



TURA Program Update

TURA Virtual Conference
Session A
April 6, 2021



Welcome!



Slides and handouts are available at turi.org/ContinuingEducationConferenceSpring2021



Webinar will be recorded – recording available at same location of TURI's website



Use chat box for questions at any time – we will answer Qs immediately when possible, and we'll find time at the end to answer the rest

- If you are experiencing technical challenges during this session, you can send a chat directly to the moderator (noted as such in the participant list) or email Brenda@turi.org

TUR Continuing Education Credits



- This session has been approved for 3 credits
- To be awarded credits from MassDEP you must:
 - Register and pay for this session
 - Participate in polls and/or breakout room discussions
 - Complete and submit the post-conference survey for this session
- You will receive a certificate of completion once you have met these requirements
 - Please be patient – this will take about a week for us to process

Massachusetts Toxics Use Reduction



TURA Program Update

TURA Continuing Education Spring Conference

April 2021



Web links to resources, meeting materials and information are provided on written program update

TURA Program Update - April 2021

COVID-19 Pandemic

Note that all upcoming events are planned as virtual due to the COVID-19 pandemic and the necessity for social distancing. Please check TURI's website for on-going updates on events and resources, and feel free to contact TURI, OTA or [MassDEP](#) staff with any questions.

For the Latest News

For the latest news, sign up for program newsletters from [TURI \(see recent newsletter\)](#) and [OTA \(see recent newsletter\)](#).

Current and Upcoming Meetings and Events

- [TURA Program Strengthening Ad Hoc Committee](#) (all meetings to be held virtually)
 - Toxic Substances, Thursday, Apr 29, 2021, 11am - 1pm
 - Fees, Thursday, May 13, 2021, 10am - 12pm
- [Spring Continuing Education Conference](#), April 6, 8, 13
 - Apr 6 Keynote: The Intersection of Toxics Use Reduction and Environmental Justice, by Ana Mascareñas, Environmental Equity Deputy Director and Tribal Liaison, CA DTSC
 - Other sessions: materials accounting fundamentals, alternate planning such as Resource Conservation or EMS, EU REACH, and Energy saving tools.
- [Lean Manufacturing and Pollution Prevention for the Food and Beverage Sector](#), March-June 2021;
Funding provided for this training through an EPA Region 1 Healthy Community grant
- CD Aero virtual demo - date TBA

Recent Events

- [Science Advisory Board Meeting](#) - Mar 11, 2021
- TURA [Administrative Council Meeting March 5, 2021](#)
- TURA Program Strengthening Ad Hoc Committee Meetings:
 - [TUR Planners and TUR Planning](#), Mar 30, 2021
 - [Alternative Planning - RC and EMS](#), Jan 13, 2021
 - [Compliance and Enforcement](#), Dec 14, 2020
 - [Orientation](#), Nov. 19, 2020
- [Virtual Fall Continuing Education Conference](#) – Oct 27 and Nov 5; sessions: Safer cleaning and disinfecting, new TURA Data site, TUR success case studies, and economic evaluation to build the case for TUR implementation.
- [Science Advisory Board, Jan 14, 2021](#): Quaternary ammonium compounds
- OTA webinar co-hosted with Department of Labor Standards for Massachusetts manufacturers on what to expect during OTA and DLS remote technical assistance visits, Feb. 10, 2021
- [TURI Webinars](#); Legislative 30-minute briefing, Feb 9, 2021 – [Using the new TURA data site](#)

Resources and Media Related to COVID-19 Safer Cleaning and Disinfecting

- See TURI's website: https://www.turi.org/Our_Work/Cleaning_Laboratory/COVID-19_Safely_Clean_Disinfect with updated list of safer disinfectant products
- [Guidance for Businesses](#): Find information about safer cleaning and disinfecting, and tools such as log and checklist templates and a [fact sheet](#).
- [Cleaning Secrets for Every Room](#), Consumer Reports, March 26, 2021
- The TURI lab is testing efficacy of safer disinfectant chemistries and devices. Using a surrogate virus for COVID-19, the TURI Lab is evaluating devices and chemistries such as steam cleaning, [hypochlorous acid](#), UV light, electrostatic sprayers and fogging devices. Stay tuned for results.

MassDEP Annual TURA Form S Reporting



- eDEP TUR reporting for RY2020 going live later in April
- Annual training on-line – will be posted by end of April
- Guidance and instructions available on MassDEP website

Newly Reportable Substances



Nonylphenol ethoxylates (NPEs)

- TRI/EPCRA category of 13 specific chemicals
- First reports due July 1, 2021 (for RY 2020)
 - Note: NPE category was reportable under TRI in 2020 for RY 2019

Addition of TRI NDAA PFAS chemicals

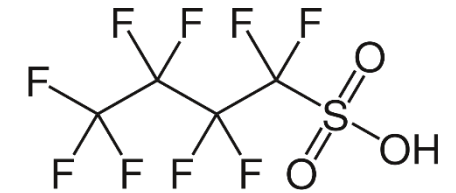
- 172 PFAS added to TRI for RY2020 and TURA for RY2021
 - 14 specific long-chain and GenX PFAS, plus 158 precursor PFAS
 - Individually listed with 100 lb reporting threshold
- 3 additional PFAS added to TRI for RY2021, Council will add to TURA no earlier than RY2022

TURA PFAS Policy Analysis

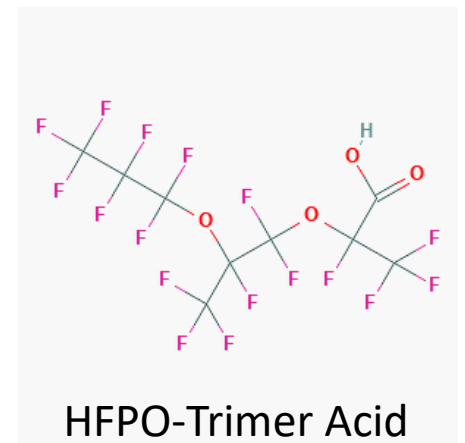
Proposed PFAS category recommended by SAB includes:

Those PFAS that contain:

- A perfluoroalkyl moiety with three or more carbons (e.g., $-C_nF_{2n}-$, $n \geq 3$; or $CF_3-C_nF_{2n}-$, $n \geq 2$) or
- A perfluoroalkylether moiety with two or more carbons (e.g., $-C_nF_{2n}OC_mF_{2m}-$ or $-C_nF_{2n}OC_mF_m-$, n and $m \geq 1$), and
- PFAS that are not otherwise listed



PFBS



HFPO-Trimer Acid

PFAS Resources



OTA Supplier notification letter template
OTA technical assistance
Gathering use and product information

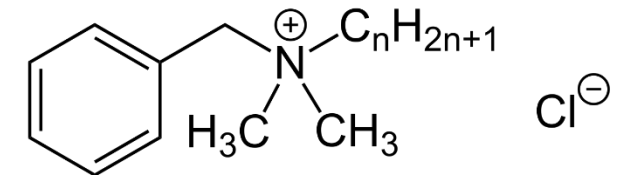
TURA PFAS NOL Policy Analysis
SAB – scientific hazard information

AFFF alternatives
NEWMOA Webinars

Science Advisory Board

- Quaternary ammonium compounds
 - Two subcategories used in disinfectants: ADBAC and DDAC

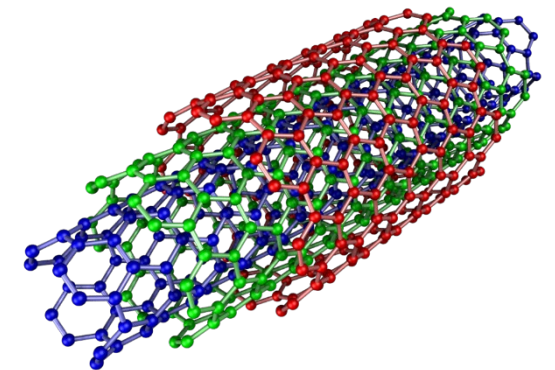
- SAB also deliberating on Nanomaterials –
petition to list carbon nanotubes and carbon nanofibers



$n = 8, 10, 12, 14, 16, 18$

e.g., ADBAC, or
Benzalkonium chloride

Source: Wikipedia



e.g., Triple-walled carbon nanotube

Source: Wikipedia

MassDEP – Flame Retardant Law



- Covered flame retardants
 - Chlorinated phosphates (TDCPP, TCEP, TCPP)
 - Chlorinated paraffins
 - Antimony trioxide
 - Brominated FRs (HBCD, TBPH, TBB, PentaBDE, OctaBDE, TBBPA)
- Covered Products
 - including bedding, carpeting, children’s products, residential upholstered furniture, and window treatments



Business, Community and Academic Grants

Massachusetts
Toxics Use Reduction



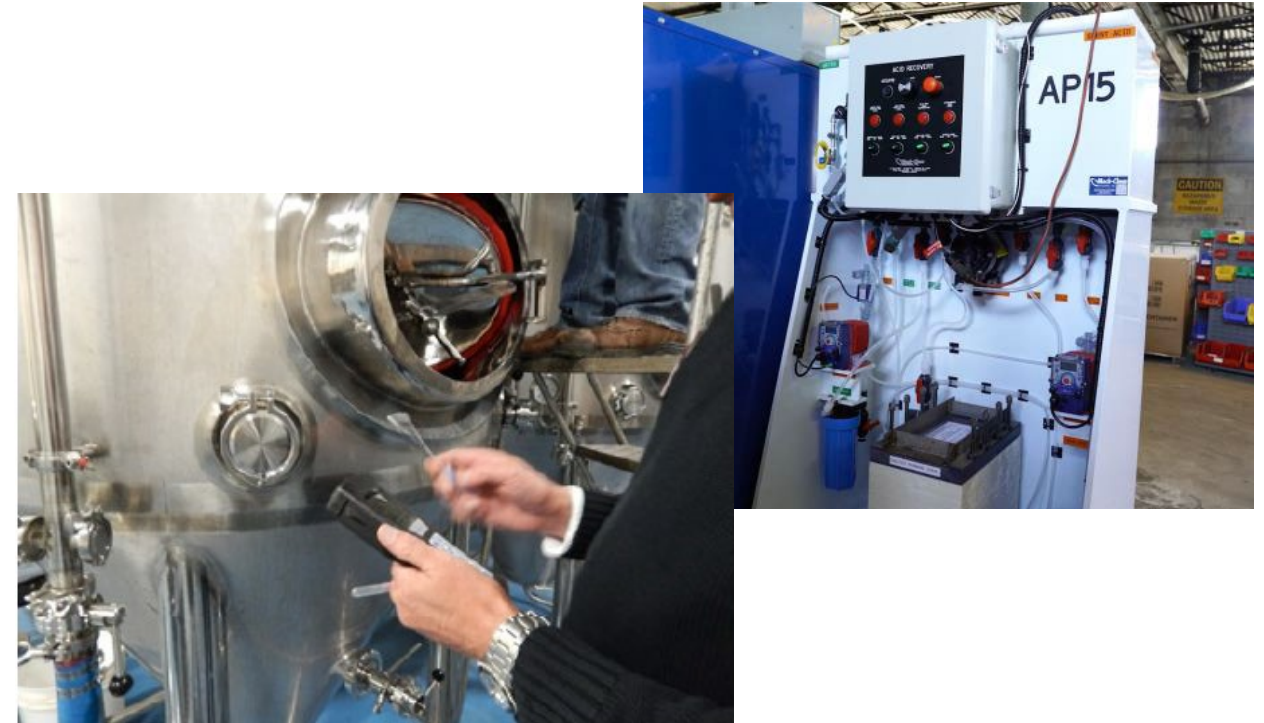
FY22 Request for Proposals available late April 2021

Industry Grants of up to \$30,000 are for manufacturing facilities to improve processes or install technology that results in reducing toxics. [Learn more.](#) [Contact Joy Onasch.](#)

Small Business Grants of up to \$10,000 are for businesses that provide services directly to consumers to change processes or replace toxics with safer alternatives. [Learn more.](#) [Contact Joy Onasch.](#)

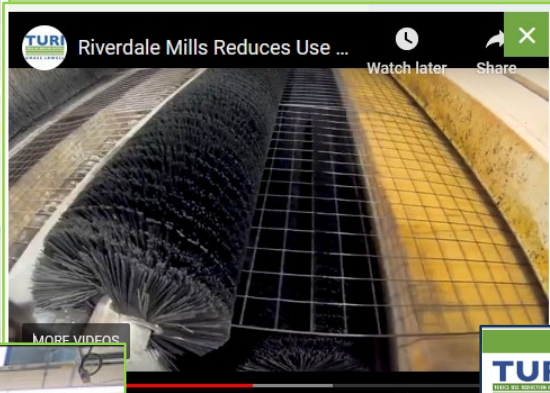
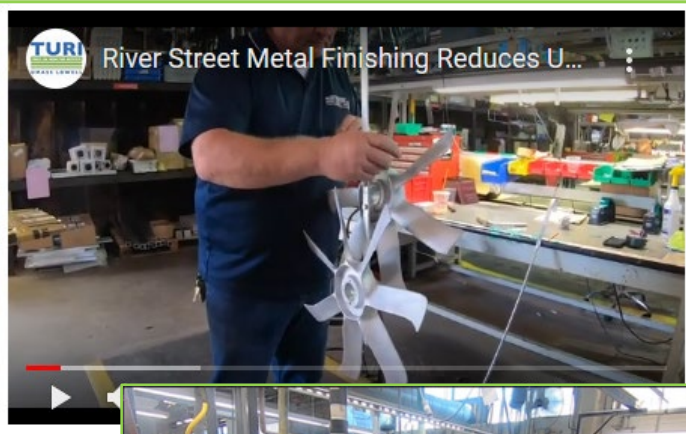
Community Grants of up to \$10,000 for local projects and up to \$20,000 for regional or statewide projects are intended to create and promote healthier communities. [Learn more.](#) [Contact Rachel Massey](#)

Academic Research Grants in partnership with industry are available up to \$25,000 for a one-year project and \$35,000 for a two-year project. [Learn more.](#) [Contact Greg Morose.](#)



TURA Program Resources

Massachusetts Toxics Use Reduction



Videos, demo sites, case studies

Environmental Assistance Services for Businesses

Get free, confidential environmental assistance for your business or facility.



TURI
UMASS LOWELL

Making Massachusetts a safer place to live and work

Fat Moon Shines with Safer Alternatives

Overview

Fat Moon Mushrooms grows mushrooms in a renovated mill building in Chelmsford, Massachusetts, for distribution to restaurants, farm stands, and small grocery stores in the Northeast region of the state. Fat Moon produces 200 to 500 pounds of mushrooms weekly, including shiitake, oyster, lion's mane, and chestnut.

Growing mushrooms indoors requires a moist environment and an acceptable growth medium, such as straw, sawdust, or coffee grounds. Fat Moon currently purchases pre-inoculated growing blocks from a vendor and then cultivates them in one of their two grow rooms.

Due to the nature of the product and the growing process, unwanted mold and bacteria contaminate the plastic sheeting hanging on the walls of the grow room. The plastic sheeting is hung to keep the wallboard underneath from getting contaminated and moist; the plastic sheeting is easier to clean and sanitize than the porous wallboard. Because the mold and bacteria on the walls was potentially becoming airborne and migrating to the grow blocks, Fat Moon was sanitizing the plastic sheeting with a diluted bleach mixture. However, bleach is an eye, mouth, lung and skin irritant and can also cause and/or trigger asthma.

Concerned about the potential negative health impacts of bleach, Fat Moon discussed finding a safer alternative with the Toxics Use Reduction Institute (TURI) at Umass Lowell. The TURI cleaning lab tested the performance of safer methods to potentially replace bleach at Fat Moon. Ultimately, the owner of Fat Moon chose to switch to a product generated from a salt mixture dissolved in water and electrochemically activated to create a hypochlorous acid solution. The solution worked for the business's needs, is considered safer than bleach, and is a cost-effective alternative.

Alternative Sanitizers

To determine what safer alternative could be effective, the TURI lab tested two off-the-shelf sanitizers and two appliances that generate sanitizers. The lab then assessed the performance of each of the four sanitizers in comparison to bleach.

The two appliances tested were a Mondovap® steam cleaner and a Force of Nature™ electrochemical activation (ECA) system. Each appliance generates a sanitizer which is then applied to the surface.

FAT MOON
COMMUNITY COMPANY

Fat Moon owner Elizabeth Almeida with her mushrooms



See written program update

Assessment of Alternatives to Cleaners and Sanitizers for the Brewing Industry



Safer Cleaning and Disinfecting: Information for Manufacturers and Other Businesses

As Massachusetts businesses reopen, they face the need to clean and disinfect to prevent COVID-19 transmission. Certain cleaning and disinfecting chemicals have been linked to acute and chronic illnesses, including asthma. However, safer alternatives are available. This fact sheet provides some key guidelines for safer cleaning and disinfecting, as well as information on how to use disinfectants effectively in manufacturing and other business facilities.

NEVER MIX CLEANING CHEMICALS

NEVER mix chemicals together when cleaning and disinfecting. Mixing chemicals together can cause very dangerous reactions. For example, bleach is a highly reactive and can cause dangerous byproducts when combined with other chemicals. If bleach and ammonia are mixed together, they produce toxic gases that can be lethal. Mixing bleach with hydrogen peroxide or vinegar is also dangerous. For more information, see TURI's web page on the [dangers of mixing cleaning chemicals](#).

CLEAN AND DISINFECT EFFECTIVELY

Disinfectants are effective only when used as directed and after cleaning. It is important to review the manufacturer's labels and technical data sheets (TDS) before use. Use the EPA Pesticide Product and Label System to find labels for any disinfectant product registered by EPA, using the EPA registrant number or product name. This resource provides hazard information, directions for use, storage, and other information. Contact the vendor for any further questions on use.

DEFINITIONS

Cleaning: the removal of foreign material (e.g., soil and organic material) from surfaces and objects, normally accomplished with detergents or soaps. Cleaning is required prior to disinfection.

Disinfection: a process that is used to reduce the number of viable microorganisms on a surface but that may not necessarily inactivate all microbial agents.

Sanitizing: a process that reduces (but does not necessarily eliminate) microorganisms to levels considered safe, as determined by public health codes or regulations. Sanitizers include food-contact and non-food contact products.

Sterilization: a validated process used to render a surface or instrument free from all viable microorganisms.

Clean before disinfecting. Disinfectants are not cleaners. Surfaces must be cleaned before disinfecting. Otherwise, the disinfectant may not come into direct contact with viruses and bacteria. Clean the surface with soap and water or another appropriate cleaner before applying any disinfectant.

Use cleaning cloths correctly. Use separate cloths for the cleaning step and the disinfecting step. Place the cloth immediately in a laundry receptacle after cleaning and disinfecting to avoid potential cross-contamination.

Cleaning and Disinfecting information

OTA Chemical Safety and Climate Cha...

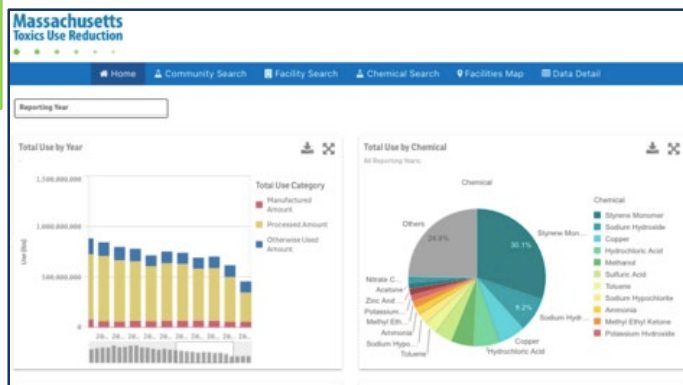
BUILDING CHEMICAL SAFETY INTO CLIMATE CHANGE RESILIENCY PLANNING

PRESENTED BY THE MASSACHUSETTS OFFICE OF TECHNICAL ASSISTANCE

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OTA
OFFICE OF TECHNICAL ASSISTANCE & TECHNOLOGY

OTA Outlook



TURI
UMASS LOWELL

Greenlist Bulletin

TURI
UMASS LOWELL

Toxics Use Reduction Institute Newsletter

October 2019

About the Toxics Use Reduction Act (TURA) Program →



TURA Program Strengthening Ad-Hoc Committee



The Administrative Council has designated an ad hoc committee to review experiences since the 2006 TURA Amendments



Looking forward to the next decade and the critical priorities of Massachusetts with respect to toxic chemicals and safer materials.

TURA Program Strengthening Ad-Hoc Committee – Topic Schedule



- *Orientation - Nov 19, 2020*
- *Compliance and Enforcement – Dec 14, 2020*
- *Alternative Planning – RC and EMS – Jan 13, 2021*
- *TUR Planners and TUR Planning – Mar 30, 2021*
- TURA Toxic or Hazardous Substance List – Apr 29, 2021
- Fees – May 13, 2021

TURA Staff Changes



- **Tiffany Skogstrom** – OTA Director and Executive Director of TURA Administrative Council



Retirements

- **Marina Gayl** at OTA will be retiring soon – we appreciate her many valuable contributions and dedication and wish her well!

OTA Virtual Site Visits



Chemists and Engineers available by:

- Virtual Zoom site visits
- Phone
- Email

Forms of Assistance:

- Toxics Use Reduction
- Regulatory and Compliance
- Resource conservation
- Pollution prevention
- Identifying PFAS products



Environmental Justice



44% of company site visits conducted in FY 2019 were in or within a half mile of EJ communities

OTA will work more thoughtfully within and provide resources to the EJ community

Contact us any time!

Massachusetts
Toxics Use Reduction



TURI
questions:

Liz Harriman harriman@turi.org

TURI Staff: https://www.turi.org/About/Staff_List



OTA
questions:

Tiffany Skogstrom Tiffany.skogstrom@mass.gov

OTA Staff: <https://www.mass.gov/service-details/otas-team>



MassDEP
questions:

Planning: Lynn Heisey Cain lynn.cain@mass.gov

Reporting: Walter Hope walter.hope@mass.gov

C&E: Veronica Wancho O'Donnell
veronica.odonnell@state.ma.us