

Massachusetts Toxics Use Reduction



TURA Program Strengthening Ad Hoc Committee Orientation

Nov 19, 2020



TURA Program Strengthening Ad Hoc Committee Meeting November 19, 2020

Please state your name and organization in the chat box for the purposes of recording meeting attendance.

We will pause for opportunities for attendee participation at designated times.

Please contact Caroline.Higley2@mass.gov if you have technical difficulties during the meeting.

Please Note

This meeting is being conducted remotely, consistent with Governor Baker's Executive Order of March 12, 2020, due to the current State of Emergency in the Commonwealth due to the outbreak of the 2019 novel coronavirus, known as "COVID-19".

Recording Notification

This TURA Program Strengthening Ad Hoc Committee Orientation meeting will be recorded to accommodate members and interested parties who were not able to attend today's event.

Written notes are also being taken.

Reminder: Please contact Caroline.Higley2@mass.gov if you have technical difficulties during the meeting.

Today's Agenda

1. Welcome and Committee Member Introductions
2. Presentation: TURA Program and Ad Hoc Committee Orientation
3. Discussion among Ad Hoc Committee members
 - Public comments / questions held until opened for general discussion.
 - Please use zoom's "raise hand" function during discussion.

TURA Program Strengthening Ad Hoc Committee



TURA Program Strengthening Ad Hoc Committee

Objective: Review and strengthen the effectiveness and value of TURA program activities to Massachusetts businesses while ensuring ongoing progress in reducing the use of toxics in the Commonwealth and increasing the adoption of safer materials.


Discussions will be summarized for the consideration of the TURA Advisory Committee.

All members of the TURA Advisory Committee are also encouraged to participate in as many of the AHC meetings as their schedules permit.

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.

Goals of TURA

A statewide goal of reducing toxic waste generated by fifty percent (**50%**) using toxics use reduction as the means of meeting this goal. 

To sustain, safeguard and promote the **competitive advantage** of Massachusetts businesses, large and small, while advancing innovation in toxics use reduction and management;

Goals, cont'd

To **promote reductions in the production and use of toxic and hazardous substances** within the commonwealth, both through the programs established in this Act and through existing toxics-related state programs;

To **enhance and strengthen the enforcement of existing environmental laws** and regulations within the commonwealth; and

Goals, cont'd

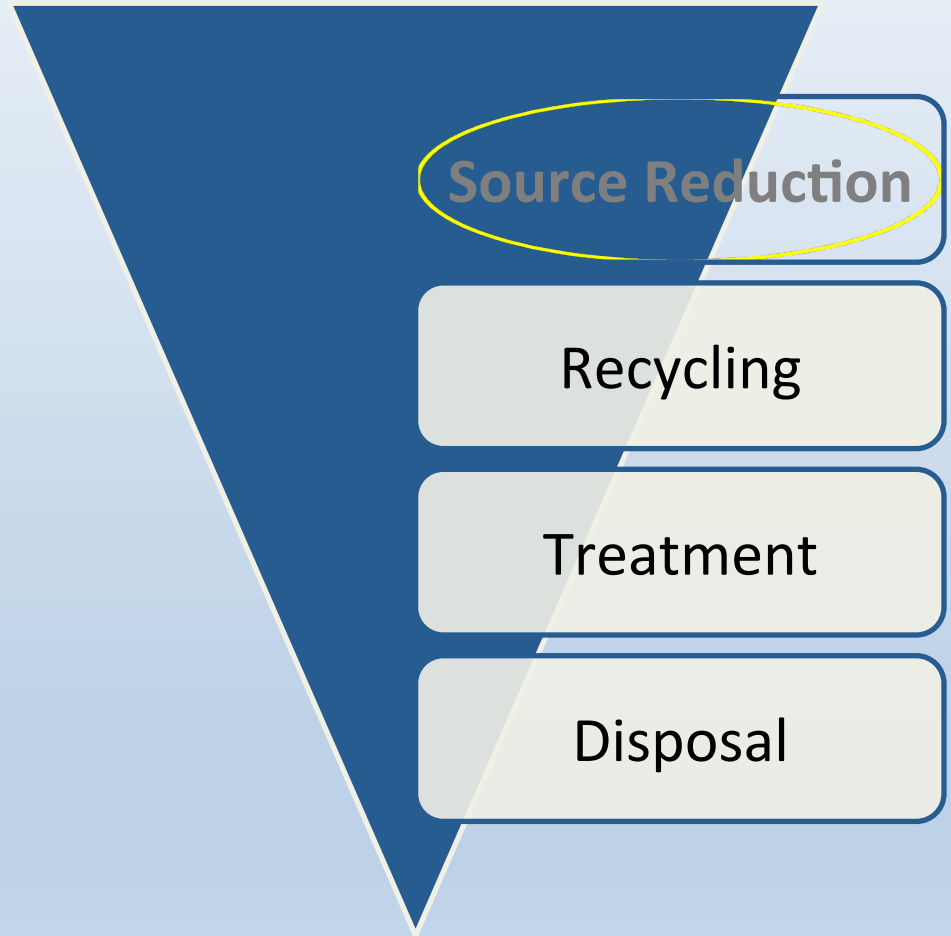
To establish toxics use reduction as the preferred means for achieving compliance with any federal or state law or regulation pertaining to toxics production and use, hazardous waste, industrial hygiene, worker safety, public exposure to toxics, or releases of toxics into the environment and for minimizing the risks associated with the use of toxic or hazardous substances and the production of toxic or hazardous substances or hazardous wastes;

Goals, cont'd

To **promote coordination** and cooperation between all state departments and agencies administering toxics-related programs.

Core principles of Toxics Use Reduction

- Reduce toxics at the source
- Look for opportunities to eliminate or reduce hazard
- Primary prevention



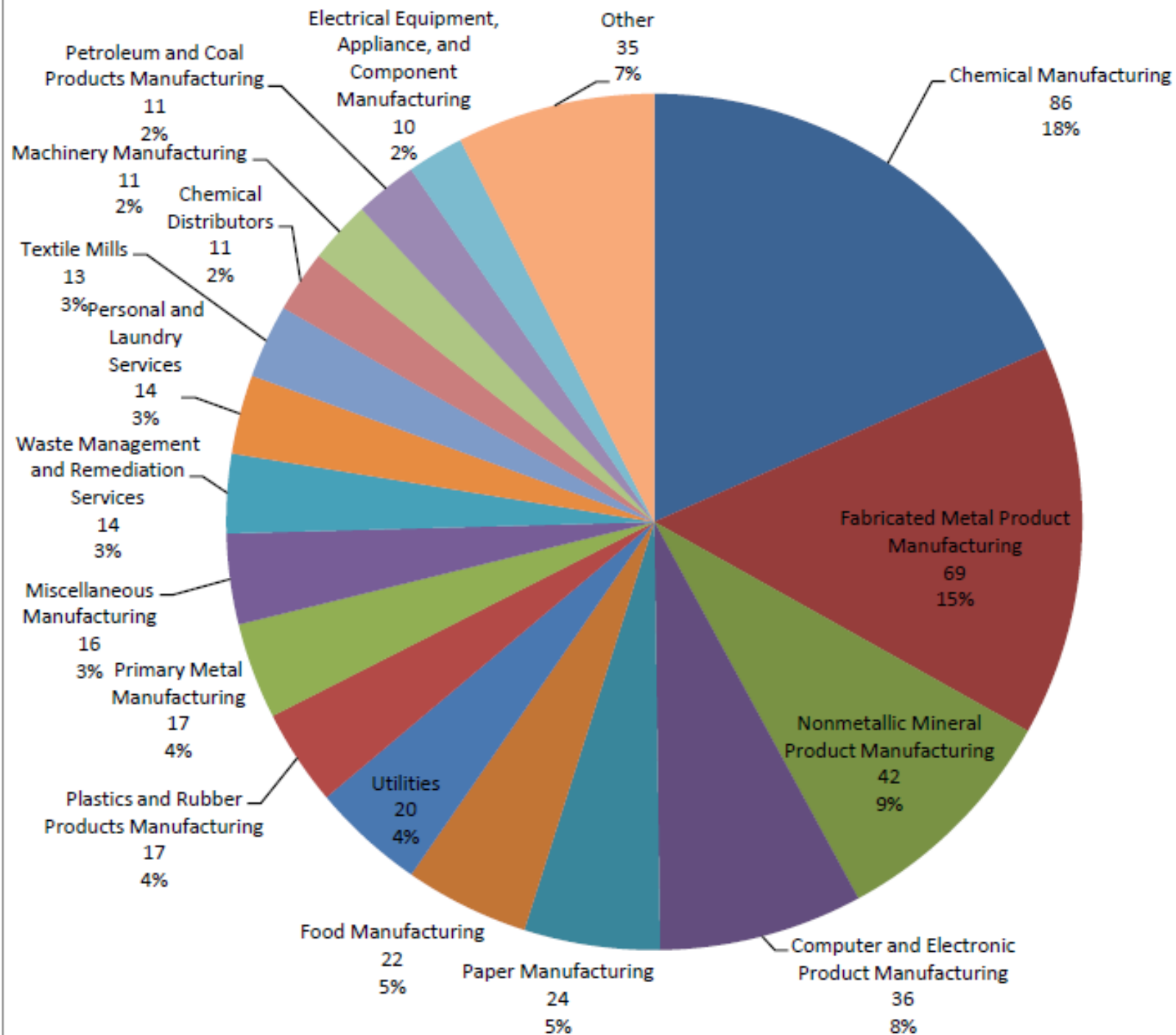
TURA Program

Who reports?

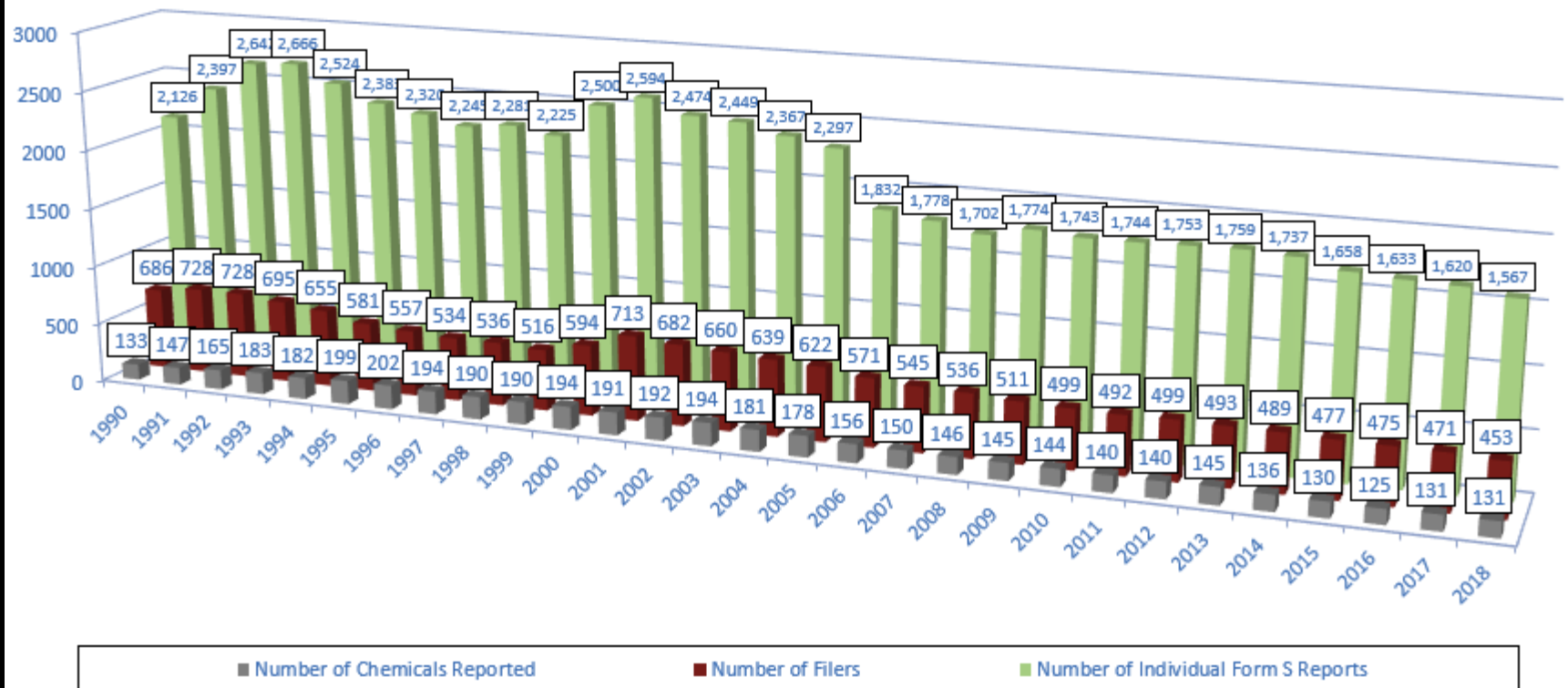
- Conduct business under certain Standard Industrial Classification (SIC) Codes, and
 - Manufacture or Process \geq 25k lb listed substance
 - Otherwise Use \geq 10k lb listed substance
- Facilities with \geq 10 FTEs
- Filing Universe between 400 – 500 facilities

What TURA Requires

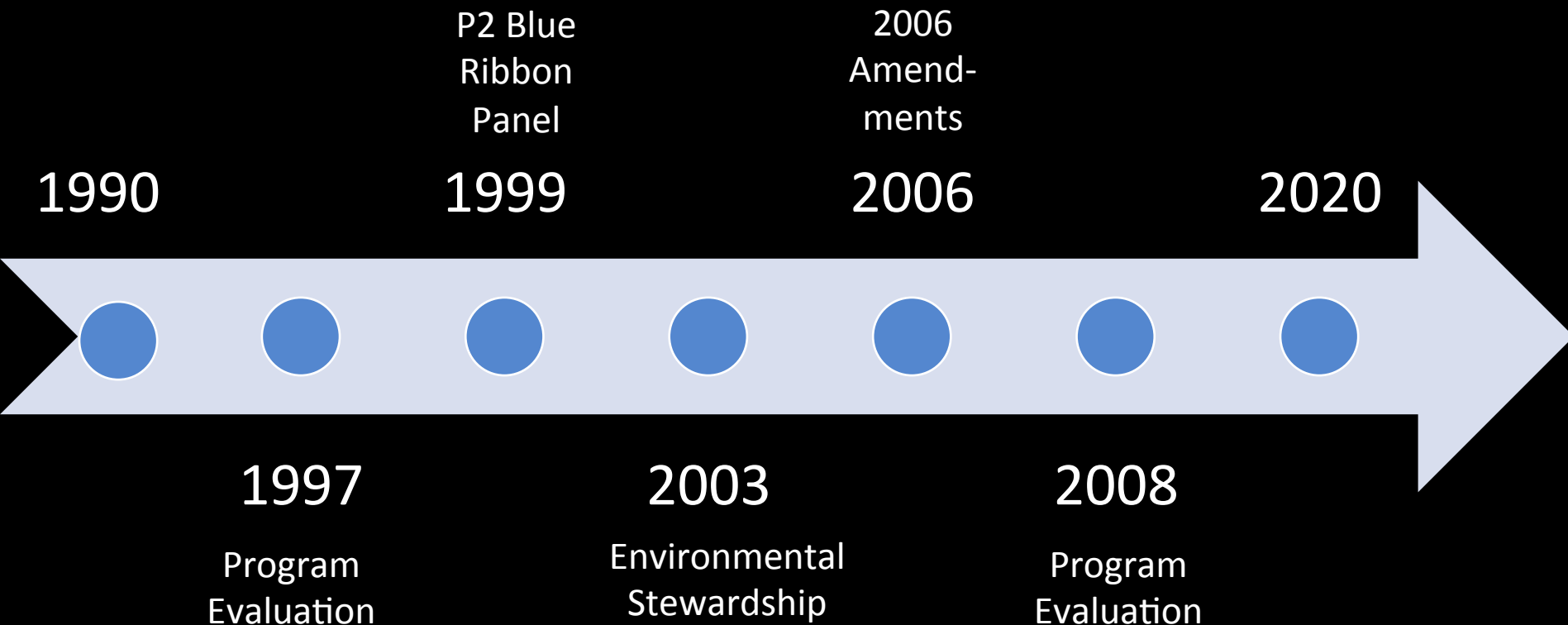
- Report on toxic chemical use
- Annual fee
- Conduct Toxics Use Reduction Planning every two years
 - Does not ban chemicals



The TURA Universe



TURA Through the years 1990-2020



2006 Amendments

Streamline reporting & planning requirements

- Eliminated automatic 10K threshold
- Eliminated BRI/ERI, production unit reporting revamp
- Eliminated escalating late fees

Resource Conservation & EMS planning options

Updated role of Advisory Committee

2006 Amendments

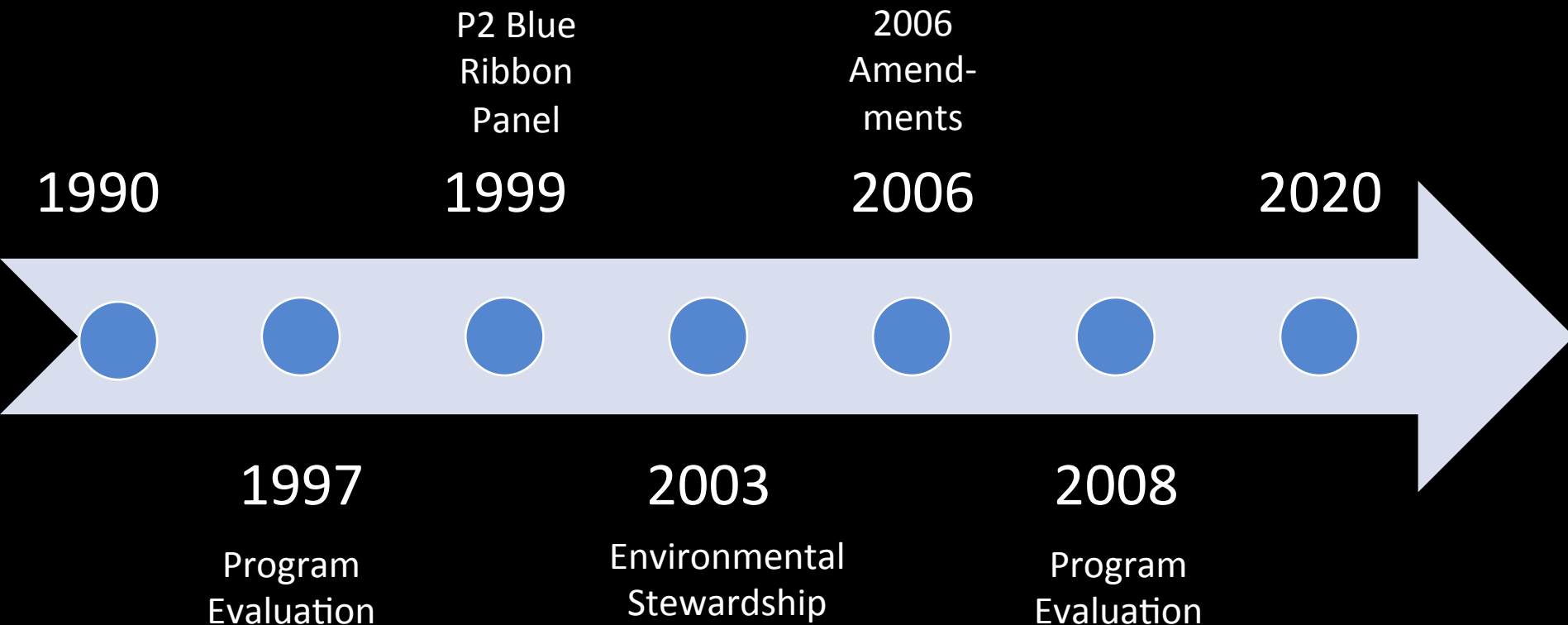
TURA Chemical list

- Categorization - HHS & LHS (10/year)
- Review of CERCLA chemicals

Updated Priority User Segments

Fee structure review – authorized Council to study and make changes to fee structure

TURA Through the years 1990-2020



Program Assessments

- 1990-97
 - Assessed economic benefits of program as a whole
 - Filer survey
 - Materials accounting was rated most valuable component of TUR planning
- 2009
 - Filer/planner survey
 - Benefits, implementation challenges
 - Changes in facilities' planning experiences over time (pre-amendments)
 - What factors make planning cycles most useful?
 - Shifting planning perspective, additional regulatory motivators, length of time devoted to planning

2008-9 Survey:

- Increased management attention to environmental practices (55%)
- Improved worker health & safety (51%)
- Financial savings as a result of TUR planning (41%)
- Other:
 - Improved worker-management relations
 - Able to retain a product line as a result of TUR planning

Higher Hazard Substances

Cadmium and Cadmium Compounds

Trichloroethylene

Perchloroethylene

Formaldehyde

Methylene chloride

Hexavalent chromium

N propyl bromide

Hydrogen fluoride

Dimethyl formamide

Cyanide Compounds

Toluene diisocyanates

Lower Hazard Substances

Isobutyl alcohol

Sec butyl alcohol

N butyl alcohol

Ferric chloride

Ferrous chloride

Ferric sulfate

Ferrous sulfate

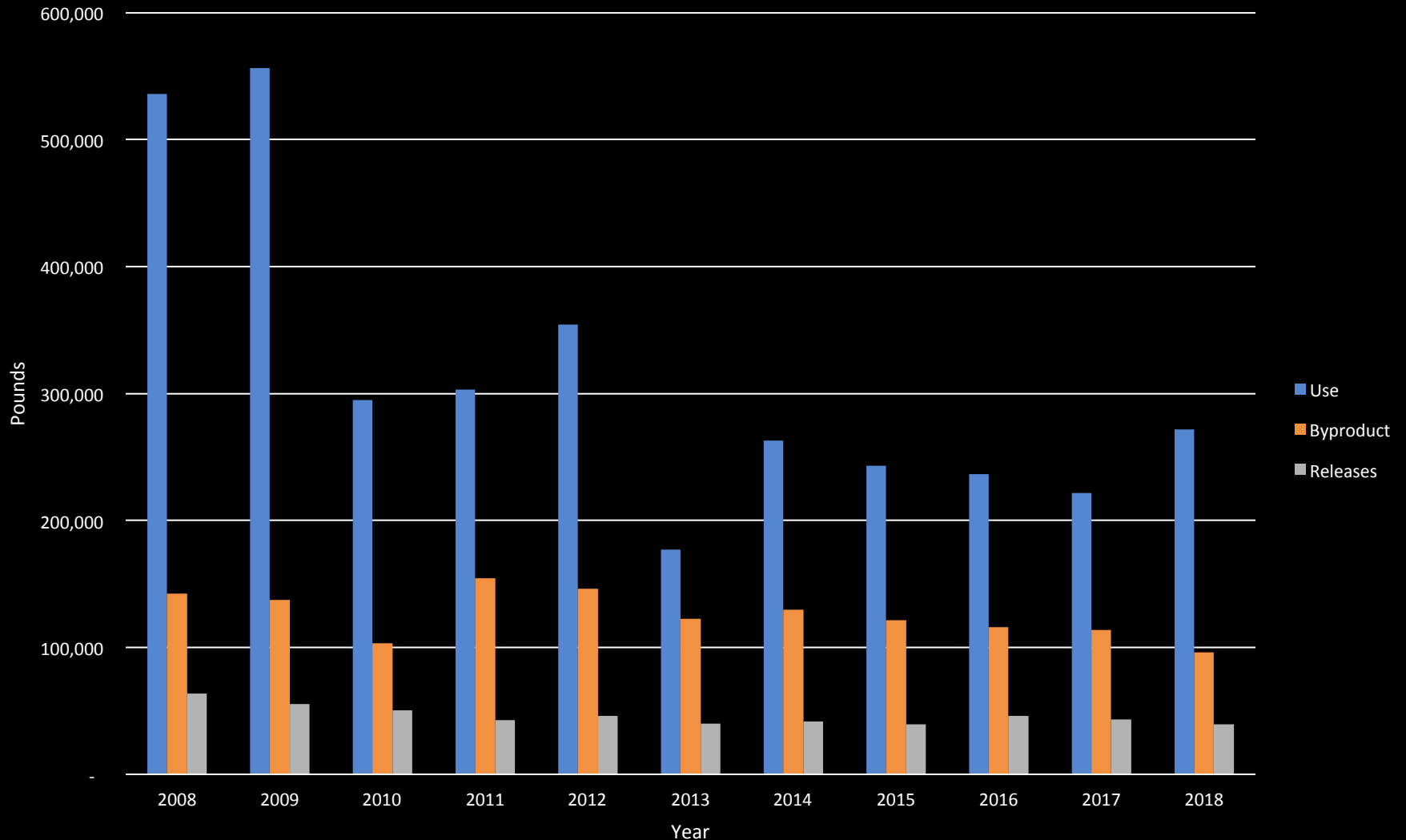
Ferrous sulfate heptahydrate

Butyl acetate

Iso butyl acetate

HHS Trends -- Example: TCE

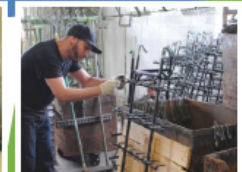
TCE USE, BYPRODUCT, AND RELEASES UNDER TURA



TURA filer accomplishments

20th & 25th
Anniversary
Honorees

Toxics Use Reduction and Resource Conservation:
Competitiveness Impacts for Massachusetts Businesses



Massachusetts Toxics Use Reduction Institute (TURI) and
Massachusetts Office of Technical Assistance and Technology (OTA)



TURI Report #2017-002
September 2017

Semiconductor Manufacturing – Analog Devices

- Reduced energy use by more than 16 million KWH per year through conservation initiatives.
- Reduced water consumption by nearly 90 million gallons per year through water use conservation projects.
- Reduced use of sodium hydroxide and hydrochloric acid for resin regeneration in DI water production processes



“ Because of the TURA framework, we are in a better position to meet customers’ needs for green products. Our TURA plan wasn’t something we wrote, put on a shelf and then updated in two years. This work is embedded into our management system and measured. “

Paints & Coatings – Stainless Steel Coatings, Inc.

- Reduced the use of xylene by 57%
- Eliminated the use of hexavalent chromium
- Saved more than \$15,000 per year in reduced waste disposal costs
- Reduced hazardous waste generation by 52%
- Reduced energy costs by 20 to 25%
- Saved 14,500 lbs of CO₂ emissions/yr



Independent Plating

- Reduced the use of toxic chemicals by more than 500,000 pounds, including:
 - Cyanide compounds by 95 percent
 - Hexavalent chromium compounds by 88 percent
 - Hydrofluoric acid by 100 percent
- Reduced the use of acids, bases and other reportable metal compounds.
- Made the switch from hexavalent chromium to trivalent chromium on several production lines, with assistance from a TURI incentive grant.



Chemgenes Corporation



- Worked with OTA to reduce use of chloroform > 55% and hexane by > 35%
- Improved manufacturing efficiency, saving \$215,000 in chemical purchases, regulatory fees and disposal costs.
- Reduced solid waste from 25,000 to 8,000 lbs. per year.
- Received TURI incentive grant to further reduce hexane and ethyl acetate use through solvent recovery and recycling system.



Small Businesses – Professional Wet Cleaning Work Group

- Small, family-owned businesses
- All shifted to 100% professional wet cleaning
- Assisted with TURI grants
- All achieved savings in operating costs
- Ten-year savings range from \$28K to \$375K



Industry Grants – Recent Projects

- Optimizing the use of cleaning chemicals at soup processor
- Researching and testing alternatives to HF at a fiber optic cable facility
- Increasing efficiency of product usage at aftermarket liquid formulating and packaging facility
- Eliminating the use of TCE in degreasing operations at a thermal solutions manufacturer





MassDEP
(Regulatory)

OTA

(Confidential
Technical
Assistance)



TURI

(Research &
Grants)



MassDEP



Writes the regulations based on environmental legislation and the policies and procedures that support the regulations

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

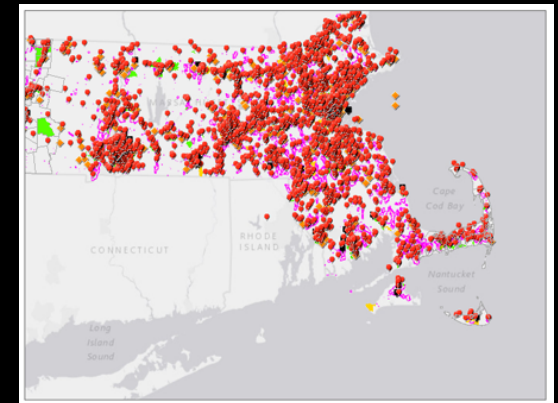
Provides outreach and education on regulatory programs

Certifies TUR planners

Evaluates programs success and provide analyses for program improvements

Office of Technical Assistance (OTA)

- Non-regulatory agency within Executive Office of Energy and Environmental Affairs (EOEEA)
- Staff of chemists, engineers, public health professionals with industry experience with understanding of
 - Regulations
 - Bottom Line
 - How to implement changes
- Provides confidential onsite technical and compliance assistance to manufacturers, businesses, and institutions
- All OTA services are available free of charge to any Massachusetts toxics user

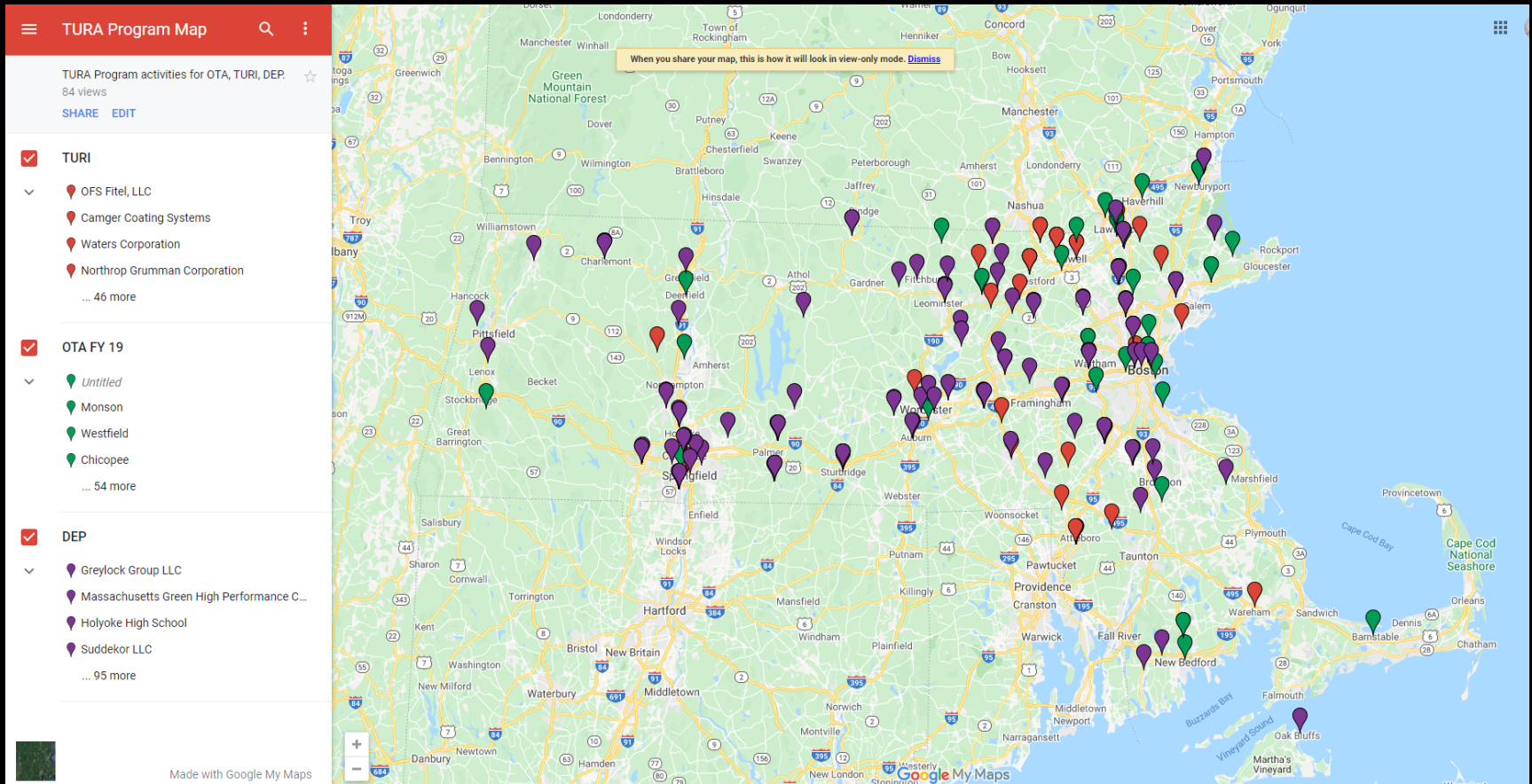


TURI Resources & Activities

- Education & training
- Grants
 - Large & small businesses
 - Municipalities, regional governments & community organizations
 - University research on safer alternatives
- Demonstration sites
- Laboratory & library services
- Facilitated work groups for industry sectors
- Policy analysis
- Science Advisory Board



TURA Program Recent Work

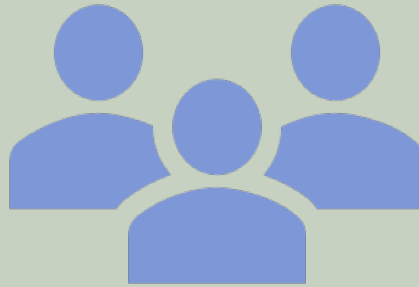


TURA Boards & Committees



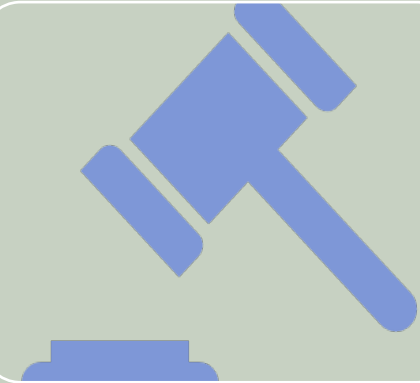
Science Advisory Board

- Managed by TURI
- Scientific experts, appointed by Governor
- Science-based recommendations and advice



Advisory Committee

- Managed by Executive Director of the Administrative Council
- Appointed by Secretary
- Multi-stakeholder group



Administrative Council

- Chaired by Secretary or Designee
- TURA Governing Body

Administrative Council

Composed of
agency
heads or
designees

Relies on
input from
Advisory
Committee
& program
agencies

Votes on
chemical
listings &
designations;
provides
input on MA
toxics policy

Advisory Committee

Stakeholder group with representation from regulated community, labor, health & environmental groups & others

Advises the Administrative Council & TURA Program on policy issues

Reflects perspectives of wide range of stakeholders

Science Advisory Board

Composed of
scientific
experts

Advises on the
addition /
deletion of
chemicals
from the TURA
list and hazard
categorization

Provides
scientific or
technical
advice on
TURA-related
issues.

QUICK PAUSE FOR 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. Participants will be unmuted and invited to ask questions one at a time.

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Ad Hoc Committee Scope

Assist the Advisory Committee and the Administrative Council by reviewing specific issue areas.

Additions or modifications of policies and guidance within the current TURA statute and regulations.

Program staff will bring feedback from prior evaluations and interviews with planners to add to the discussion.

Discussion Topics

Compliance &
Enforcement

Resource
Conservation &
EMS Planning

TUR Planners &
TUR Planning

TURA
Reportable
Substances

Fees

Compliance & Enforcement

Discussion topics may include:

- Requests for information – DEP audit of company plans
- Good faith effort
- Quality control for TUR Planners
- Regional inspections / screenings

Resource Conservation (RC) & Environmental Management Systems (EMS) Planning

Discussion topics may include:

- Approaches to encouraging more use of RC & EMS options
- Resource Conservation Planning Guidance Document
- Integrating TUR planning with other business systems and drivers
- How can we make RC & EMS options more productive & useful?

TUR Planners & Planning

Discussion topics may include:

- Insights from TUR Planner interviews
- Creation of tools to help guide planning
- Options when a safer alternative is not available
- Continuing Education
- Certification & Recertification

TURA Reportable Substances

Discussion topics may include:

- Maintaining a current & relevant chemical list
- Approaches to updating the list
- Higher Hazard Substances (HHS) & Lower Hazard Substances (LHS)
- Emerging chemicals of concern
- Priority user segments

Fees

Discussion topics may include:

- Annual fee adjustment
- 2014 fee review & proposal
- Consistency between TURA fee revenue & statutory targets

Ad Hoc Committee Representation

TURA Advisory Committee members, representative stakeholders selected from nominations, and TURA program agency representatives.

Meetings will be chaired by Chair of the Administrative Council (Undersecretary for Environmental Affairs, Dan Sieger).

Ad Hoc Committee Process

One topic per 2-hr meeting

No consensus required; pros and cons of proposals will be noted. No votes; focus on implementation.

Program staff summarize discussion for Advisory Committee & Admin Council, noting discussions & any proposals for program improvement.

Open Meeting Law

All TURA meetings are Open Meetings

All our work and communications are public record

Discussion

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Adjourn

Next Topic: Compliance and Enforcement