

Massachusetts Toxics Use Reduction



TURA Administrative Council December 4, 2024



Agenda

- Welcome and Introductions
- Approval of April 25, 2024 Meeting Minutes
- TURA Appointees and Process
- TURA Fees Background and Status
- Interagency History of Nanomaterials and Update on TURA Program Consideration of Carbon Nanotubes and Carbon Nanofibers
- Regulations and TRI Updates
- Adjourn & Next Meeting Dates

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

Format for Questions and Discussion

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- Raise hand function will be used
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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.

Welcome and Introductions

TURA Grants: New Funding Opportunity

Status of grants for FY25:

- Two research grants to identify safer alternatives to PFAS for industry in MA
- Additional opportunity announced in Dec. 2025

Grants in FY26:

- Expected to be announced April 2025
- Secured EPA grant to assist MA businesses with TSCA compliance through TUR

Grants in FY27 and beyond

- ***Unlikely due to limited funding***

The TURA Program is pleased to announce a new round of grant opportunities. For-profit, municipal, and not-for-profit entities are all eligible to seek financial assistance for projects that aim to reduce the use of toxics in Massachusetts.

Submit a preliminary application here by December 20, 2024: turi.org/grants

April 25, 2024 Meeting Minutes Vote



Approval of April 25, 2024
meeting minutes

TURA Appointees and Process

Upcoming Meetings

- Administrative Council: Anticipated February / March 2025, TBA
- Advisory Committee: Thursday January 16, 2025, 2pm – 4pm
- Science Advisory Board: December 16, 9:30 am – 12 pm

TURA Fees Background and Status

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.

Outcomes of Ad Hoc Process

Compliance & Enforcement	Planners and Planning	Multi-Topic
TURA List	Fees	

Actions taken

- Inspector training & assistance
- Increased DEP plan audits and inspections

- Encouraged alternative planning for PFAS for 2024 plan cycle
- Assessed learning in trainings

- Improved usability of chemical list

**Would require amending regulations*

†Would require amending statute

Planned or potential future actions

- Sector-focused assistance workshops & resources
- *Evaluate options to streamline TUR plan updates in certain cases (e.g., if TUR implementation is in progress)
- *Consider offering option to skip a planning cycle if no feasible options, based on results of a TURI/OTA plan review pilot program

- Consider streamlining or expediting TURA List updates from authoritative chemical lists
- Require reporting of already-listed CERCLA categories

- *Revisit fee regulations based on 2014 proposal

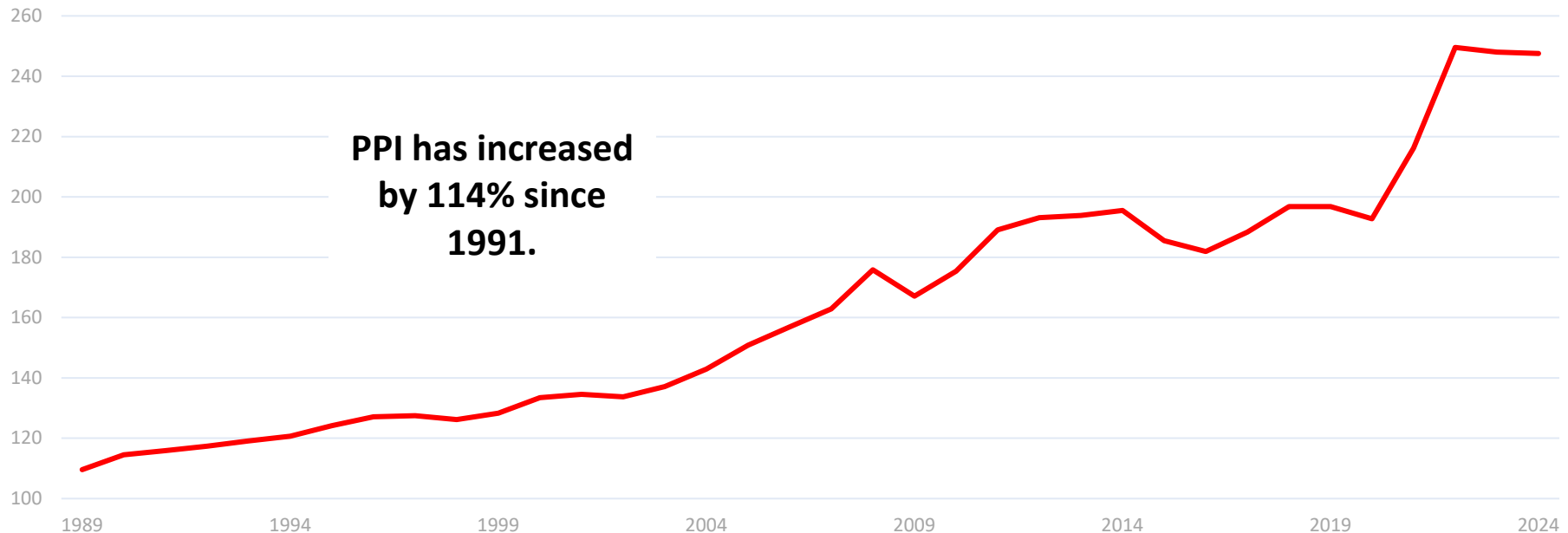
- †Explore expanding filer universe, beginning with study of chemical use by non-filer sectors

TURA Fees: Background

TURA Section 19

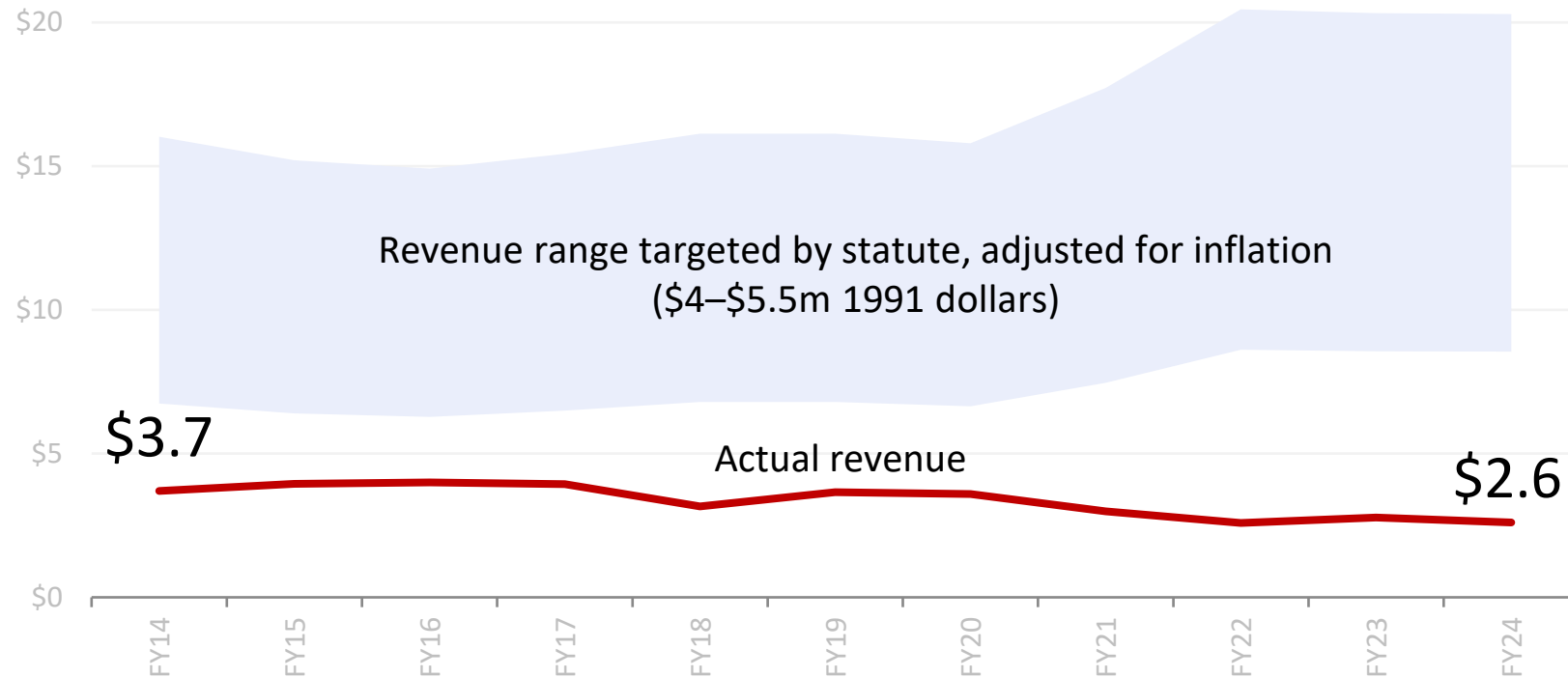
“The base fees, additional amount per chemical, and maximum fees shall be adjusted annually to reflect changes in the Producer Price Index”.

Producer Price Index, 1989-2024



TURA Fees: Background

Target vs. Actual TURA Program Revenue, 2014–2024



All values shown in millions of 2023 dollars.

2014 Proposal

- Council voted to open public comment on a one-time fee increase to account for part of missed PPI changes, designed to bring program to \$4m revenue/year
- Three options (A, B, C) were proposed, all generally built around a 50% increase
 - Council recommended Option B, which limited fee increases on smallest filers. Comments on all 3 options, and on implementation, were invited.
- Response to comments was prepared, but amendment was put on hold indefinitely due to the 2015 regulatory pause (Executive Order 562).
- **If this change had been promulgated and annually adjusted, TURA FY28 revenue would only be about \$750,000 below where it would have been if all PPI adjustments had been made since 1991.**

Adjusted Fees by Filer Size

2023 Filer Universe (n=430)	Current Base Fee	Current Maximum	Percent Increase	Adjusted Base Fee	Adjusted Maximum
<10 to <50 (39% of filers)	\$1,850	\$5,550	Full PPI (114%)	\$3,963	\$11,890
			2014 proposal (91%)	\$3,524	\$10,573
<50 to <100 (22% of filers)	\$2,775	\$7,400	Full PPI (114%)	\$5,945	\$15,853
			2014 proposal (91%)	\$5,286	\$14,097
<100 to <500 (33% of filers)	\$4,625	\$14,800	Full PPI (114%)	\$9,908	\$31,705
			2014 proposal (91%)	\$8,811	\$28,194
>500 (6% of filers)	\$9,250	\$31,450	Full PPI (114%)	\$19,816	\$67,374
			2014 proposal (91%)	\$17,621	\$59,913

Per-Chemical Fee (Current: \$1,100)	
Percent Increase	Adjusted Fee
Full PPI (114%)	\$2,356
2014 proposal (91%)	\$2,096

The “2014 proposal” rows show the fees the TURA Program would be collecting today if the 2014 proposal had been promulgated at the time and if annual PPI adjustments had been made.

“Full PPI” refers to an adjustment that would reflect the last 33 years of missed PPI adjustments.

How Would OTA Direct Funding?

- Fully fund all current Technical Staff – OTA current has three Technical Staff, with 1.5 staff funded through TURA
- Restoring OTA to early 2000s staffing levels by hiring six Technical Assistance staff
- Add 1 FTE to work on PFAS Source Reduction
- More capacity for site visits
 - More staff to support existing Right From The Start and Chemical Safety & Climate Change Resiliency Programs
 - More site visits for companies that are in or near Environmental Justice neighborhoods (70-80% of filers)
- Allow OTA Director to devote 100% of time to operation of TURA Program agency by staffing an Executive Director position for the TURA Administrative Council

Chapter 21I Section 4: *The council shall have its own staff. - OTA Director and TURA Administrative Council Executive Director would be two separate full-time positions.*



How Would MassDEP Direct Funding?

- Funding to cover existing staff working on TURA (\$200k)
- Funding for additional staff to:
 - Increase Plan audits & facility inspections for improved compliance
 - Identify non-filer companies (e.g., research NAICS codes with a goal of expanding the filer universe)
 - Increase PFAS scrutiny for source reduction
 - Increase outreach/training to facilities and TURPs regarding Plan deficiencies
- Funding to improve critical online report filing infrastructure (eDEP)

How Would TURI Direct Funding?

- Fully fund TURI's grant program:
 - Additional funding for research into alternatives for MA businesses*
**recommended by MA Legislature's PFAS task-force*
 - Additional funding for businesses to adopt safer alternatives
 - Additional grants for communities, with a focus on EJ communities
- Fund vacant positions at TURI (e.g. grant mgmt. positions)
- Enhance and expand free Lab services for MA businesses
- Modernize TURP trainings
- Support toxics related non-TURA statutory requirements, such as advice from SAB under MA flame retardant law

Spotlight on PFAS: TURA Program Activities

- OTA's [PFAS source identification](#) work
 - Coordination with wastewater treatment plants in priority Drinking Water Protection Areas to identify facilities where PFAS may be used
 - Development of PFAS [questionnaires](#) for paper, metal finishing, and coatings industries
 - Outreach to metal finishers
 - Supplier Notification Letter for facilities to send to their vendors to identify PFAS in products they may be using
- TURI grant-funded [development of PFAS alternatives](#)

Source Reduction and the Cost of PFAS Crisis

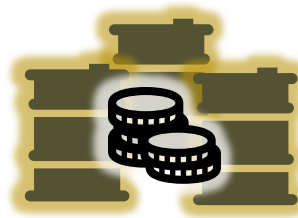
Massachusetts is spending millions of dollars to address existing PFAS contamination in the state, while the TURA Program has insufficient funding for source reduction – and remediating as much PFAS as we currently produce is impossible.

Source reduction prevents tomorrow's contamination, safeguarding health and the environment and protecting Massachusetts companies from future liability.

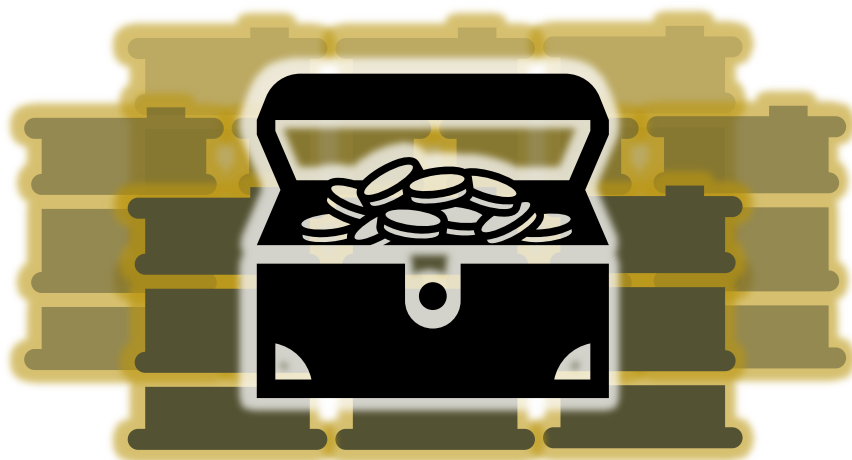
“Removing PFAS from the environment at the rate we are adding it now would cost more than the global GDP. Thus, remediation alone cannot manage global PFAS stocks.”

Ling (2024)

Source Reduction



Remediation



Discussion

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Interagency History of Nanomaterials
and Update on TURA Program
Consideration of Carbon Nanotubes
and Carbon Nanofibers

What are nanomaterials

- Nanomaterials are defined by size – one nanometer (nm) is equal to one billionth of a meter (10^{-9} meters)
- The width of a human hair is approximately 80,000 – 100,000 nm in diameter; a red blood cell is about 7,000 nm wide
- Nanomaterials can be intentionally engineered for a variety of uses, e.g., consumer products, medical applications, electronics, etc.
- Materials of the same composition may have different properties, behave differently, and pose different hazards and risks at the bulk scale vs. nano scale

Interagency History of Nanomaterials

MA Interagency Nanotechnology Committee (2007 – 2010)

- Representatives from MassDEP, OTA, MDPH, DLS, TURI, and EOHED
- All but 3 members of original Committee now retired from state service
- Workshops held in 2007 and 2009

The Big Picture: Safe Development of Nanotechnology

Proceedings from the workshop held in November 2007



Interagency History of Nanomaterials

2009 Workshop

- Brought together multiple stakeholders for a review of the science, industry, and worker and consumer exposure
- Attendees and presenters from government, academia, industry, law firms, and non-profit groups

2nd ANNUAL MASSACHUSETTS NANOTECHNOLOGY WORKSHOP

PROCEEDINGS FROM THE JANUARY 29, 2009 WORKSHOP

Promoting the Safe Development of Nanotechnology in Massachusetts



OTA 2017 Nanomaterials Survey

Outreach Methods

- Direct email through known contacts / webinar attendees / online searches
- Newsletters: OTA / TURI / MassDEP / New England Biosafety Assn
- Promotion through MCTA and ACC
- Posting in LinkedIn Nano Groups
- Boards of Health

Results

- Survey opened 165 times
- Respondents:
 - 13 Massachusetts
 - 10 current users of nanomaterials
 - 41 out of state

Items to Consider

Toxic Substances Control Act

(TSCA): Solely regulates new & existing chemicals in commerce. Does not capture nanomaterial data when a company moves from a micrometer-sized material to nanometer-sized material. For existing chemicals, EPA issued a one-time reporting rule that went into effect on August 17, 2017.

NIOSH: guidelines are recommendations rather than regulations or law.

Items to Consider:

- Companies choose nanomaterials based on function rather than the chemical composition
- Companies unaware of own use of nanomaterials (not on SDS)
- Break down in communication between chemical manufacturers and users
- EPA premanufacturing best practices for handling nanomaterials may not make it to the shop floor
- TURA Program is unaware of self-identified nanomaterial best management practices role models

TURA Program Consideration of Carbon Nanotubes and Nanofibers: **Petition**

June 2020

Petition filed by Clean Water Action (CWA) and Public Employees for Environmental Responsibility (PEER) to list Carbon Nanotubes (CNT) and Carbon Nanofibers (CNF) under TURA

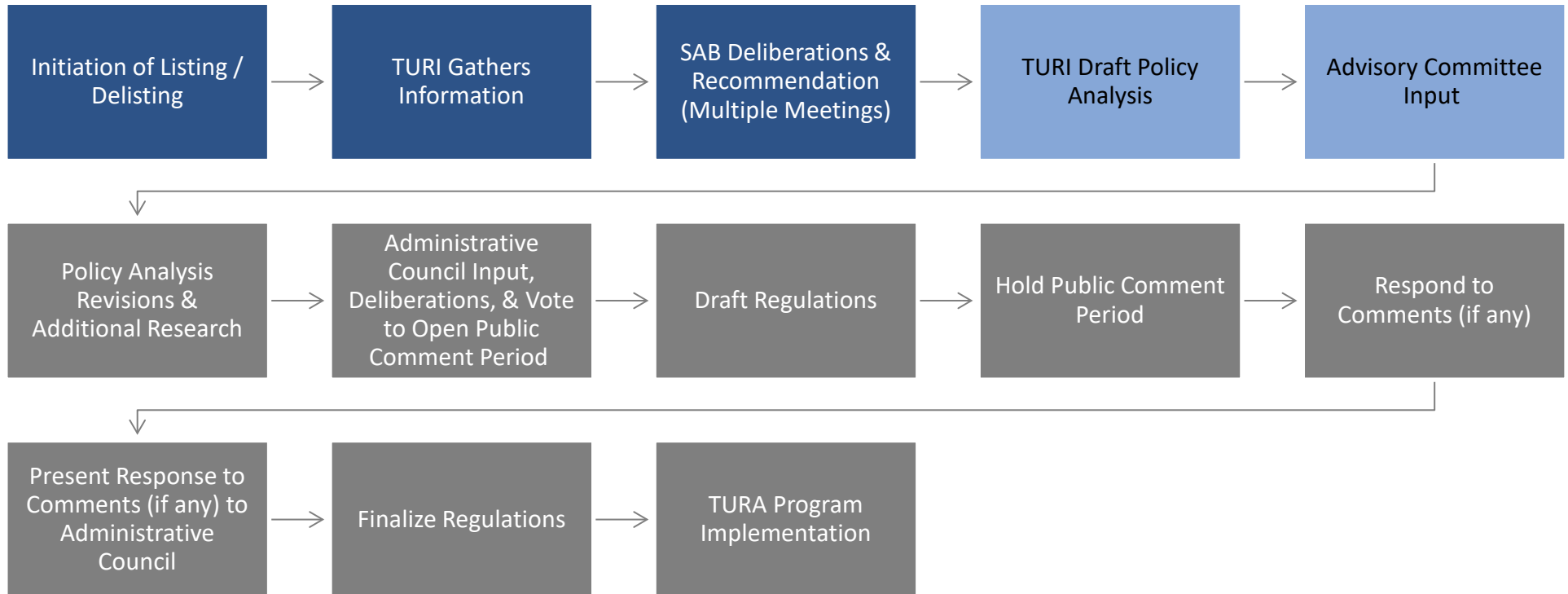
- Requested to list Carbon Nanotubes and Carbon Nanofibers as Higher Hazard Substances
- Proposed to include CNTs and CNFs on TURA list as a group
- Requested 100g reporting threshold

TURA Program Consideration of Carbon Nanotubes and Nanofibers: **Recommendation from the TURA Science Advisory Board (SAB)**

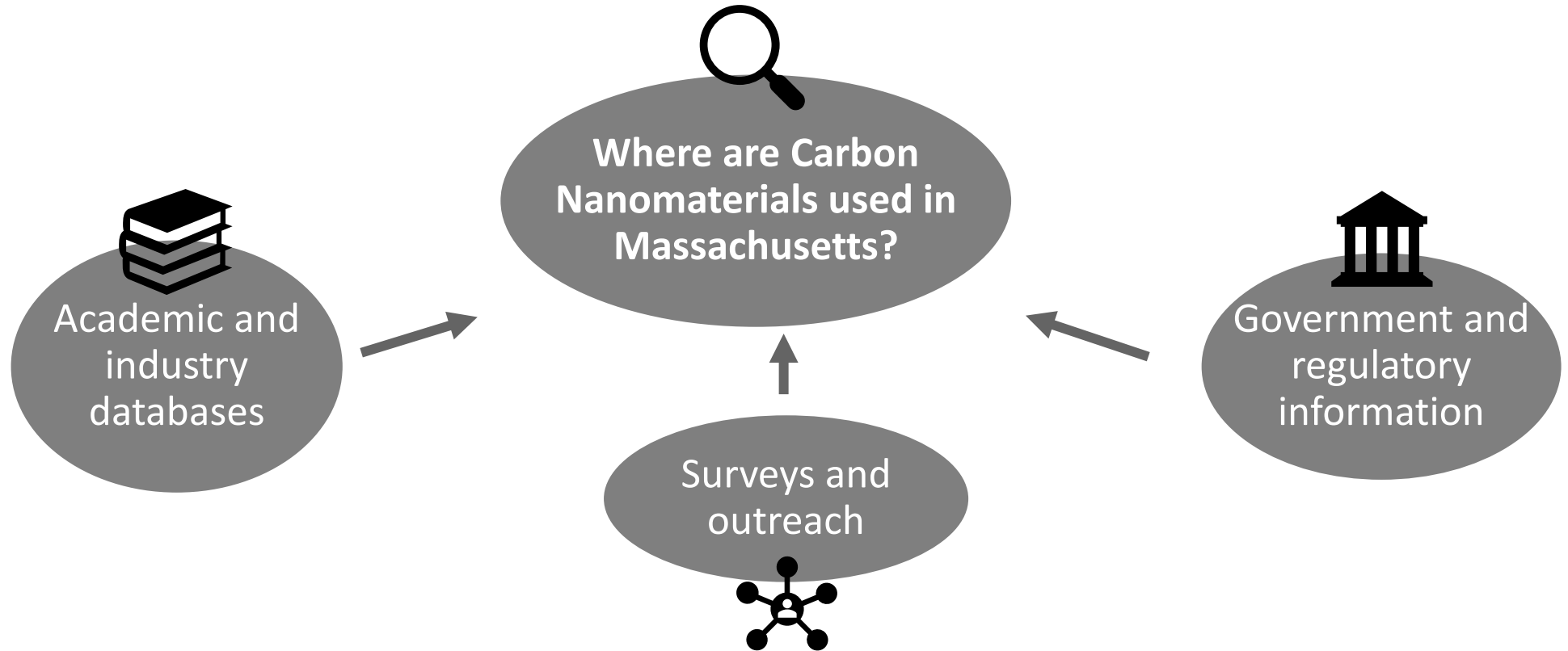
TURA Science Advisory Board recommends Multi Walled Carbon Nanotubes, Single Walled Carbon Nanotubes, and Carbon Nanofibers be **added as three distinct categories** to the TURA List of Toxic Substances

- Recommended MWCNT category be listed as HHS
 - Evidence of pulmonary toxicity, lung cancer, mesothelioma and environmental persistence. Concerns for genotoxicity and toxic environmental degradation products.
- Recommended listing SWCNT and CNF as standard categories
 - **SWCNT** - evidence of pulmonary toxicity and environmental persistence. Concerns for reactive oxygen species (ROS) production and DNA damage.
 - **CNF** - evidence of pulmonary toxicity.

TURA Program Consideration of Carbon Nanotubes and Nanofibers: **Decision Making Steps for Additions to TURA List**



TURA Program Consideration of Carbon Nanotubes and Nanofibers: **Potential Use in Massachusetts**



TURA Program Consideration of Carbon Nanotubes and Nanofibers: **Regulatory Review Approach**

Overview of regulations, official guidance and initiatives which cover carbon nanomaterials

International

- OECD - Strategic Programme on Safety Eval. & Risk Assessment
- UN - SAICM/GFC Emerging Policy Issue / Issue of Concern
- EU - e.g. REACH, Cosmetics legislation; Nanoform Guidance

Federal

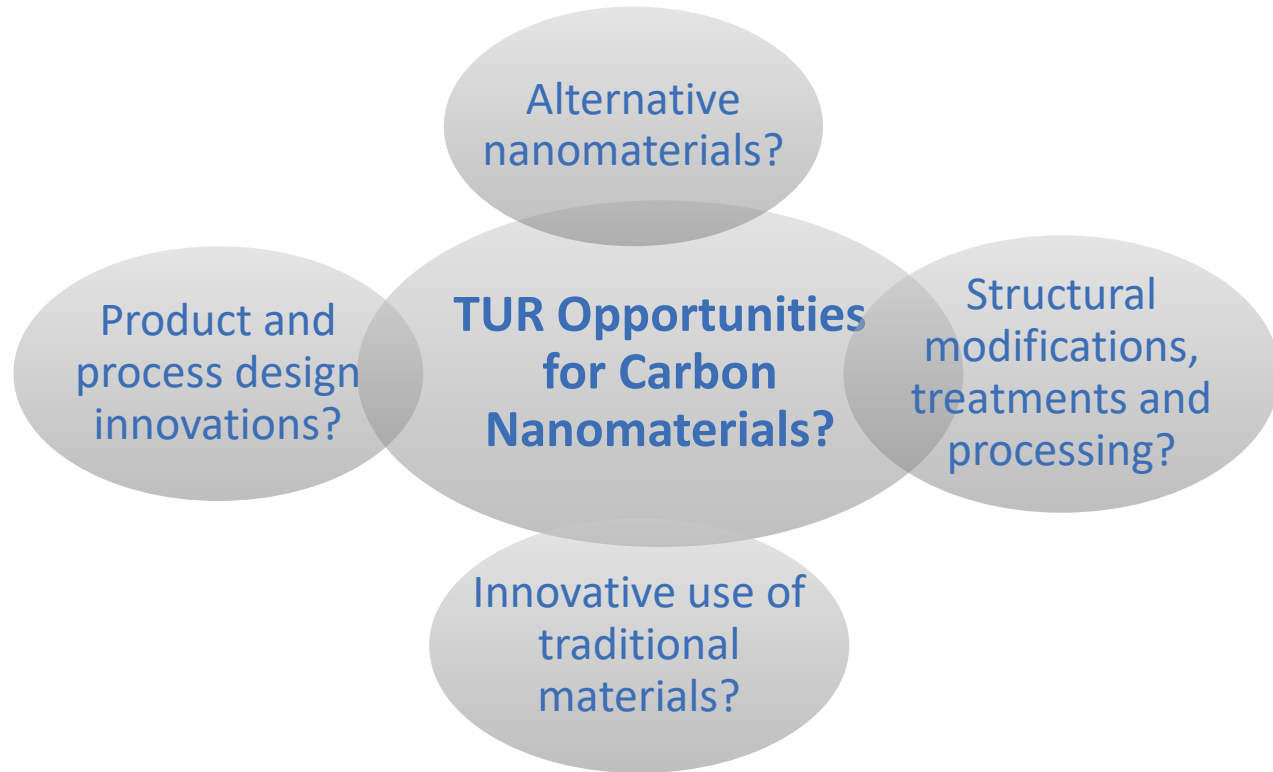
- TSCA Section 5 (Premanufacturing Notices and Significant New Use Rules)
- EPA Recordkeeping Rule
- NIOSH Recommended Exposure Limit

State and Local

- California DTSC Formal Request Letters
- Cambridge nanotechnology committee and Berkeley, CA disclosure requirements

TURA Program Consideration of Carbon Nanotubes and Nanofibers: **TUR Opportunities**

Do opportunities exist to reduce the use of carbon nanomaterials or their associated hazards along the lifecycle without compromising their unique characteristics and potential benefits to society?

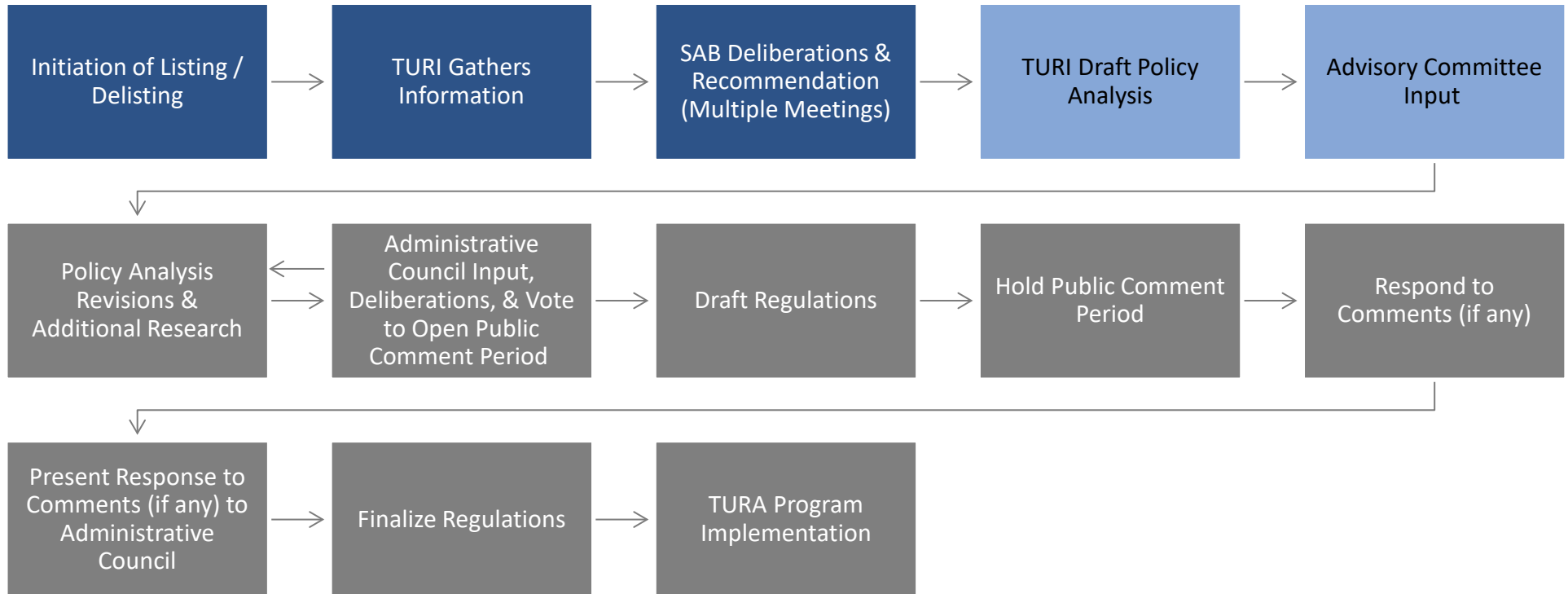


Threshold Considerations

- Petition requested 100g reporting threshold
- Regular reporting thresholds are 25,000/10,000 lbs.
- Higher Hazard Substances (HHS) reporting thresholds are 1,000 lbs.
- HHS thresholds can be further lowered upon recommendation from TURI and Science Advisory Board

We welcome input regarding policy considerations regarding the potential lowering of reporting thresholds below 1,000 lbs.

TURA Program Consideration of Carbon Nanotubes and Nanofibers: **Decision Making Steps for Additions to TURA List**



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Regulations and TRI Updates

Regulations and TRI Updates

- PFAS
 - The most recent TRI list additions have been added to the TURA List for tracking effective 1/1/25
 - EPA recently proposed a new TRI listing for 16 PFAS and 15 PFAS categories; not yet finalized
 - If finalized, we will initiate process to add these 16 PFAS and 15 categories to the TURA List, as required by law
- Quaternary Ammonium Compounds

PFAS Tracking and Reporting

	Report to TRI	TURA tracking starting	Report to DEP	How Reportable	Threshold
TURA Certain PFAS NOL	-----	January 1, 2022	July 1, 2023	As a category	25,000 lbs. mfg’d/ processed; 10,000 lbs. otherwise used
172 TRI/TURA PFAS – 2020	July 1, 2021	January 1, 2021	July 1, 2022	Separately	100 lbs. De minimis exemption no longer applies All PFAS in a given category would count towards 100 pound threshold
Four TRI PFAS - 2021	July 1, 2022	January 1, 2023	July 1, 2024		
Four TRI PFAS - 2022	July 1, 2023				
Nine TRI PFAS - 2023	July 1, 2024	January 1, 2024	July 1, 2025		
Twelve TRI PFAS - 2024	July 1, 2025	January 1, 2025	July 1, 2026		
(EPA proposed) Sixteen PFAS and 15 PFAS categories (TRI) – Anticipated 2025	Anticipated July 1, 2026	Anticipated January 1, 2026	Anticipated July 1, 2027		

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Contact us any time!



Heather Tenney heather@turi.org
General inquiry: info@turi.org
[TURI Team](#) contact information



Tiffany Skogstrom tiffany.skogstrom@mass.gov
Also contact Tiffany for Administrative Council and Advisory Committee questions
OTA Staff: <https://www.mass.gov/service-details/otas-team>



Lynn Cain lynn.cain@mass.gov
C&E: Rebecca Dolan rebecca.g.dolan@mass.gov

Adjourn



Direct all questions to
TURA Administrative Council
Executive Director
Tiffany Skogstrom:
tiffany.skogstrom@mass.gov