions will be held until opened for general discussion

# Format for Questions and Discussion

- Administrative Council members may ask questions at any time by raising hand
- Non-Administrative Council members will be given an opportunity to participate **after** the Administrative Council member discussion at the end of each agenda item
- Raise hand function will be used

# How to Ask Questions

Use Zoom function to raise your hand for comments or questions.

To access the "Raise Hand" function, click "Participants" at the bottom of your screen, and then click the "Raise Hand" button that appears under the list of participants. This will notify the host that you have a question or comment.

# December 20, 2023 Meeting Minutes Vote



Approval of December 20,  
2023 meeting minutes

# Additions to TURA List: 2024 Toxics Release Inventory (TRI) Additions

## **EPCRA (TRI): Additions are required**

“Each year the Council shall adjust the toxic or hazardous substance list to add or delete substances consistent with changes in said toxic chemical list.”

[M.G.L 21I, §9\(A\)](#)

## Seven PFAS (100 lb. threshold)

307-24-4	Perfluorohexanoic acid (PFHxA)
422-64-0	Perfluoropropanoic acid (PFPrA)
2923-26-4	Sodium perfluorohexanoate
21615-47-4	Ammonium perfluorohexanoate
82113-65-3	1,1,1-Trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide (TFSI)
90076-65-6	Lithium bis[(trifluoromethyl)sulfonyl] azanide
2816091-53-7	Betaines, dimethyl(.gamma.-.omega.-perfluoro-.gamma.-hydro-C8-18-alkyl)

# Vote to Add Recent TRI Additions to TURA List



Vote to add all recent Toxics  
Release Inventory (TRI)  
additions to the TURA List

# **Presentation on the TURA Strengthening Ad Hoc Committee**



## Ad Hoc Committee Charge

In the interest of continuous improvement, the Council charges the Ad Hoc Committee with reviewing experiences since the 2006 TURA Amendments and discussing possible improvements that would ensure ongoing progress in toxics use reduction.

# TURA Program Strengthening Ad Hoc Committee Members

*TURA Advisory Committee members noted with asterisks (\*)*

Name	Affiliation
Tom Estabrook	The New England Consortium (TNEC)
Wendy Heiger-Bernays	TURA SAB / BUSPH
Andy Irwin	Irwin Engineers / TUR Planner / MCTA
Bill Judd*	TUR Planner
Jay Kaufman	Beacon Leadership Collaborative
Terry McCormack	Umicore Electrical Materials, Inc / TUR Planner
Mark Monique*	TUR Planner / Savogran / MCTA
Elise Pechter	MA DPH
Jim Reger	Massachusetts Asphalt & Aggregate Paving Association

Name	Affiliation
Rick Reibstein	Former TURA Program Staff / BU
Robert Rio	Associated Industries of Massachusetts (AIM)
Katherine Robertson	Massachusetts Chemistry Technology Alliance (MCTA)
Cora Roelofs	Worker Health Advocate UMass Lowell
Mark Rossi*	Clean Production Action
Elizabeth Saunders	Clean Water Action
Lucy Servidio*	TUR Planner
Laura Spark*	Clean Water Action
Jodi Sugerman-Brozan*	MassCOSH
Matthew Taylor*	Dupont

# Ad Hoc Committee Discussion Topics

1. Compliance and Enforcement
2. Alternative Planning
3. Planners and Planning
4. Chemical List
5. Fees

# Documentation and Resources

Background documents prepared  
for each topic

November 19, 2020  
Ad Hoc Meeting 1:  
[Orientation](#)

December 14, 2020  
Meeting 2: [Compliance  
& Enforcement](#)

January 13, 2021  
Meeting 3: [Alternative  
Planning](#)

March 30, 2021  
Meeting 4:  
[Planning and Planners](#)

April 29, 2021  
Meeting 5:  
[TURA List](#)

July 22, 2021  
Meeting 6:  
[Fees](#)

Synthesis document prepared  
to summarize committee discussions;  
presented to Advisory Committee

**Background and  
objectives**

**Ad Hoc  
discussions**

**Potential options**

# Compliance and Enforcement: Background

## Background

- Facilities are required to report annually, pay a fee, and do TUR planning every 2 years
- MassDEP is responsible for ensuring compliance
- TUR planners play an important role by certifying plans

## Objectives

- Ensure that facilities are in compliance
- Ensure that TUR plans are high-quality: compliant, thorough, and done in good faith

# Compliance and Enforcement: Discussion

- Quality control for TUR plans and planners; training and enforcement
- Support for desk audits
- MassDEP multi-media inspector training
- Appetite for findings/feedback from both desk audits and inspections
- Amnesty program

# Compliance and Enforcement: Options

Likely Level of Effort	Potential Options Identified
<b>Straightforward</b> (additional resources required)	Provide inspector training and assistance
<b>Intermediate</b> (requires prioritization of staff resources and/or additional resources)	<ul style="list-style-type: none"><li>• Increase desk audits and enforcement for TUR Plan and TUR Planner violations</li><li>• Communicate common findings to all planners and filers</li></ul>
	Offer TURA program engagement <ul style="list-style-type: none"><li>• Direct deficient filers and planners who received DEP enforcement to OTA and TURI for focused support and training</li></ul>
	Modify EEA data portal to allow downloadable copy of TURA enforcement actions



# TUR Planners: Background

## **Background:**

- Types of planners
  - General Practice Planners can assist any facility
  - Limited Practice Planners can only do planning for their own facility
- Planner qualifications and training
- Two-year planner recertification cycle – continuing education required

## **Objectives:**

- Help planners improve compliance and skills
- Ensure that (re)certification process is not overly burdensome

# TUR Planners: Discussion

- Ensure quality and availability of continuing education
  - Gauge learning achieved
  - Improve access to external TUR-related trainings
- Ensure facilities and planners are taking advantage of program resources:
  - Technical assistance
  - Research opportunities
  - Lab support
  - Assistance identifying TUR options in challenging situations
- Re-certification cycle

# TUR Planners: Options

Likely Level of Effort	Potential Options Identified
<b>Straightforward</b> (will benefit from additional resources)	Provide feedback on plan quality following enforcement documentation and desk audits. DEP to post a document of common mistakes made by planners.
	Facilitate credit approval for TUR planners to expand external trainings
<b>Intermediate</b> (could require regulatory change or additional resources)	Offer TUR planner credit for OTA and/or TURI plan review
	Evaluate recertification cycle for TUR planners

# Alternative Planning: Background

## **Background:**

- In response to feedback from filers and planners, the 2006 amendments to TURA provided for alternative planning
- RC planning includes energy/water conservation; solid waste reduction; toxics otherwise not reportable
- Companies may also integrate TUR into their environmental management system (EMS)

## **Objectives:**

- Facilitate resource conservation (RC) planning for companies that find it beneficial
- Maintain program focus on toxics

## Alternative Planning: Discussion

- Level of effort required may present a barrier
- Focus on TUR vs. RC; non-reportable toxics RC options
- Availability and clarity of guidance; desire for case studies
- Challenges with getting necessary credits for RC recertification
- RC activities outside of planning year
- EMS option – small subset of companies use it, but those who do find it very beneficial

# Alternative Planning: Options

Likely Level of Effort	Potential Options Identified
<b>Straightforward</b> (will benefit from additional resources)	Encourage use of resource conservation (RC) planning for chemicals below threshold or exempt chemicals
<b>Intermediate</b> (would require regulatory change and additional resources)	Incorporate RC plan update into TUR plan update

# TUR Planning: Background

## **Background:**

- Plan updates are required every 2 years
- Some facilities may lack good TUR options

## **Objectives:**

- Provide options when facilities aren't finding TUR options, or when customer requirements limit options
- Ensure that plan updates provide a genuine opportunity to reflect
- Encourage engagement with TURA program agencies

# TUR Planning: Discussion

- Overall support for program and planning model
- Desire for expansion of program staff and resources
- Discussion about 2-year planning cycle:
  - Some facilities do not see value in a 2-year cycle, especially if filing for the same chemicals for many years with few or no apparent TUR options
  - 2 years may not provide enough time to implement larger projects
  - 2-year cycle can maintain momentum and encourage innovation
  - New options may become available, or options that were previously not feasible may become feasible
- Constraints placed by government specs; support for program to assist with these



# TUR Planning: Options

Likely Level of Effort	Potential Options Identified
<b>Straightforward</b> (will benefit from additional resources)	Offer sector-focused assistance through workshops, continuing education, etc.; provide technical assistance, research and grants to identify and adopt options
<b>Intermediate</b> (could require statutory and/or regulatory change or additional resources)	Allow simple status updates/certification every other cycle if implementation is in progress, or streamline update form
	New RC/EMS planning alternative: OTA/TURI review plans to help ID options and opportunities
<b>Major Change</b> (potential statutory change)	OTA and TURI plan review for potential facility plan cycle extension ( <i>to be discussed later in presentation</i> )

# TURA List: Background

## Background:

- Originally based on TRI and CERCLA
- Designed for regular updates over time, in tandem with federal updates – however, federal updates have been slow
- As a result, many chemicals of concern are not yet listed under TURA
- Certain substances not reportable based on MassDEP reporting guidance

## Objectives:

- Ensure TURA List is up-to-date, relevant, useful, and based on the best available science
- Avoid regrettable substitution
- Increase reporting on known hazards

# TURA List: Discussion

- List format and use
- Process for updating the TURA list
  - Other authoritative lists
- Currently non-reportable CERCLA categories
- Value of informational lists to assist in identifying chemicals of concern

# TURA List: Options

Likely Level of Effort	Potential Options Identified
<b>Straightforward</b> (will benefit from additional resources)	Provide additional information and training for filers on selected classes of chemicals (e.g., flame retardants)
<b>Intermediate</b> (could require additional resources or agency decision)	Require reporting of already listed CERCLA categories or selected categories (e.g., phthalate esters)
	Streamline addition of chemicals on other authoritative lists; provide expedited review

# TURA Fees: Background

## **Background:**

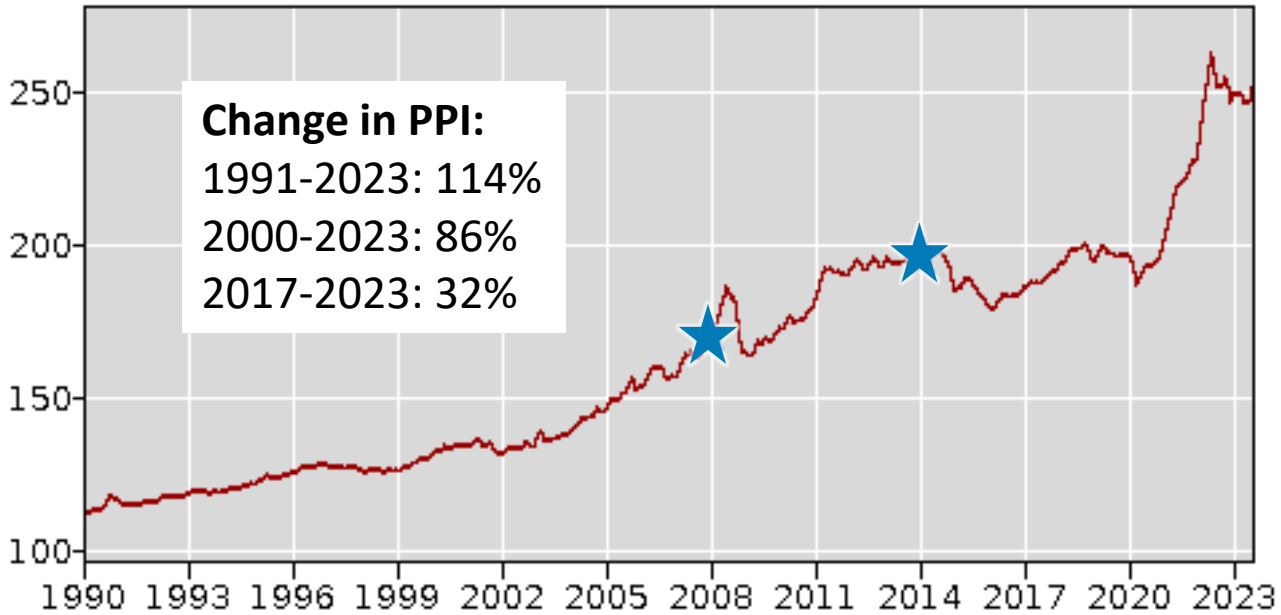
- Decrease in TURA program funding over time has led to the loss of staff and programs over the program's history, threatening value to filers
- Fees were intended to provide revenue of \$4–5.5 million 1989 dollars (\$10–13.5 million today). Actual current program revenue approximately \$2.6 million
- Statute requires annual adjustment for inflation, but this has never been done
- Fee increases have been proposed previously, but were never adopted

## **Objectives:**

- Adequately fund TURA program
- Implement statutory mandate for PPI adjustments
- Assure level playing field and reflect current business sectors

# TURA Fees: Background

## Producer Price Index



★ Fee proposal years

## TURA Fee History

- **2006:** Amendments provided authority to change fee structure
- **2008-09:** Fee revision proposal developed
- **2014:** Simplified proposal developed; Council voted to move forward. Public comment received but regs not promulgated

# TURA Fees: Discussion

- Need for compliance with statute
- Need for adequate resources to fund the program
- Non-covered sectors using same chemicals as filers
- Needs of filers
- Public health needs

## Fees: Options

Likely Level of Effort	Potential Options Identified
<b>Intermediate</b> (requires resources and Council decision process)	Adopt fee adjustments <ul style="list-style-type: none"><li>• A one-time increase for part of past PPI</li><li>• Adjust for PPI going forward</li></ul> Initiate study of chemical use by non-filers
<b>Major Change</b> (statutory change)	Expand filer universe, e.g., R&D



# Next Steps

## Already Implementing

- Inspector training and assistance
- Increased DEP plan audits and accompanying inspections
- Encourage Alternative Planning for PFAS for 2024 plan cycle for all eligible companies (*use of RC for non-reportable toxics*)
- Where practicable, assess learning in trainings
- Improved usability of chemical list by adding CAS numbers with hyphens

## Implement as soon as feasible – *no Council action necessary*

- Plan pilot of sector-focused assistance workshops and resources
- Evaluate options to streamline TUR plan updates in certain cases (e.g., when TUR implementation is still in progress at time of plan update)
- Plan SAB discussions to consider a streamlined process for updating the TURA List using authoritative lists of toxic or hazardous chemicals
- Initiate study of chemical use by non-filer sectors
- Require reporting of already listed CERCLA categories (e.g., phthalate esters)

# Pilot and Fee Proposals

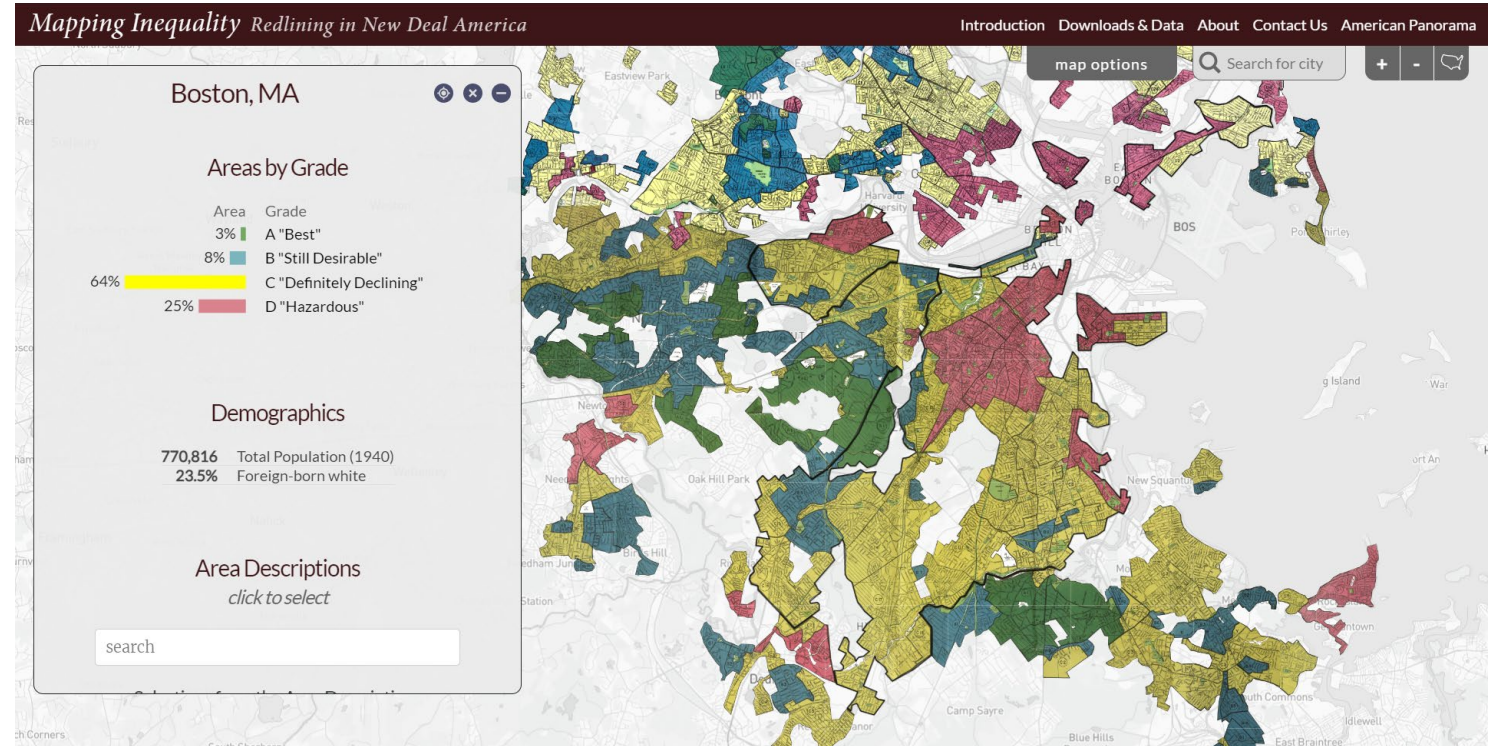
- New RC/Alternative planning option: OTA/TURI review plans to help ID options and opportunities
  - this also provides insight into benefits and feasibility of expanding this option to allow some planning cycle relief to businesses with limited options
  - Award TUR Planner credits for participating in plan review
- Revisit fee regulations based on 2014 proposal

## To be further investigated

- Allow simple status updates and certification every other cycle if implementation is in progress
- Explore whether to provide filers the ability to skip a planning cycle if no feasible options, based on results of pilot
- Streamline or expedite the addition of chemicals on other authoritative lists based on SAB discussions
- Explore expanding filer universe, based on study of chemical use by non-filer sectors

# Not addressed in Ad Hoc process

- Environmental justice
- Climate change



[Mapping Inequality: Redlining in New Deal America](#)

# How to Ask Questions

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# Massachusetts Toxics Use Reduction



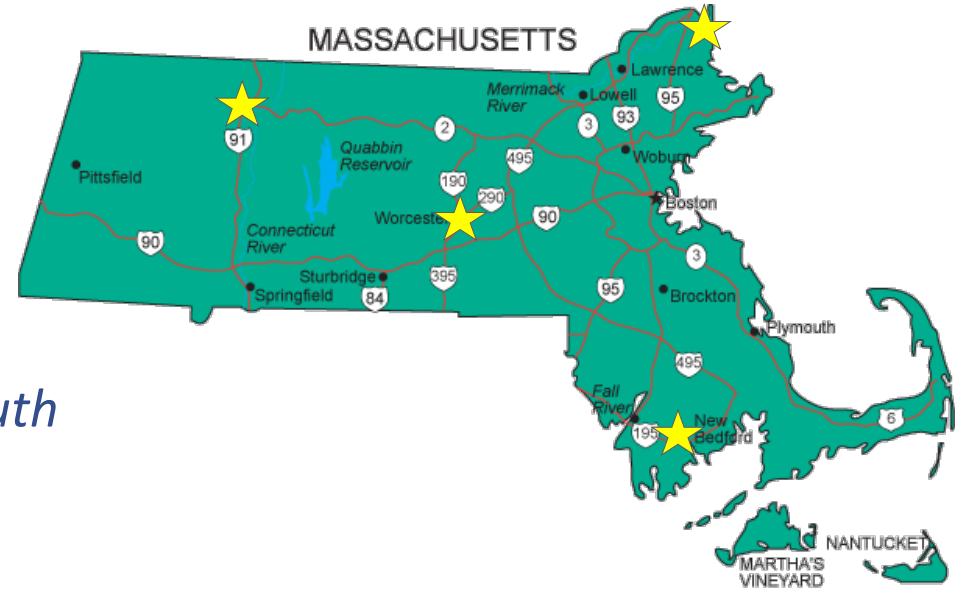
## TURA Program Update





# Upcoming Form S Workshops

- Stay up to date with reporting!
- 8:30AM registration
- 9AM-1PM
  - May 7 – Dartmouth - *UMass Dartmouth*
  - May 9 – Worcester – *MassDEP*
  - May 14 – Greenfield – *Greenfield Community College*
  - May 16 – Newburyport – *Parker River National Wildlife Refuge HQ*
- *Watch for MassDEP registration info!*



# Science Advisory Board

## Carbon Nanotubes and Carbon Nanofibers petition

### Recommendation to list

- Single- (SWCNTs)
- Multi-Walled Carbon Nanotubes (MWCNTs)
- Carbon Nanofibers (CNFs)

### Recommendation to designate as Higher Hazard Substance

- Multi-walled Carbon Nanotubes

### SAB adding to their More Hazardous Chemicals advisory list

- SWCNT
- CNF

# Science Advisory Board

## Flame Retardants

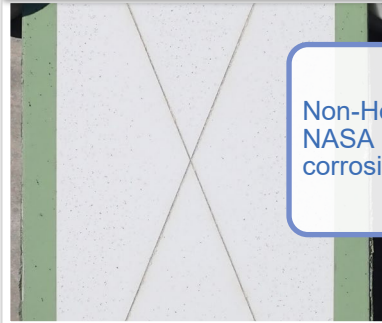
- Advising MassDEP on new [MA Flame Retardants law](#) (*not part of TURA*)
  - An Act To Protect Children, Families, And Firefighters From Harmful Flame Retardants
  - Reviewed 5 of 7 subclasses of FR analogs to the 11 chemicals/CAS No. restricted in law.
    - Polyhalogenated diphenyl ethers (PentaBDE, OctaBDE)
    - Polyhalogenated alicycles (HBCD)
    - Polyhalogenated Phthalates/Benzoates/Imides (TBPH, TBB)
    - Polyhalogenated Bisphenol Aliphatics (TBBPA)
    - Inorganic (Antimony trioxide)
  - Future meetings
    - *Polyhalogenated Aliphatic Chains (SCCPs - short chain chlorinated paraffins) (April 29, 2024 meeting)*
    - *Polyhalogenated organophosphates (TDCPP, TCEP and TCPP)*
  - overview document of subclasses
    - [https://www.turi.org/content/download/14419/223729/file/Proposed\\_CAS\\_Numbers\\_Isomers\\_Analogues.pdf](https://www.turi.org/content/download/14419/223729/file/Proposed_CAS_Numbers_Isomers_Analogues.pdf)

## Education and Training



TUR Planner  
Course, CE  
Conferences

## Research



Non-Hex Chrome  
NASA beachfront  
corrosion testing

## Laboratory



TCE alternatives  
Food and Beverage  
EPA Safer Pipe and Paint  
Products

## PFAS



- Textile coatings
- Paperboard coatings
- PIGE analysis for community and small business screening

## Flame Retardants



- Are they necessary?

# OTA Update



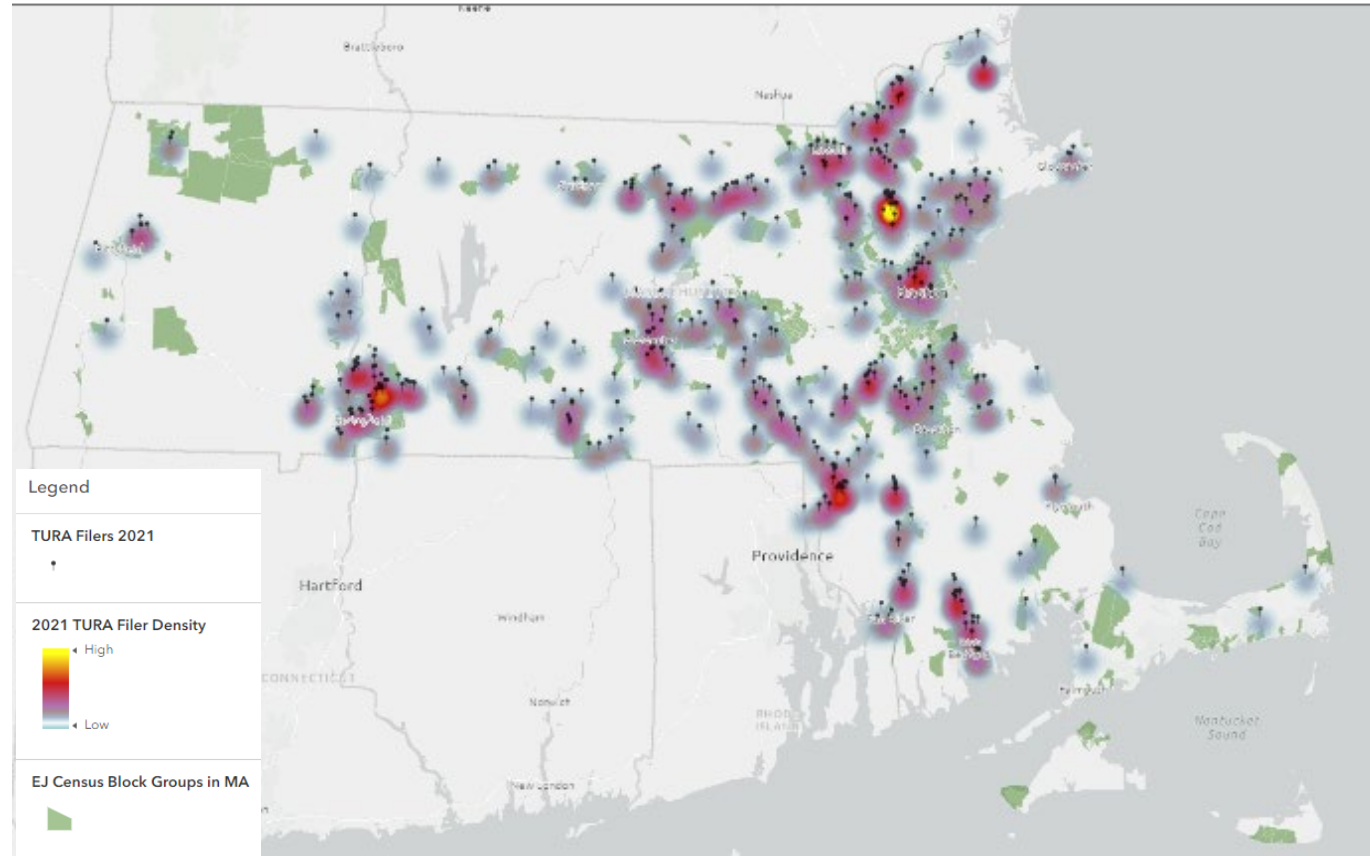
# Current Work

- PFAS (TUR resources from [OTA](#) and [TURI](#))
  - Conducted outreach to metal finishers in 2023
  - Survey also available for paper industry
  - Developing new PFAS identification survey tool for coatings
- Food and beverage outreach
- Chemical safety and climate resiliency

# OTA Environmental Justice (EJ)

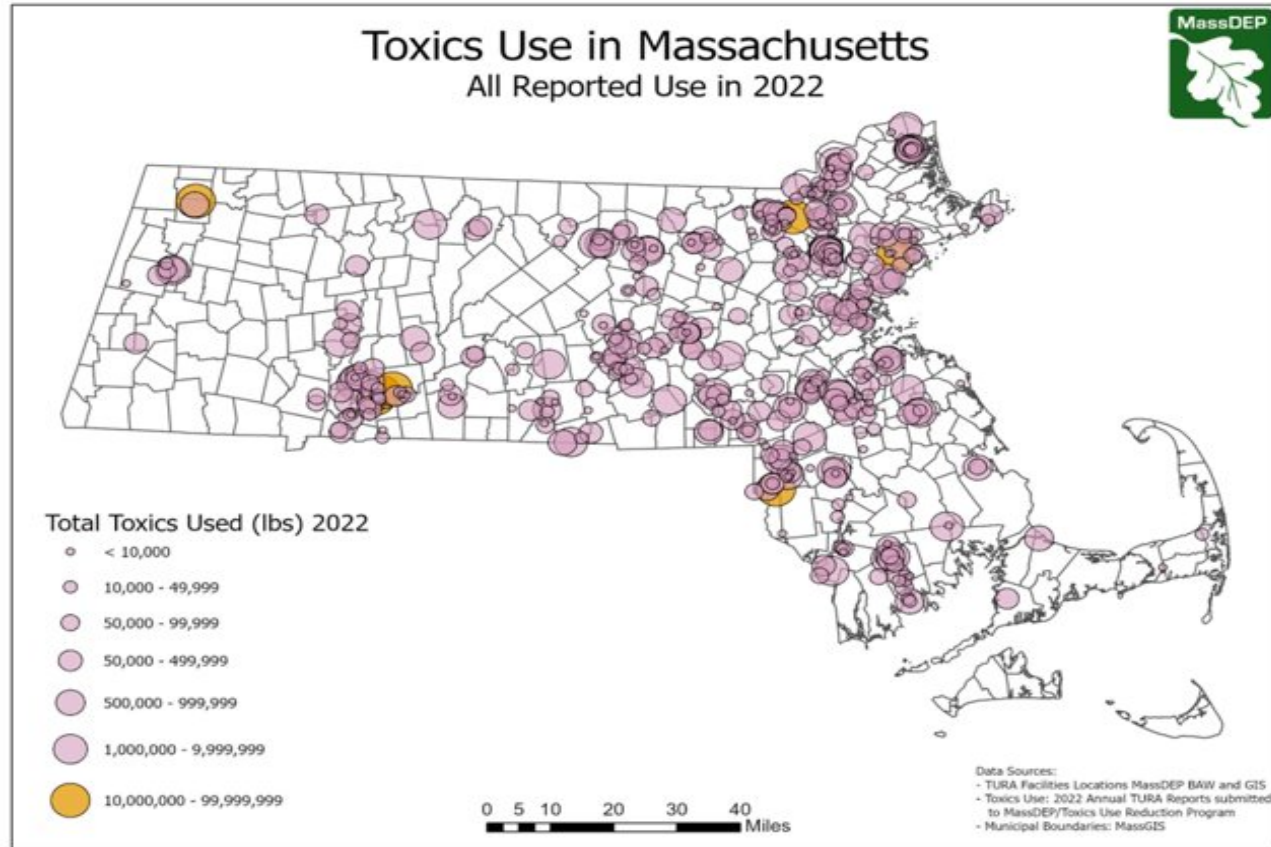
- OTA seeking candidates for new EJ seat on Advisory Committee
- OTA actively involved in EJ and climate justice work
- OTA developing GIS Story Map to illustrate current toxics use and release in relation to current EJ populations and historical redlining
- OTA's new EJ intern

TURA Filer Density and EJ Census Block Groups





# 2022 TURA Information Release



<https://www.mass.gov/lists/massdep-toxics-use-reduction-act-tura-data-results#tura-information-releases->



# Massachusetts Dept. of Environmental Protection (MassDEP)



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Promulgates regulations based on environmental legislation, and issues policies and procedures to support the regulations

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Inspects regulated facilities to ensure regulatory compliance, and issues enforcement for non-compliance

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Provides outreach and education on regulatory programs

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Certifies TUR planners

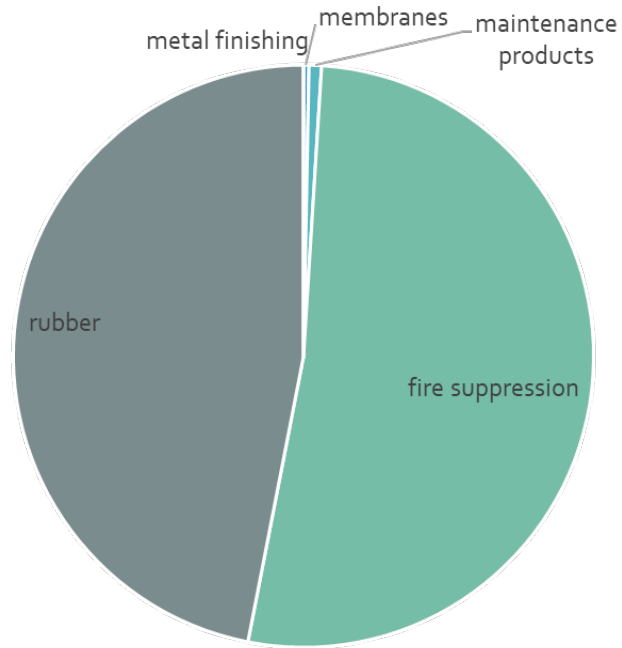
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Evaluates program success and provides analysis for program improvement

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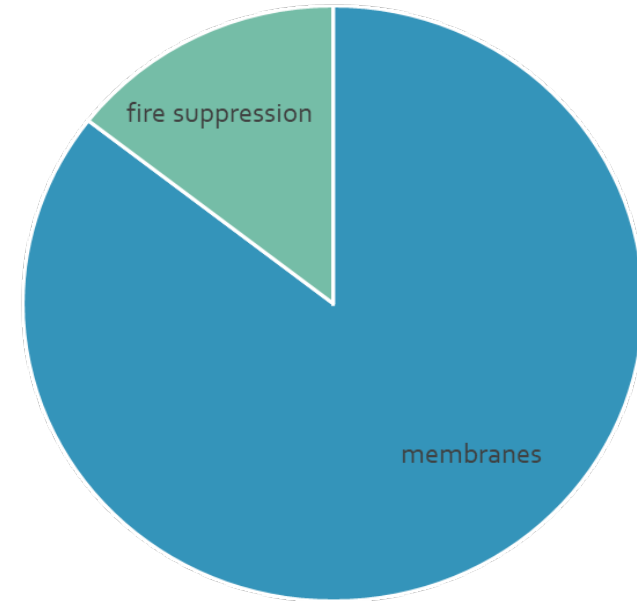
# Use and Release of PFAS by TURA Filers

2022 PFAS Use by TURA Filers



■ membranes ■ maintenance products ■ fire suppression ■ rubber ■ metal finishing

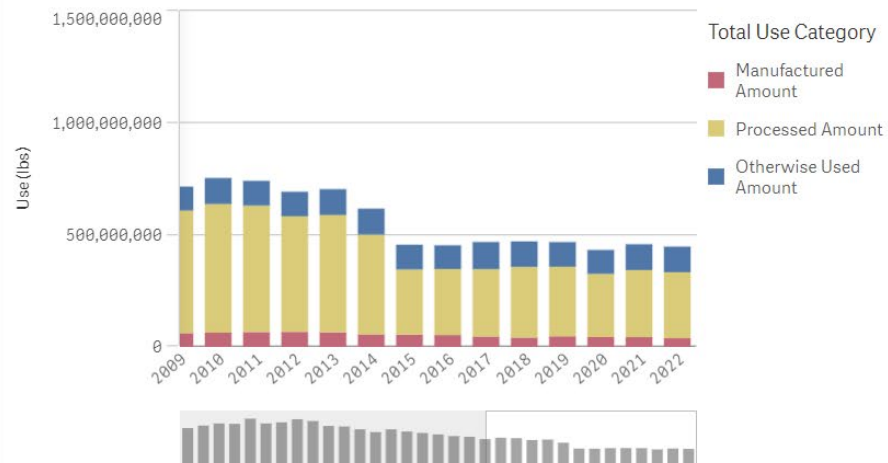
2022 PFAS Releases by TURA Filers



■ membranes ■ maintenance products ■ fire suppression ■ rubber ■ metal finishing

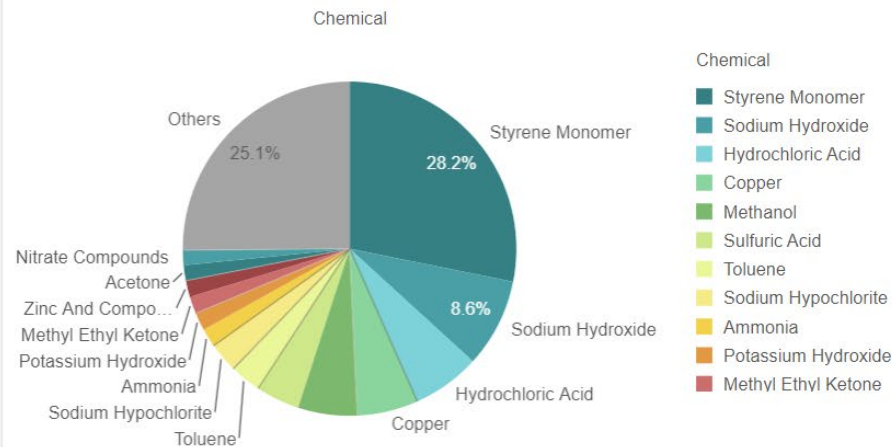
Reporting Year

Total Use by Year



Total Use by Chemical

All Reporting Years;



Total Generated as Byproduct by Year



Total Byproduct by Chemical

All Reporting Years;



# Contact us any time!



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# Adjourn



Direct all questions to  
TURA Administrative Council  
Executive Director  
Tiffany Skogstrom:  
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