



CONNECTICUT COALITION FOR SUSTAINABLE MATERIALS MANAGEMENT

The **Connecticut Coalition for Sustainable Materials Management (CCSMM)** is an initiative involving the Connecticut Department of Energy & Environmental Protection (DEEP) and leaders from more than 70 cities and towns across Connecticut who [signed on to a statement](#) in September 2020 committing to: 1. Share experiences and lessons learned from various efforts to adopt effective waste reduction strategies; 2. Engage market participants and local stakeholders to solicit input and proposed waste reduction solutions; 3. Seek creative means to fund solutions that further our collective goal; 4. Identify and evaluate a menu of options that municipalities and the state can adopt that will help us to collectively make progress towards our goal; 5. By January 1, 2021, report on our progress and announce commitments to action in furtherance of our waste reduction vision.

The CCSMM held its first meeting on September 8, 2020 and it was attended by municipal representatives of over 70 cities and towns across Connecticut and by more than 130 individuals. The tri-chairs of the coalition, Laura Francis, First Selectman for the Town of Durham, Matthew Knickerbocker, First Selectman for the Town of Bethel and Katie Dykes, Commissioner of Energy and Environmental Protection, established this forum to focus attention and develop options for actions that the Department and CT municipalities can effect in order to counter the growing solid waste management concerns faced by the state, including the imminent potential for a significant shortfall in waste to energy (WTE) disposal capacity for municipal solid waste (MSW).

To that end, the tri-chairs issued a request for public input to guide the work of the coalition which resulted in establishing four working groups co-chaired by municipal representatives and supported by Department staff, as follows:

- **Extended Producer Responsibility (EPR)**, co-chairs Matt Knickerbocker and Diana McCarthy-Bercury, Sustainability & Compliance Office, Town of Branford; Department support Chris Nelson, Supervisor for Sustainable Materials Management program & Tom Metzner, Environmental Analyst 3 in the Commissioner's Office of Policy and Program Development;

- **Food Scraps & Organics**, co-chairs Ronald McDaniel, Mayor for the Town of Montville and Katie Dykes, Commissioner; Department support Robert Isner, Director Waste Engineering and Enforcement Division and Chelsey Hahn, Environmental Analyst Intern, Sustainable Materials Management program;
- **Increasing Recycling**, co-chairs Laura Francis and Ben Florsheim, Mayor for the City of Middletown; Department support Sherill Baldwin, Environmental Analyst 3 in the Sustainable Materials Management program, Chelsey Hahn, Environmental Analyst Intern, Sustainable Materials Management program and Elizabeth Moore, Environmental Analyst Intern in the Bureau of Materials Management and Compliance Assurance/Office of Policy and Planning.
- **Unit-Based Pricing (UBP)**, co-chairs Elinor Carbone, Mayor for the City of Torrington and Katie Dykes, Commissioner; Department support Gabrielle Frigon Assistant Director Waste Engineering and Enforcement Division Jennifer Weymouth and Elizabeth Moore.

The working groups each held five working sessions pertaining to the specific areas of concern and each discussed in detail the current state and measures that might be implemented to increase diversion and reduce waste generation across the state. The topics for discussion in each working group ranged widely and ensured a comprehensive evaluation of options. All working group meetings were held virtually, open to the public, and recordings of each meeting are posted on the [CCSMM website](#).

The CCSMM also issued a public [Request for Solutions](#) to implement the goals of CCSMM, and received [43 submissions](#) from both CCSMM members and members of the public about specific actions or recommendations CCSMM could undertake to achieve its goals.

As an overlay to the working groups' discussions, an Environmental Equity/Environmental Justice lens was used to ensure that all Connecticut residents were represented and considered in each working group's efforts. A special full coalition meeting regarding Environmental Equity and Environmental Justice was held on October 28, 2020, which included a presentation by Mike Ewall of the Energy Justice Network. On November 15, 2020 a "mid-term" full coalition meeting was held and each working group presented to the full coalition a status report on their efforts and a plan for the groups' goals regarding the development of options to be discussed within the working groups and subsequently proposed to the full coalition. At this meeting, CCSMM discussed funding options for sustainable materials management programs.

This document presents a "menu of options": an exhaustive list of potential legislative, department and municipal actions identified and discussed in the CCSMM process. Each option includes a detailed description, insights from discussion during the working group sessions and the suggestions made through public engagement during the coalition's work. This menu is not an endorsement of specific policies or actions, but an extensive list of all of the options that municipal and state policymakers could consider to enhance sustainable materials management in Connecticut. As the menu demonstrates, there is a wide variety of policies and programs that can be adopted to help reduce disposal tonnage, and provide environmental benefits and/or cost savings for Connecticut communities.

Each municipality has unique policy priorities and circumstances, and can embrace different solutions. In some cases, municipalities will find benefits from implementing solutions together, as regional groups, or on a statewide basis. The key is that all of these actions— individual, regional, and state-level—can add up in the aggregate to a significant reduction in disposal of MSW, and real progress towards our shared goal of a more equitable, affordable, and sustainable waste system for Connecticut.

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Funding Sustainable Materials Management

1. End Exemption for Landfilling in the Solid Waste Assessment

The Solid Waste Assessment (SWA) (CGS Sec. 22a-232) assesses a fee of \$1.50 on each ton of waste processed at a Waste-to-Energy facility (currently about 2 million tons/year), with the proceeds deposited in the General Fund. The SWA exempts from this fee any waste that is disposed of at landfills, including MSW and Construction & Demolition waste (currently about 1.4 million tons/year). The effect of the exemption is that it creates an economic advantage or preference for landfilling—a disparity that is not in line with the state’s solid waste hierarchy, and that could accelerate adoption of landfilling.

Expanding the SWA to apply to apply the \$1.50/ton fee equitably to all solid waste transferred for disposal (Waste to Energy, landfill and Incineration) would generate between \$1.5 and \$2 million tons/year in additional revenue. Some or all of this revenue could be allocated to DEEP and municipalities to fund sustainable materials management efforts, such as:

- a. Grants for towns that adopt new EPR programs
- b. Revenue credits to municipalities, distributed based on percentage reduction in per capita disposal, year-over-year
- c. Allocate revenue credits to municipalities based on UBP implementation and per capita waste reduction
- d. Fund technical assistance for commercial generators of organic waste to support compliance with diversion requirements
- e. Grants to municipalities in support of EPR and diversion program implementations. May fund educational materials, EPR projects through stakeholder dialogues, assistance with writing legislation, evaluations, financial assistance to the CT Product Stewardship Council (CTPSC).
- f. Grants to municipalities in support of Food scrap/Organics collection and diversion program implementations. May fund educational materials, assist in establishing a municipal collection program and composting operation, may fund collection bags or containers, establish stable, predictable funding source for infrastructure development including transfer station modernization
- g. Grants to municipalities in support of Recycling and diversion program implementations. May fund:
 - i. Education, promotion, printing or other materials
 - ii. Staffing for recycling promotion at Schools and at Town level
 - iii. Recycling coordinators, start-up costs for the position
 - iv. Curbside carts, equipment costs
 - v. Public space containers
 - vi. Start-up funds for special projects (organics collection, swap shops, textile collection, events)

Extended Producer Responsibility (EPR)

Extended Producer Responsibility (EPR) is a mandatory type of product stewardship that includes, at a minimum, the requirement that the manufacturer's responsibility for its product extends to post-consumer management of that product and its packaging. There are two related features of EPR policy, one is to shift the financial and management responsibility, with appropriate oversight, upstream to the manufacturer and away from the public sector and the other is to provide incentives to manufacturers to incorporate environmental considerations into the design of their products and packaging

EPR programs can save municipalities money on collection and recycling costs. EPR can lead to preferred environmental outcomes such as increased recycling, improved recycling (higher end uses), and product/packaging re-design to benefit the environment. EPR laws in Connecticut for mattresses, paint, electronics and thermostats have shown to increase recycling, save municipalities money, create jobs and reduce greenhouse gases ([PSI study](#)). These programs require legislation to establish a level playing field for manufacturers and to secure long-term success of the programs (i.e., establish accountability for producers and minimize “free riders” that benefit from the program without paying into it).

EPR legislation should develop programs that require prescriptive plans, identify the responsible producers, identify covered products, covered entities (e.g., who can use the program), establish financial mechanisms, and establish performance goals and metrics. EPR can establish recycling programs for difficult to recycle materials such as tires, propane cylinders, household hazardous waste (HHW) and smoke detectors. Packaging EPR is specifically for materials included in curbside (and transfer station) recycling collection programs. Manufacturers of packaging are beginning to support EPR in the USA due to the pressure from states and local governments pursuing legislation. Members of the National Waste & Recycling Association (NWRA) in New York have expressed conditional support for the elements of Packaging EPR.

Packaging EPR addresses municipal concerns about rising tipping fees for recyclables, and is a complementary policy piece to Unit-Based Pricing (UBP) programs (which incentivize the diversion of more recyclables from the trash to the proper recycling paths). Packaging EPR also eliminates barriers to expansion of Bottle Bill programs, as recycling facility operators wouldn't be concerned with additional plastic and aluminum containers shifting to an expanded Bottle Bill program (and losing the associated commodity revenue).

2. Establish an Extended Producer Responsibility Program for Gas Cylinders

Gas cylinders are a difficult to manage component of the municipal waste stream. They present a danger for haulers and MRF operators, when the cylinders are present on trucks and sorting lines; as well as for operators of WTE facilities. An EPR program would create a safe recycling

path for potentially hazardous (i.e., explosive) gas cylinders, and relieve municipalities' cost burdens for collecting and managing these difficult to manage items.

Action Steps:

- **2021 LEGISLATIVE ACTION** The CT Product Stewardship Council (CTPSC) introduced a bill to establish a first-in-the-nation EPR program for gas cylinders in 2020. The bill did not move forward due to the COVID-truncated legislative session. A similar bill will be introduced again for the next legislative session.
- **DEEP** Support the Connecticut Product Stewardship Council (CTPSC) in the promotion of EPR initiatives
 - Perform a biannual evaluation of the EPR programs and recommendations for new materials.
 - Depending on what type of new or modified infrastructure is needed to support new EPR programs, expedite new permits or modification of existing permits as necessary.
 - Work regionally with other interested groups such as PSI, NEWMOA and NERC to foster regional consistency in EPR program implementation and administration.
 - In conjunction with CTPSC, other states and local governments, participate in stakeholder discussions as new EPR programs are being developed.
- **Municipalities**
 - Affirm EPR as the preferred materials management strategy for increasing recycling of packaging and difficult to recycle materials.
 - Support the Connecticut Product Stewardship Council (CTPSC) in the promotion of EPR initiatives
 - Participate in stakeholder discussions as new EPR programs are being developed.
 - Opt in to new EPR programs if municipalities have a choice to participate or not (e.g., Mattress EPR program)

Links With: Increasing recyclables diversion

3. Establish an Extended Producer Responsibility Program for Tires

An Extended Producer Responsibility Program for tires would virtually eliminate illegal dumping by removing the financial incentive to dump. Such a program would promote higher end recycling over the current practice of burning for energy, by diverting tires to higher end recycling which will bring recycling industries to CT. It would also relieve municipalities' cost burdens for collecting & managing tires.

Action Steps:

- **2021 LEGISLATIVE ACTION.** There is currently no tire EPR precedent in the US, and opposition from manufacturers has been evident during previous efforts to pass tire EPR legislation. The CT River Conservancy has drafted a bill and a key sponsor has agreed to introduce it in the 2021 session.
- **DEEP** Support the Connecticut Product Stewardship Council (CTPSC) in the promotion of EPR initiatives
 - Perform a biannual evaluation of the EPR programs and recommendations for new materials.
 - Depending on what type of new or modified infrastructure is needed to support new EPR programs, expedite new permits or modification of existing permits as necessary.
 - Work regionally with other interested groups such as PSI, NEWMOA and NERC to foster regional consistency in EPR program implementation and administration.
 - In conjunction with CTPSC, other states and local governments, participate in stakeholder discussions as new EPR programs are being developed.
- **Municipalities**
 - Affirm EPR as the preferred materials management strategy for increasing recycling of packaging and difficult to recycle materials.
 - Support the Connecticut Product Stewardship Council (CTPSC) in the promotion of EPR initiatives
 - Participate in stakeholder discussions as new EPR programs are being developed.
 - Opt in to new EPR programs if municipalities have a choice to participate or not (e.g., Mattress EPR program)

Links With: Increasing recyclables diversion

4. Establish an Extended Producer Responsibility Program for Packaging

An Extended Producer Responsibility program for packaging and printed paper (Packaging EPR) would be an effective solution for municipal concerns about rising collection and tipping costs for single stream recyclables. A packaging EPR program would include residentially-generated recyclables currently collected curbside and at municipal transfer stations. It could result in recycling collection and processing services being provided to municipalities at no cost to participating municipalities.

Packaging EPR is estimated to **potentially save CT municipalities \$40 million dollars each year (in aggregate)**. Producers of packaging would help cover expenses needed to improve the collection and processing of packaging materials. Packaging EPR improves the quality of the whole recycling stream, by incenting product manufacturers to design more sustainable

packaging that's easier to recycle, leading to higher quality recyclables/commodities being generated by recycling facilities.

No Packaging EPR programs exist yet in the US, but several states have proposed legislation, and there are models to draw from outside the US (e.g., Canada, Europe). Packaging EPR programs are being discussed on a regional level by states, which can lead to consistency from state to state. The Flexible Packaging Association has agreed to key concepts for packaging EPR, including a funding mechanism that includes all recycling program costs, and other manufacturers are beginning to support manufacturer funding; meanwhile, uncertainties on how existing haulers and facilities will fit in to a new system overseen by a Product Steward Organization will need to be addressed.

Action Steps:

- **2022 LEGISLATIVE ACTION** Continue regional and national stakeholder engagement in 2021, with an aim to introduce legislation in 2022.
- **DEEP** Support the Connecticut Product Stewardship Council (CTPSC) in the promotion of EPR initiatives
 - Perform a biannual evaluation of the EPR programs and recommendations for new materials.
 - Depending on what type of new or modified infrastructure is needed to support new EPR programs, expedite new permits or modification of existing permits as necessary.
 - Work regionally with other interested groups such as PSI, NEWMOA and NERC to foster regional consistency in EPR program implementation and administration.
 - In conjunction with CTPSC, other states and local governments, participate in stakeholder discussions as new EPR programs are being developed.
- **DEEP** and **Municipalities** should continue working with CTPSC, other states, local governments, manufacturers and other interested stakeholders, in drafting consistent EPR legislation for packaging.
- **Municipalities**
 - Affirm EPR as the preferred materials management strategy for increasing recycling of packaging and difficult to recycle materials.
 - Support the Connecticut Product Stewardship Council (CTPSC) in the promotion of EPR initiatives
 - Participate in stakeholder discussions as new EPR programs are being developed.
 - Opt in to new EPR programs if municipalities have a choice to participate or not (e.g., Mattress EPR program)

Links With: Increasing recyclables diversion, Unit-Based Pricing (UBP)

5. Establish an Extended Producer Responsibility program for Household Hazardous Wastes (HHW)

Creating a new EPR program for residentially-generated hazardous waste would increase access for household hazardous waste (HHW) collection programs, decrease the amount of hazardous chemicals in the MSW stream, and relieve municipalities' cost burdens for collecting and managing these materials.

Connecticut residents have a long history and familiarity with HHW collections, and existing HHW collection infrastructure can be utilized. While there is no precedent for HHW EPR in the US, other states (VT, OR) are proposing EPR for HHW legislation. Having to pay for hazardous chemicals may spur innovation to develop non-hazardous alternatives and source reduction methods.

Action Step:

- **Legislative Action** - Support the adoption of HHW EPR legislation in the 2022 session or later, which will increase access for collection programs, decrease the amount of hazardous chemicals in the MSW and save municipalities money.
- **Legislative Action** will be needed to implement this new EPR program.
- **DEEP** Support the Connecticut Product Stewardship Council (CTPSC) in the promotion of EPR initiatives
 - Perform a biannual evaluation of the EPR programs and recommendations for new materials.
 - Depending on what type of new or modified infrastructure is needed to support new EPR programs, expedite new permits or modification of existing permits as necessary.
 - Work regionally with other interested groups such as PSI, NEWMOA and NERC to foster regional consistency in EPR program implementation and administration.
 - In conjunction with CTPSC, other states and local governments, participate in stakeholder discussions as new EPR programs are being developed.
- **Municipalities**
 - Affirm EPR as the preferred materials management strategy for increasing recycling of packaging and difficult to recycle materials.
 - Support the Connecticut Product Stewardship Council (CTPSC) in the promotion of EPR initiatives
 - Participate in stakeholder discussions as new EPR programs are being developed.
 - Opt in to new EPR programs if municipalities have a choice to participate or not (e.g., Mattress EPR program)

Links With: Increasing recyclables diversion

6. Establish Extended Producer Responsibility Programs for Other Materials

In response to demand to better manage and divert certain materials in the waste stream (e.g., batteries, smoke detectors, sharps), EPR programs can be created to handle these materials. EPR approaches relieve municipalities' cost burdens for collecting and managing these materials, and increase recycling, diversion, and introduce environmental considerations into product design.

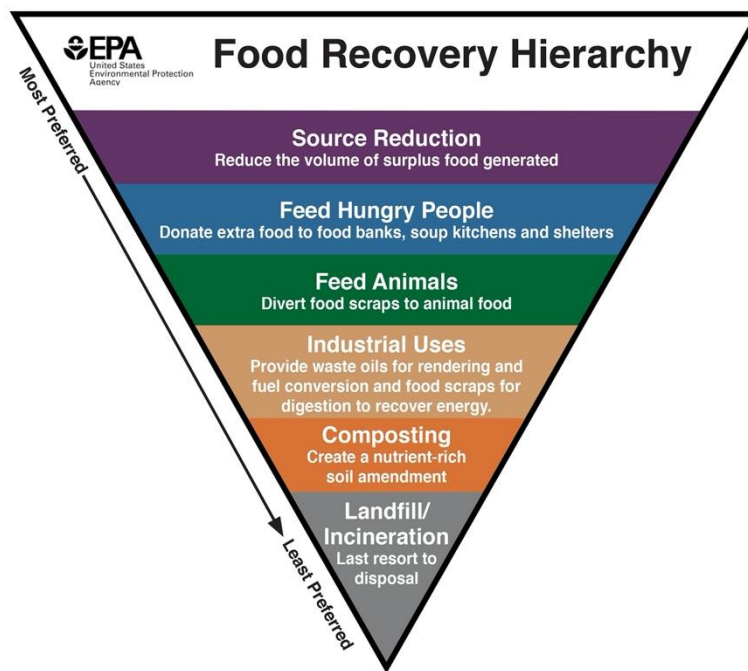
Action Steps:

- **Legislative Action** would be needed to implement any additional new EPR programs.
- **DEEP** Support the Connecticut Product Stewardship Council (CTPSC) in the promotion of EPR initiatives
 - Perform a biannual evaluation of the EPR programs and recommendations for new materials.
 - Depending on what type of new or modified infrastructure is needed to support new EPR programs, expedite new permits or modification of existing permits as necessary.
 - Work regionally with other interested groups such as PSI, NEWMOA and NERC to foster regional consistency in EPR program implementation and administration.
 - In conjunction with CTPSC, other states and local governments, participate in stakeholder discussions as new EPR programs are being developed.
- **DEEP** will need to collaborate with **municipalities**, CTPSC and other states, and participate in discussions with stakeholders to establish an updated priority list of EPR materials.
- **Municipalities**
 - Affirm EPR as the preferred materials management strategy for increasing recycling of packaging and difficult to recycle materials.
 - Support the Connecticut Product Stewardship Council (CTPSC) in the promotion of EPR initiatives
 - Participate in stakeholder discussions as new EPR programs are being developed.
 - Opt in to new EPR programs if municipalities have a choice to participate or not (e.g., Mattress EPR program)

Links With: Increasing recyclables diversion

Food Scraps and Organics Collection & Diversion

Based on the 2015 Connecticut waste characterization study, organics make up about 33% of the residential waste stream (nearly one million tons per year) —including food scraps (22%) and other organics (11%). Connecticut’s waste characterization results are consistent with other northeastern states’ studies performed both before and after Connecticut’s 2015 study. Separation, collection and diversion of all organic materials, including yard and food wastes, provides the largest opportunity to increase diversion and recycling to move toward a more sustainable and self-sufficient waste management system in Connecticut. Efforts to divert food scrap in Connecticut should be consistent with EPA’s Food Recovery Hierarchy.



When food is produced and not consumed, that waste reflects a flaw in the food system. Wasted food is a matter of wasted resources. All of the food system inputs - water, labor, transportation, pesticides and other agricultural chemicals, soil and nutrients - are all lost if food waste is not prevented or diverted for other uses. Food waste occurs at every stage of production and throughout the supply chain; “EPA estimates that 63.1 million tons of food waste was generated in the commercial, institutional, and residential sectors in 2018, which is 21.6 percent of total MSW generation”. Reducing food waste is an upstream solution; environmentally-favored diversion and disposal options are downstream solutions to dealing with wasted food and other organics. Properly using purchased foods at the commercial and residential level will greatly reduce the need to dispose of food wastes. However, food scraps

will always be generated when preparing and manufacturing foods; eggshells, coffee grounds, onion skins, and other non-edible parts of foods will always need to be managed.

The environmentally-appropriate management of food waste and organics is key to optimization of the resource of food waste. Saving and recovering food for its nutritional value for people and animals is an underutilized strategy that can significantly reduce infrastructure management needs and provide for a more equitable social and environmental outcome of the resource. Composting food scraps and yard waste can provide added nutrients to our soils and is a method of disposal that contributes lower methane emissions than waste-to-energy disposal. Off-site management of organics can raise some logistical and cost issues, all of which are reconcilable with scalable local, regional and statewide infrastructure to minimize disposal needs. Food waste not removed from the municipal waste stream in Connecticut will predominantly end up at a resource recovery facility, where it has a low btu value due to its high moisture content and thereby produces very little electricity.

The Food Scraps/ Organics Collection and Diversion Working Group of the CCSMM held 5 meetings between October 2020 and December 2020 where a variety of topics, barriers and solutions were presented and discussed by the working group with input from other stakeholders and public comment. The group also collected and reviewed written public comments for consideration, with nearly half of the comments received providing input on organics management. The “menu of options” below provides further detail on, and analysis of, the discussion points and presentations from the Working Group meetings. It includes possible legislative pathways for improving efficiency of our food scraps and organics collection and management systems, and describes potential opportunities for diverting and reducing the generation of food waste and organics in the state, as well as actions that DEEP and individual municipalities may wish to adopt towards these aims.

Promote Collection and Diversion of Food Scrap / Organics

Promote and implement actions consistent with the solid waste management hierarchy, food recovery hierarchy, and Connecticut’s order of priority for managing solid waste [CGS Sec. 22a-228(b)] as most preferred option. Food waste and loss is created at the individual and commercial level across all sectors that produce, handle and consume food. The EPA considers source reduction the most preferred method of food recovery. As the most preferred method of food recovery, working towards source reduction of food waste will have the biggest impact on food loss, saves money, reduces emissions and conserves resources. **(High impact and low cost)**

Potential Partners:

- UConn Extension & UConn Master Composters,
- local garden clubs,
- Peels & Wheels Composting, New Haven: <https://www.pwcomposting.com/in>

- Waste Zero,
- Zero Waste Coalition,
- CCM, COST
- CT NOFA,
- NRCS,
- In-state regional conservation groups
- Foodshare, CT Food Bank, United Way, Goodwill, other local food banks/ pantries,
- Energy Justice Network

7. Support Food Donation for Human Consumption

Support **food donation** for human consumption from a variety of generators, farms, grocery stores and restaurants. There is a high rate of food insecurity in CT/ nationally and internationally, some of these needs can be temporarily met through food donation practices such as when food is close to expiration a grocery store can donate those items to a food bank/ pantry, which is a much better use for food than having it go through the waste system. Produce is a large sector of the food waste stream and can be used without processing, as supplemental feedstock for pigs and chickens. This is a waste that does not need to be processed to supplement the diet of pigs and chickens.

- **Legislative** UBP legislation would drive food donation, legislative finding could affirm solid waste hierarchy
- **Legislative** Support the Food Date Labeling Act of 2019
- **Legislative** Eliminate state laws that bar the sale or donation of food past the quality date. However, states would still be allowed to prohibit the past-date sale or donation of foods bearing the “Use by” discard date
- **DEEP** - update and expand website resources and technical assistance programs based on EPA’s Food Recovery hierarchy and EPA’s Waste Management Hierarchy
- **DEEP** – provide education for retailers and consumers about the meaning of existing and new labels so that they can make better economic and safety decisions.
- **Municipal** – promote local donations may help increase donation frequency.

Links With: Food Justice

8. Expand Education, Outreach and Support for Composting of Food Scraps

Composting in backyards, on school grounds and in community gardens are low-/ no cost recycling for food scraps that removes excess food from the waste stream and provides the household, school and community garden with a beneficial end product. Community and school garden composting allows for a closed-loop system where the gardeners are likely to bring food scraps and may also use the finished product right on site, which reduces the need

for transportation of compost. These types of communal gardens with on-site composting provide educational opportunities for both residents and students. Community composting can also occur in an urban setting, such as the “Peels & Wheels Composting” program in New Haven. There are no transportation logistics, costs or emissions. Municipalities can buy compost and kitchen bins at wholesale and resell them to constituents. Sales could generate some revenue, the sale of the bins can also be used as an educational touch point.

- **DEEP** - update and expand website resources based on EPA’s Food Recovery hierarchy and EPA’s Waste Management Hierarchy
- **Municipalities** Develop school-based programs for diversion of organics and education; engage in outreach to increase and support schoolyard composting
- **Municipalities** Educate municipal public works staff and/or collaborate with contract haulers on identifying and reporting mixed loads (not separating recyclables/organics)
- **Municipalities** can also set targets or enact ordinances to require diversion of food scraps from all school meals and food processing.
- **Municipalities** can enact ordinances that prohibit disposal of organics
- **Municipalities** can offer subsidized home compost bin
- **Municipalities** Affirm/reestablish a designated recycling coordinator CGS 22a-220(i)

Links with: Increased Recycling, UBP (UBP system functions as an incentive for composting and recycling, because the prices are lower than that of trash.); EPR

9. Expand Education, Outreach and Support for Collection and Diversion of Food Scraps / Organics

Curbside collection of food scraps is a convenient option for food scrap diversion for residents. It can result in a high percentage of MSW diversion, and if participation is robust enough, it can also reduce the frequency of MSW collect needed (e.g., shifting from weekly to every-other-week collection).

- **Legislative Include within the mandate** per CGS Sec. 22a-220(a) that all municipalities shall make provisions for diversion of organics from the waste stream through one or a combination of the following:
 - Adoption of Unit-Based Pricing to incentivize behavior change and drive separation of organics to be used according to the food recovery hierarchy
 - Curbside Collection of Organics (Co-Collection or Separate Collection), which may include co-collection with other streams
 - Community wide implementation of Home Composting with subsidized containers and robust education
 - Provide for convenient and accessible drop-off of household Food Waste at a Transfer Station including municipal or regional

- **DEEP** - update and expand website resources and technical assistance programs based on EPA's Food Recovery hierarchy and EPA's Waste Management Hierarchy
- **DEEP** - Collaborate with RecycleCT on statewide food scrap collection and diversion programs
- **DEEP** - action potentially required if CMMS municipal performance goal (Goal #1) were to be mandated
- **Municipalities** Adopt UBP program to enhance food scrap diversion
- **Municipalities** Establish voluntary food scrap collection with curbside collection, charging residents a fee to offset the cost of collection
- **Municipalities** Focus on technical assistance and education for all generators including residents to improve diversion as compliance
- **Municipalities** Ensure collector/hauler registration and reporting for consistent messaging of recycling requirements given the front line role of contracting and collection of material
- **Municipalities** Focused enforcement of municipal ordinances, and applicable hauler requirements consistent with CMMS, and synced with outreach programs.
- **Municipalities** Develop school-based programs for diversion of organics and education
- **Municipalities** In lieu of or supplemental to local capacity, collaborate with other municipalities to develop regional facilities for receiving organic material

Links with: Increased Recycling, UBP (UBP system functions as an incentive for composting and recycling, because the prices are lower than that of trash.) EPR

10. Promote Co-collection of Food Scrap/Organics with MSW

A **Food Scrap co-collection program** provides for a convenient, low-cost way to implement residential food scrap collection by having residents segregate their food scraps in designated (color) bags and place in their trash bin for weekly pickup. The designated bags are then sorted at a transfer station or MRF. This approach has the advantage of being implemented within existing collection system and vehicles. It is convenient for generators/residents and collectors/haulers. It does not require additional collection routes to be established thus substantially reducing transportation cost.

Action Steps:

- **Legislative** Potential pilot authorization for processing at permitted transfer stations (mimic PA 14-94 exclusion codified in CGS Sec. 22a-208a(d)(1) for adding up to 75 tpd designated recyclables at permitted solid waste facilities
- **Legislative** **Include within the mandate** per CGS Sec. 22a-220(a) that all municipalities shall make provisions for diversion of organics from the waste stream through one or a combination of the following:

- Adoption of Unit-Based Pricing to incentivize behavior change and drive separation of organics to be used according to the food recovery hierarchy
- Curbside Collection of Organics (Co-Collection or Separate Collection), which may include co-collection with other streams
- Community wide implementation of Home Composting with subsidized containers and robust education
- Provide for convenient and accessible drop-off of household Food Waste at a Transfer Station including municipal or regional
- **DEEP** - update and expand website resources and technical assistance programs based on EPA's Food Recovery hierarchy and EPA's Waste Management Hierarchy
- **DEEP** - Collaborate with RecycleCT on statewide food scrap collection and diversion programs
- **DEEP** action potentially required if CMMS municipal performance goal (Goal #1) were to be mandated
- **DEEP** - evaluate whether any permit streamlining or small scale exemptions may be helpful to remove barriers for this activity.
- **DEEP** and **Municipalities** can engage with potential partners including CT NOFA, UConn Extension, New CT Farmer Alliance, CT Department of Ag
- **Municipalities** can seek grants to subsidize bins & technical assistance
- **Municipalities** can also set targets or enact ordinances to require diversion of food scraps from all school meals and food processing.
- **Municipalities** can enact ordinances that require separate collection of food scraps/organics
- **Municipalities** can offer voluntary curbside collection, charging residents a fee to offset the cost of collection
- **Municipalities** Ensure collector/hauler registration and reporting for consistent messaging of recycling requirements given the front line role of contracting and collection of material

Links With: Increased Recycling, UBP (UBP system functions as an incentive for composting and recycling, because the prices are lower than that of trash.) EPR, Food Justice

Resources: Natick MA [presentation](#) to UBP on 12/9/2020, [Organics Recycling: Municipal Programs in CT \(DEEP Webinar\)](#)

Infrastructure Development

Infrastructure Development for an array of small, medium and large facilities to support the waste management and food recovery hierarchy and to ensure capacity, competition and convenience. There is a need to establish local and regional capacity for effective organics collection and diversion programs. Established capacity for the processing of food scraps and organics will help to drive diversion. To establish such processing capacity assistance in siting

and financing the needed infrastructure. Opportunity to develop satellite collection locations or commercial transfer stations for the aggregation of residentially generated and small-scale generators of food scraps will assist in supporting the composting/anaerobic digestion facilities.

11. Anaerobic Digesters

There are multiple policies and programs states may implement in order to support the development of organics processing facilities. Mandating organics diversion and Renewable Portfolio Standard policies that include biogas produced by AD can also drive infrastructure development by ensuring feedstock and return of investment.

Opportunity exists to develop additional anaerobic digestion sites on CT farms that include animal feeding operations, this is done on a few dairy farms in MA. Several New England states, including Massachusetts and Vermont, have experienced processing infrastructure growth as a result of the implementation and enforcement of organic waste bans or mandatory recycling laws. Private developers are unlikely to invest in infrastructure unless they feel confident there will be a steady feedstock of organic material.

Action Steps:

- **Legislative** Authorize DEEP to procure renewable natural gas (RNG) from AD facilities to support infrastructure development. Long-term fixed price contracts for electricity or renewable natural gas produced by anaerobic digesters can help support the financing and development of these facilities. Providing DEEP with the authority to offer renewable natural gas purchase agreements enables the state to support AD facilities in a manner consistent with long-term greenhouse gas emission reduction policies for the electric sector.
- **Legislative** Amend CGS [Sec. 22a-208cc](#) to increase the non-agricultural organic feedstock percentage for on-farm anaerobic digesters. Current limit is 5% food, food residual, soiled paper, consider increasing up to 25%. The intent of the 22a-208cc exemption was to ensure at least 50% of the feedstock must be CAFO generated organics, thus the majority of the organics received should remain agricultural.
- **DEEP** - pursue opportunities to streamline the permitting process for AD facilities.
- **DEEP** and **Municipalities** can engage in coordinate procurements, to align identified organic waste streams, energy purchase contracts, and preferred sites in targeted locations to attract competitive bids
- **Municipalities** can identify preferred sites and locations for infrastructure.
- **Municipalities** Assess host community & economic benefit potential

Links With: Green jobs, UBP

Potential Partners: AD facility developers, farmers, Dept. of Agriculture, USDA/NRCS, DECD

Resource: https://www.chlpi.org/wp-content/uploads/2013/12/Organic-Waste-Bans_FINAL-compressed.pdf

12. Encourage the development of food waste to animal feed facilities

Waste-to-Animal Feed Facilities process all food wastes into safe alternative feed options for feeding pigs, chickens or appropriate livestock. After identifying large enough feedstocks; there is opportunity to build these types of facilities as a new industry in CT improving diversion options and creating sustainable jobs. Farmers that have an interest in reducing food waste or composting may be enticed to buy this feed if the price and nutrition level is competitive with traditional grain. This saves money in disposal costs and diverts food from being used further down the hierarchy. The challenge of getting enough feedstock and interested farmers may be great because this is a relatively new technology. In non-organic farming, grain prices are artificially low and there are very precise nutrient needs for growing livestock.

Action Steps:

- **Legislative** - An expansion of Connecticut's organics diversion law (CGS Sec, 22a-226e) would help improve necessary feedstock to attract project developers and improve adequate return on capital investment
- **DEEP** streamline permitting for such facilities
- **Municipalities** can identify preferred sites and locations for infrastructure.

Links With: UBP; Increasing recycling

Potential Partners: DPH, DoAg, CT and regional farmers, especially larger farms; DECD; Zero Waste Advocacy

Resources: From Jon Fife, Smart Feed Tech Board Member, presentation: Recommended San Francisco model <https://www.refed.com/solutions/animal-feed/>

13. Establish a transfer station food waste drop off location and option for in-vessel composting

Municipalities can establish dedicated containers at their transfer stations, where residents and other users (if municipalities allow commercial use of transfer station), directly place source-separated organic material and food scraps. This type of program is fairly easy to implement, and lower cost than disposal because commercial organics tip fees are typically lower than MSW. Collection of food scraps is authorized under the Municipal Transfer Station General Permit. The dropoff location should be under the control of a certified operator. Municipalities may choose to establish at their transfer station fully-contained in-vessel composting operations.

Most municipalities have transfer stations or could partner/regionalize to implement a program. The total tonnage/impact of this measure may be limited by utilization—ie., the fact that regular transfer station dropoff is not accessible or convenient for residents that currently do not use transfer station. There may be space limitations at some transfer stations; mixed use zone and potential odors; potential attraction to wildlife; may require staffing to maintain a clean stream of organic material and minimize contamination.

Potential Partners: Composting and anaerobic digestion facilities

Action Required: (DEEP, municipality, legislative):

- **Legislative** - Mandate or ban the disposal of organics
- **DEEP** – provide grant opportunities for transfer station enhancements for specialized organics collection containers and additional collection areas for other recyclable materials (textiles, EPRs, plastic film, etc)
- **DEEP** - modify Municipal Transfer Station General Permit to authorize contained in-vessel composting at transfer stations
- **Municipal** – adopt ordinances to prohibit disposal of organics, include transfer station enhancements in capital budgeting

Examples: Town of Glastonbury (USA Hauling, Quantum).

Links With: UBP, Increasing Recycling

14. Promote the inclusion of food waste composting with leaf composting

Municipalities can offer opportunities for residents to bring leaves and food scraps to be composted at registered leaf composting locations. Municipalities are authorized to collect food scraps, leaves and grass clippings at Transfer Stations and satellite sites under the Municipal Transfer Station General Permit. Small scale local composting and organics management provides for economic and environmental benefits for municipalities. Expanding municipal participation in leaf and food scrap composting at transfer stations/municipal properties allows organic material to be diverted from the waste stream and may lower overall disposal costs.

Action Steps:

- **DEEP** will explore simplifying the permitting process and expanding the general permit to allow for composting at Transfer Stations and municipal properties.
- **Municipalities** can implement these programs individually or regionally at transfer stations

Links With: Increase recycling, UBP, green jobs, regional efforts

Potential Partners: UConn Master Composters program, regional groups

15. Streamline Siting and Permitting for Composting Facilities

Composting facilities must obtain permits from DEEP in order to operate. To support the development of organics processing infrastructure, DEEP can work to develop streamlined permitting procedures, to drive the development of facilities in the state.

States like New York, Rhode Island, and Massachusetts have revised their permitting regulations in recent years to facilitate the development of composting and AD facilities. New York and Rhode Island have created tiered permitting systems for different sizes and types of facilities. New York DEC regulations divide permitting requirements into three tiers based on capacity of the facilities. This type of permitting structure can reduce cost burdens on smaller or mid-size facilities. MassDEP similarly has differing permit requirements based on processing capacity, as well as a General Permit for Recycling, Composting, or Aerobic and Anaerobic Digestion Operations.

Action Required (DEEP, municipality, legislative):

- DEEP will consider opportunities to streamline permitting for composting facilities.
- Municipalities can identify preferred sites and locations for infrastructure development..

Links With: Green jobs, UBP

Resource: https://www.chlpi.org/wp-content/uploads/2013/12/Organic-Waste-Bans_FINAL-compressed.pdf

Potential Partners: Commercial Composting facility developers, DoAG

Expand, Strengthen and Increase Compliance with Existing Organics Diversion Laws

16. Strengthen the requirement for commercial generators to divert organics from the waste stream to be donated, composted or processed in AD facilities

Approximately 31.8% of Connecticut's commercial waste stream (2015 waste characterization study) consists of food scraps and other organics. Increasing diversion and donations would significantly cut down on the food waste and organics disposed of through the waste stream. Connecticut law ([CGS Sec. 22a-226e](#)) currently requires that commercial generators of each commercial food wholesaler or distributor, industrial food manufacturer or processor, supermarket, resort or conference center that is located 20 miles of an authorized source-separated organic material composting facility and generates 52 tons of source-separated organic material per year to divert those materials to a composting facility. Strengthening this requirement would create greater certainty for developers of composting and anaerobic digester facilities about the availability of organic waste streams, creating a critical investment signal for this needed infrastructure. Because tip fees are lower for organic processing than for disposal, compliance with this requirement would also likely result in cost savings for those subject to the requirement.

Action Steps:

- **Legislative (2021)** Strategic, tiered expansion of the Commercial Organics Recycling law could be accomplished in several ways:
 - Enact a schedule for future compliance-triggering volume threshold of generated food manufacturing waste, or food scraps, requiring diversion from disposal (example: change 1 ton per week to, ½ ton per week, ¼ per week) to allow for iterative volume reduction over specified timeframe. The threshold is determined by the weight of the organics disposed of on a weekly basis by each commercial generator
 - Expand the threshold distance from a composting facility, or anaerobic digestion facility, requiring diversion from disposal of food manufacturing waste or food scraps generated, or eliminate the existing 20-mile radius (example: change radius to 30 miles, then 40 miles)
 - Include additional generators of triggering-volumes of food waste
 - i. Hospitality and Entertainment sector
 - ii. Colleges and Educational Facilities
 - iii. Correctional and Rehabilitation Facilities
 - iv. Hospitals and Healthcare
 - v. Other
- **Legislative** After infrastructure is available, establish a diversion mandate or designate organics as a mandatory recyclable item (CGS Sec. 22a-241b), to include the residential sector, requiring all residents of the state to divert organics from the waste stream. (Similar to the Vermont Universal Recycling Law (Act 148))
- **DEEP** Convene stakeholders' regional roundtable forum for collection dialogue and collaboration to establish, expand and improve the infrastructure for organics
- **DEEP** Launch organics infrastructure initiative to accelerate deployment of Food scrap/organics composting/AD facilities, including on-farm and grid-scale anaerobic digestion facilities, composting facilities, and food-to-animal feed manufacturing facilities.
 - Collaborate with municipalities, DECD, DoAG, the Connecticut Green Bank, and regional partners on site identification, siting and permit process facilitation, and coordinated RFPs for long-term contracts for grid-scale anaerobic digestion facilities
 - Focus on: Small, medium, and large food processing facility mapping, eastern CT capacity gaps, attracting food to animal feed manufacturing

Potential Partners: Commercial food waste and organics processors, CT Food Bank, Foodshare

17. Increase compliance assistance to the food waste generators within the Commercial Organics Recycling Law; develop enforcement strategy

Compliance assurance is a mix of technical assistance and enforcement and are essential components of the DEEP mission. Technical assistance is important to raise awareness of both regulatory requirement and the environmental, economic and social benefits of following the food recovery hierarchy. Improved understanding of regulatory requirement will facilitate and incentivize compliance and in turn increase diversion rates. Technical assistance improves compliance; reduces contamination; increases quality, marketability and value of organics-based feedstocks and end products. Increased compliance by food waste generators within the Commercial Organics Law helps to provide guaranteed, stable feedstocks for potential composting facilities and additional organics infrastructure developed in the state while also helping to remove food residuals from the waste stream.

There may be generators that are not in compliance with the law, but willing to comply with regulatory requirements with technical support from DEEP or non-regulatory, third party entities. DEEP staff currently provide assistance, but there are opportunities to increase awareness of policies and educational opportunities to help generators realize the benefits of organics diversion as they work to comply with the law. Technical assistance can help connect food waste generators with service providers that match their business' needs and identify opportunities for cost savings.

Enforcement for the Commercial Organics Recycling Law would allow for more diversion programs to be set up and more generators to be in compliance with the law. Ensures a level playing field, corrects or incentivizes compliance, expected for bad actors by compliant businesses, environmental advocates and the public. Consistent with Objective 1.6 of the CMMS to increase enforcement of mandatory recycling provisions

Action Steps:

- **DEEP** Work to increase opportunities to provide compliance assistance and educational materials to commercial food waste generators within the law.
- **DEEP** Conduct focused enforcement of generator requirements in CGS Sec 22a-226e, consistent with CMMS and synced with outreach

Links With: UBP, Increase Recycling, green jobs

Potential Partners: Commercial generators, composting facilities, RecycleCT, CCM, COST, trade & business groups, Zero Waste Coalition

Increase Recycling

Recycling was adopted in Connecticut as a law in 1987. The law established the state-wide recycling and required municipalities to make provisions for the recycling of the materials identified. Recycling became mandatory for all Connecticut residents, businesses, agencies and intuitions. Although all Connecticut municipalities provide recycling opportunities for their residents, active and informed public participation in these programs varies widely across the state. Looking to the future of sustainable materials management, it is important to consider opportunities for additional programs and collection services to continue to divert materials that are recyclable from out of state landfills, incineration and WTE facilities. These solutions should consider best management practices and provide educational opportunities for municipalities to increase public participation in new and expanded recycling programs.

Reduce, reuse and recycle are the first steps to creating a sustainable materials management system. In order to increase the diversion of designated recyclables and potentially expand the materials that may be recycled, programs for the collection of those materials must be established and subsequently markets for the recycling of those materials will be established. The Connecticut solid waste management hierarchy lists source reduction, reuse of goods and recycling of the materials that cannot be reused as the first steps toward waste reduction and increased diversion.

In addition, the last Working Group meeting discussed potential funding opportunities and where those funds might best be spent to support municipalities in their increase recycling efforts. Eighteen working group participants, representing 44 communities, responded to a poll asking what their municipality most needs recycling funding for. The poll results and accompanying working group conversation suggested additional funds were most likely to be used for education/ promotion, staffing, and start-up funds for special projects, including organics collection, swap shops, and events. A few municipalities responded wanting to ensure that DEEP received funding as well, especially to be able to administer/distribute municipal grants on a regular basis and provide ongoing resources to ensure DEEP can effectively provide statewide education, outreach and enforcement where necessary.

Source Reduction

Source reduction means engaging in many actions or methods that together work towards reducing the volume of MSW generated and living in a more sustainable way. Reducing our reliance on plastics (bags, bottles, etc) and other complementary changes such as manufacturers' packaging practices/materials and consumer purchasing habits can significantly enhance our environment and help Connecticut reduce our reliance on the shrinking regional disposal capacity.

Adopting laws that allow for the repair of electronics and other durable consumer goods, from vehicles to phones, will create opportunities for maintaining consumer goods and will work to counter manufacturers' planned obsolescence. Planned obsolescence describes the process that manufacturers use to deliberately design products to prematurely fail or become out-of-date, requiring consumers to pay to have the item fixed or to buy an upgrade. These techniques may include "a deliberate introduction of a flaw, a weakness, a scheduled stop, a technical limitation, incompatibility or other obstacles for repair."

18. Eliminate Single-use Plastics and Expanded Polystyrene

Efforts at the federal level for eliminating plastics such as bags, bottles and straws are underway; several Cities have already banned single-use plastics. The [Break Free from Plastic Pollution Act](#), introduced in 2020 by U.S. Senator Tom Udall and U.S. Rep. Alan Lowenthal is intended to tackle America's growing plastic pollution and packaging waste crisis.

Adopting a comparable law in Connecticut would result in a decrease of plastic litter, plastic in the MSW stream and the use of expanded polystyrene. Polystyrene is not biodegradable and is difficult to reuse or recycle cost effectively. In October 2020, Stamford Mayor David Martin [announced](#) he signed an ordinance amending Stamford's charter to prohibit the sale and distribution of polystyrene products (a.k.a. Styrofoam™) for food packagers and retail establishments in the City of Stamford.

The federal Act provides legislative blueprints for product responsibility, bottle deposit programs, single-use plastic "trifecta" laws (bags, straws and expanded polystyrene), post-consumer recycled content, recycling and compost labeling, preventing plastic waste exports to developing countries, and protecting local government actions to reduce plastic products.

Action steps:

- **Legislative** Adopt legislation to eliminate certain plastics and expanded polystyrene
- **Municipalities** Ban in your city/town expanded polystyrene, disposable food ware for on-site dining, single-use toiletries in hotels; adopt ordinances to prohibit the sale and distribution of polystyrene products for food packages and retail establishments.
- **Municipalities** Require restaurants for take-out service to ask first/opt in before providing disposable foodware and condiments; have restaurants charge for disposable food ware, replace disposable food packaging for take-out service in favor of reusable packaging
- **Municipalities** can pass resolutions to support the federal Act like the town of Mansfield, Connecticut, which passed a [resolution](#) to support this federal Act in November, 2020.
- **Municipalities** Host repair clinics for electronics and other consumer goods
- **DEEP** Encourage zero waste approaches

Links with: Marine debris, packaging EPR, recycled content standards, Bottle Bill, labeling

Potential Partners: Environmental organizations (Sierra Club, CT River, Zero Waste Coalition), EJ communities/supporters.

Resources: [Break Free From Plastic Pollution Act](#), [Break Free Memo for Local Legislators](#), Mansfield's [resolution](#)

19. Right to Repair

The goal of right-to-repair is to require companies to make their parts, tools and information available to consumers and repair shops in order to extend the use of these items. This approach also seeks to get away from the culture of planned obsolescence — the idea that products are designed to be short-lived in order to encourage people to continually purchase goods. This contributes to wasted natural resources and energy use.

Massachusetts passed the first right to repair law in the 1970s, allowing cars to be repaired by independent car repair shops or DIY and created the famous “Chilton Manuals” with instructions on how to change your own oil, spark plugs, etc. The Massachusetts Right to Repair Initiative (2020), also known as Question 1, appeared on the Massachusetts 2020 general election ballot as an initiated state statute. It was approved by voters and the measure will update the state's right to repair laws to include electronics and mechanical vehicle data related to vehicle maintenance and repair.

Action Required:

- **Legislation** Support the adoption of Right to Repair legislation in the 2021 session. Support for legislation will be needed from municipalities and DEEP.
- **Municipalities** Host repair clinics for electronics and other consumer goods

Links with: Environmental justice, reuse, fights against planned obsolescence, supports reuse economy, green jobs (auto repair)

Potential Partners: Independent auto repair shops & retail stores, MassRighttoRepair.org, Coalition of Automobile Repair Equality, Advance Auto Parts, Genuine Auto Parts, Auto Care Association, O'Reilly Auto Parts, AutoZone.

Resources: [Right to Repair Association](#), <http://www.MassRighttoRepair.org>, [IFixit.com](#)

20. Ban Food Serviceware containing PFAS from Sale in Connecticut

PFAS are a class of chemicals that can accumulate in the human body through food and food packaging. A study in 2017 found PFAS in one-third of all fast food wrappers, where it can easily migrate into food. As concern about per- and polyfluoroalkyl substances (PFAS) continues to grow due, in part, to their prevalence in the environment, actions to limit or ban their use often extends to food packaging. Bans might include fiber food serviceware that may be purchased as alternatives to expanded polystyrene and/or is compostable, which is then added to compost.

Connecticut residents and organizations are learning more about PFAS and the problems associated with it. With increased education surrounding the chemicals, the state should continue to be motivated to reduce the amount of food serviceware with PFAS that comes into Connecticut and/or impacts our residents. San Francisco and the States of Washington and Maine banned PFAS from food packaging. Many states introduced legislation, and New York recently passed Senate Bill 8812, which establishes a ban.

Action Steps:

- **Legislative Action** is needed. [H.B. 5291](#), “An Act Limiting the Use of Perfluoroalkyl and Polyfluoroalkyl Substances and Expanded Polystyrene in Food Packaging,” was introduced in the CT General Assembly in February 24, 2020. It would prohibit the manufacture and sale of food packaging containing PFASs or expanded polystyrene, effective January 2022, if a “reasonable alternative” is available. The Connecticut Department of Public Health (DPH) would be required to issue a report by January 2021 that includes a list of any food packaging products that contain any intentionally added PFAS chemicals or expanded polystyrene. The Public Health Committee held a public hearing on the bill on March 9, 2020.

Links With: Environmental Justice, PFAS, compost/organic recycling

Potential Partners: CT DPH, Environmental organizations

Resources: Webinar: [How to Avoid PFAS in Food Service Ware \(incl. Case study for reusable trays from Greenwich Public Schools\)-DEEP](#)

Reuse

21. Establish Swap Shops and Textile Collection Programs

Many items that are unwanted are not past their useful life. Furniture, clothing, small kitchen appliances, dishes, etc. can all be reused eliminating the need for expending natural resources to generate more of the same goods. Residents may choose to donate these good to non-profits such as Goodwill and the Salvation Army but Municipalities with Transfer Stations are registered under the Municipal Transfer Station General Permit have authorization to establish “Swap Shops” or “Re-Use-It” shops where residents may drop off useable, unwanted items for other residents to use. Swap Shops or “Re-Use-It” shops are areas within transfer stations where residents can donate and find gently used items that range from kitchen items to toys. Swap shops provide a space for residents to conveniently give-away usable items they no longer need and find useful items. Swap shops allow usable items to remain out of the waste stream.

Textiles make up approximately 4% (or 96,500 tons) of CT’s waste stream. When textiles are collected for recycling, 95% of them are sold and reused as secondhand clothing, remade into wiping rags, or reprocessed into fiber materials. There are several ways that municipalities can support recycling and reuse of textiles paired with education and outreach, including transfer station collection containers, collection containers on municipal properties, and curbside collection.

Coordination with the reuse and recycling outlets along with harmonized and simple statewide messaging on textile reuse and recycling will increase participation in textiles programming. Messaging should consider the definition of textiles to include bedding, stuffed animals, shoes, and handbags. Messaging should also note that many collectors will accept textiles in any condition (except for wet, oily or mildewed materials).

Action Steps:

- **Municipalities** can establish swap shops at their transfer stations, by finding space and making arrangements to monitor.
- **Municipalities** can establish **textile collection programs at transfer stations** and other municipal properties, or a third-party entity could provide a collection container as part of an agreement with the municipality. Often the municipality will receive a portion of the proceeds. Textile collection bins do not take up much space and provide funds for charities while offering residents a place to divert textiles from the waste stream. There could be concern for illegal dumping, if bins are not maintained or curbside collection is disrupted, residents may not be able or willing to wait to dispose of their textiles and may throw them away.

- **Municipalities** can establish **curbside collection programs** by contract with a service provider to collect separately bagged textiles on the same day as recycling is collected. Often the municipality will receive a portion of the proceeds. Curbside programs are convenient for residents.

Links With: Reuse, Creative Reuse, Recovering efforts, Environmental Justice, reuse, repair, UBP. Implementation of UBP drives participation in other municipal recycling programs.

Resources: Brian Bartram, Salisbury/Sharon [presentation](#) #1 Working Group Meeting. Kim O'Rourke, Middletown [presentation](#) at the first CCSMM meeting; [Textile Reuse and Recycling - DEEP](#)

Potential Partners: Non-profits, Goodwill, Savers, Salvation Army, Youth/ Family services and for-profit organizations that have collection bins or are able to collect textiles curbside.

22. Reuse/Refill Targets for Retail Sector

Setting a reduce/reuse target for each retail product sector can support source reduction and reuse with flexibility for business. [UPSTREAM provides evidence](#) that shows reuse beats single-use across a variety of metrics, including cost savings and increased brand loyalty.

For example, each retail sector will sell 25% of their products in bulk without a package (that's the *reduce* option) or in returnable, sector-funded *reusable* or *refillable packaging* within 5 years from adoption of a reduce/ reuse target policy. Deposit systems can work well here, but the policy doesn't need to be prescriptive on how the systems work. It only needs to require reporting to show that the goal was achieved. If the sector fails to meet the target, charges can be imposed for single-use products and the funding can be used to make reusable and refillable options available to the customer. [UPSTREAM Solutions](#) has been working with municipalities across the country to create policies and implement programs to support waste reduction and reuse efforts - more information can be found under their [Reuse Acceleration Policies](#) page.

Action steps;

- **Municipalities** can adopt ordinances to set reuse/ refill targets to support waste reduction and reuse efforts.

Links with: Environmental justice, packaging

Potential Partners: Retail stores and associations that represent them, UPSTREAM.

Resources: [Reuse Acceleration Policies \(UPSTREAM\)](#)

Recycling/Diversion

23. Establish Plastic Bags/Plastic Film “Return to Retail” Program

Connecticut WRAP (Wrap Recycling Action Project) is an innovative public/private partnership that promotes recycling of plastic “film” beyond bags. The partnership is comprised of public officials, municipalities, recycling officials, retailers and grocers such as Price Chopper, plastics makers, Trex, which makes recycled plastic lumber products, and other recycling advocates. Grocers and retailers accept plastic bags such as grocery bags, newspaper bags, produce bags, bread bags, dry cleaning bags, and even zipper bags for recycling. They also accept plastic wraps from water bottle cases, diapers, bathroom tissue, and paper towels, as well as bubble wrap and shipping pillows. The plastic bags and wraps must be clean and dry and placed in storefront recycling bins. Plastic bags and wraps get recycled into products such as new grocery bags, benches, and decking.

Promoting this “Return to Retail” program helps reduce contamination in CT’s mixed recycling program by providing a solution to throwing used material into the residential waste stream. Plastic film is more than bags. A CT WRAP audit found 30-50% of incoming film was not plastic bags. Towns can collect more film by offering plastic bag/ film collection at transfer stations, senior centers, schools, or community centers in addition to retail stores. Awareness of the program can be spread through municipal webpages, handouts, etc. Trex offers a school challenge, which can be linked with community-wide collection of film.

Action Steps:

- **Legislative** Return to Retail could be established by a revision to the CT bag tax law.
- **Municipalities** Participate in plastic bags/ plastic film “Return to Retail” programs by requiring retailers that use/sell plastic bags and/or products with plastic film packaging to collect film at stores for recycling..
- **Municipalities** can increase awareness of the program and residential participation through educational campaigns.

Links With: UBP may incentivize program.

24. Modernize Connecticut’s Bottle Bill

Connecticut is one of 11 states in the U.S. that has a “bottle bill,” also known as container redemption programs. Essentially, they work by charging a deposit on a container at the time of purchase, which is then returned to the consumer when the empty bottle is returned. The original program was developed to reduce litter along roadways, the deposit providing an incentive to return the container and not toss/litter it. Currently, CT’s bottle bill program has

the lowest return rate of containers when compared to other programs. This could be due to low access/accessibility to return containers, disincentive to start/maintain redemption centers or low deposit (still at 5 cents). Over the last 5-6 years, several bills have been put forth in CT legislature that included raising the deposit, raising the handling fee, adding juice and sports drinks, liquor, wine & spirits, nips and other containers, as well as getting rid of the bottle bill.

Container redemption programs, while providing a parallel system to curbside and transfer station programs, provide the cleanest material resulting in greater value due to the containers being collected as source-separated material. This is especially desirous of glass, which is currently a low-value item in current mixed/single stream system and also damaging to MRF equipment.

Action Steps:

- **Legislative** Revisions to the CT Bottle Bill program to expand the covered beverages (e.g. Liquor, wine, nips, fruit juices), increase deposit to 10 cents and increase handling fees.
- **Legislative** Adopt an Oregon model for deposits and redemption

Links With: EPR, source separated glass collection, litter, plastic pollution, marine debris, increasing quality of materials collected, green jobs, reduced fraud, reuse/refillables, recycled content standards.

Potential Partners: Oregon Beverage Recycling Cooperative, CT Beverage Distributors, retailers, CT Food Association, Citizen's Campaign for the Environment, TOMRA, ENVIPCO

Resources: Jules Bailey, Oregon Beverage Recycling Cooperative, [Presentation #2](#) Working Group meeting; Michael Noel, TOMRA, [Presentation #2](#) Working Group meeting;

25. Source Separated Glass Collection

Currently MRF operators are receiving significant quantities of glass in the mixed (single stream) recyclables, which is detrimental to their equipment. Glass is crushed and creates contamination in the other recyclable materials in single-stream collections. This method of collection making it difficult to produce quality materials for recycling end-markets, including bottle to bottle. If glass were to be evaluated using the same criteria as other recyclable materials in the 'universal list of acceptable materials,' it would be viewed as a contaminant, similar to shredded paper and plastic film. It is valuable when collected separately, but not in single stream recyclables collection systems.

The Connecticut legislature in 2018 established the opportunity for a glass collection pilot program. The Housatonic Resource Recovery Authority (HRRRA) was authorized to conduct a

glass pilot collection program to measure the benefits of keeping glass out of the single-stream recyclables collection system.

Action steps:

- **Legislative** Mandate separate glass collection for recycling
- **Municipalities** can offer source-separated glass collection at Transfer Stations or satellite sites.

Links with: Bottle Bill, increasing the quality of recyclables, ensuring materials are recycled, not just beneficially used (ie daily landfill cover), UBP (implementation of UBP drives participation in other municipal recycling programs).

Potential Partners: MRF operators, haulers/collectors, COGs.

Resources: Jennifer Heaton-Jones' [presentation](#) at the first CCSMM meeting; Eric Forbes, Fairfax County, VA [presentation](#) from #3 Working Group meeting

26. Enhanced Recyclable Materials Collection

Municipalities should be intentional about recycling collection in municipal facilities, offices, schools and public spaces. Through outreach and by keeping the message brief, simple, and clear municipalities can increase recycling rates. Making recycling convenient and thinking about functionality above other considerations like aesthetics can also increase participation and reduce contamination. Placing recycling bins next to garbage containers (“Twinning the Bin”) forces the decision between the two options. Numbering bins can help municipalities easily identify those that need to be serviced or moved. Educational campaigns and altering signage can have positive impacts on clean recycling streams. Municipalities might also consider including organics collection or other non-mandated materials in municipal buildings as a place to model and encourage additional sorting of material. Establishing more robust recycling programs, including food scraps, in schools creates opportunities for education and cost reductions.

Action steps:

- **Municipalities** should consider public space recycling options to place bins for maximum participation with thoughtful signage.
- **Municipalities** can offer recycling options in municipal buildings for both mandated and non-mandated materials.
- **Municipalities** should offer recycling options in schools and provide educational opportunities and appropriate signage.

- **Municipalities** Schools can offer additional materials collection opportunities for reuse and recycling
- **Municipalities** Explore grant options and programs already in place through CT Green LEAF and RecycleCT
- **DEEP** Provide grants and technical assistance/training for setting up and maintaining recyclables bins.

Links with: Organics (potential for organics collection options), SustainableCT points, climate change goals, education,

Potential Partners: Local environmental groups may be able to help with signage. Keep America Beautiful has resources as well. Recycling coordinator or Public Works staff; CT Green LEAF schools program provides professional development workshops for educators to learn more about collecting materials for recycling; RecycleCT has a School Grant program to support these types of initiatives; Center for EcoTechnology, CT Zero Waste Schools Alliance, **CSDE**, UConn Extension.

Resources: Randy Hartmann, Keep America Beautiful [presentation](#) #5 Working Group meeting; [Event Recycling – DEEP](#); [Recycling at Fairs, Festivals and Outdoor Events – DEEP](#); [Tips for Designing Public Space Recycling – Keep America Beautiful](#), [Business Recycling – DEEP](#); [Recycling at Work – Keep America Beautiful](#); [CT Green LEAF Schools program](#), Webinar: [Setting Up a Recycling Program in Your Schools \(DEEP\)](#), [Center for Eco-Technology](#); [RecycleCT Grant Program](#), [SustainableCT](#), [Carton Recycling in Schools: BMP – Carton Council](#)

27. Recycling Technical Assistance and Enforcement

CT regulations require *Everyone to recycle*, suggesting all players in the system or chain of collecting recyclables should also be part of enforcement efforts, including haulers, local municipalities and communities and DEEP. It's also important to recognize that enforcement is strongly aligned with the need to expand and ensure there is on-going education to residents and businesses. When enforcement programs are implemented at the local level, within education programs, there is greater success – including “oops tag” approach, with or without fines.

Business recycling technical assistance allows for organization-specific, tailored sustainability efforts, which help to prevent and divert a wide range of materials from disposal. Organizations in the commercial sector, including small businesses, retail stores, restaurants, malls, grocery stores, hospitals/ health care facilities, colleges and universities have the opportunity to save money and promote sustainable business practices through recycling and waste reduction efforts. Programs like Massachusetts' RecyclingWorks (funded by MassDEP)

provide no cost technical assistance to businesses and institutions, helping them maximize recycling, reuse, and food recovery opportunities.

The [Government Reuse Forum](#) is a support network for U.S.-based state and local government staff and elected officials to develop and launch policies and infrastructure to steward the transition from single-use to reuse. [UPSTREAM Solutions](#) has created a national forum for municipalities and states to share their challenges and hear from others about new opportunities to create policies and programs that prevent waste and encourage reuse as a priority over recycling.

Action steps:

- **Municipalities** can engage haulers that collect materials in their communities, especially within the hauler registration program, to help with education and enforcement.
- With additional funding, **municipalities** could hire staff to check bins, educate, and enforce at the source.
- **Municipalities** may need local ordinances to assess fines for non-compliance.
- **Municipal** officials and **DEEP** staff can join the forum
- **DEEP** Strengthen and streamline enforcement opportunities.
- **DEEP** Expand Recycling Enforcement Initiative to additional sectors
- With additional funding, **DEEP** should consider opportunities to provide business recycling technical assistance.
- **DEEP** Seek to establish reporting requirements for haulers

Links with: Green jobs, Reuse, Organics, Contamination, funding

Potential Partners: Center for EcoTechnology, RecycleCT, The Recycling Partnership

Resources: Center for EcoTechnology, [RecyclingWorks](#), DEEP [Business Recycling Assistance](#); The Recycling Partnership, City of Waterbury, Increase Recycling Working Group Meeting #3, presentations from Sherill Baldwin, CT DEEP on [Building Deconstruction: The Value of Reuse](#) and Stephanie Phillips, Sr. Historic Preservation Specialist on [San Antonio's Deconstruction and Salvage Initiative](#)

28. Recyclable Recovery from Construction & Demolition Waste – Wood, Gypsum Wall Board, Asphalt Shingles, Building Materials

In Connecticut, construction and demolition debris (C&D) includes wood, steel, concrete, gypsum, masonry, plaster, metal, and asphalt. According to the 2016 C&D Waste Characterization, approximately 7-9% of the construction and demolition debris in CT is recovered through recycling due to some Volume Reduction Facilities that pick out scrap metal, bulky rigid plastics, corrugated cardboard and clean wood. It is possible that a significantly larger portion of these products could be recycled or reused, especially if collected separately. According to the 2013 CT facility reports, 82% of C&D materials are sent to out-of-state landfills.

Deconstruction is the purposeful removal and reuse of building materials that are no longer wanted or safe to access in the original building, but are of good working order and can be used elsewhere. This practice is more time consuming than demolition, but diverts useable items from the waste stream and allows them to be sold or donated for reuse as building materials. In Connecticut, the current regulations allow for deconstruction. This practice creates jobs and diverts waste while also preserving the resources of the original building materials and allows for the maximum economic and environmental value of materials. There are many markets for reused building materials and “vintage” cabinets or windows from an older building.

Action steps:

- **Municipalities** can adopt deconstruction initiatives or ordinances to encourage separation of these materials at the point of generation to increase the usability of materials.
- **Municipalities** might offer opportunities for recovered material collection.
- **Municipalities** Establish opportunities to collect certain materials separately, including asphalt shingles, clean wood, gypsum wallboard from construction and reusable building materials.
- **DEEP** Help in creating markets and demand for recycled gypsum wall board would greatly reduce tip fee costs because it is the heaviest C&D item.
- **DEEP** Expand mandatory recyclables to include C&D materials, but not until strong markets exist.

Links with: Environmental justice and equity, reuse, green jobs

Potential Partners: Contactors, builders, CT Green Building Council, Contractors and Demolition companies, historic societies.

Resources: Increase Recycling Working Group Meeting #3, presentations from Sherill Baldwin, CT DEEP on [Building Deconstruction: The Value of Reuse](#) and Stephanie Phillips, Sr. Historic Preservation Specialist on [San Antonio’s Deconstruction and Salvage Initiative](#)

Infrastructure Development and End Markets

Recycling industry materials are varied, including containers, fiber, organics, textiles, C&D etc. All materials have market fluctuations and value changes depending on how materials are collected (source separated vs single stream) and processed. End market development also fluctuates and, likely due to China’s effect on U.S. recycling markets, EPA and others are beginning to focus more on creating capacity at the state level. Minnesota, California and Pennsylvania have consistently maintained end market development agencies and initiatives.

Supporting and expanding end-markets is about expanding the manufacturing sector in Connecticut, bringing in more green jobs while also supporting a more localized circular economy. RecycleCT will be finalizing their REI study in December 2020 showing the number and types of jobs affiliated with the residential recycling sector with possible plans to conduct another study with other parts of the 'materials economy' that would include organics, textiles, C&D etc.

29. Establish Regional Recycling Coordinators and Facilities and Improve Recycling Contracts

Using a regional or multiple town model to support individual municipalities with recycling compliance assistance allows for all towns to have access to technical support without having an individual recycling coordinator for every town. It may reduce costs to individual municipalities and allow for greater regional consistency between municipalities. There are many municipalities without recycling coordinators. Hiring recycling coordinators (for single or regional groups of municipalities) could help provide support for public works/ department of sanitation as well as municipal efforts to educate or support recycling efforts.

Formal or informal agreements between towns and cities to share transfer stations can reduce the costs and administrative burdens on individual municipalities and residents. This practice can support a town with reduced site capacity. Transfer station satellite sites are municipal sites that serve as an additional drop-off center for materials. These are useful for municipalities covering a large geographic area and those hoping to collect specific materials.

Ensuring that contracts for the management of recyclables provide for the needs of the municipality or regional waste authority requires contracts to be flexible. As markets ebb and flow, a contract that allows for flexibility in response to market fluctuations is in the interest of both the municipality and the service provider. A municipality can form a partnership with other communities and contract together with MRF processors if a regional approach supports the goal of municipality(ies).

In Massachusetts, there are 8 DEP staff who work as Municipal Assistance Coordinators (MACs) that support the entire state on recycling and waste reduction efforts. This statewide team works together to support policies, legislation and waste bans, while also supporting innovative efforts such as repair clinics and library tool check-outs to allow for sharing and regional waste reduction. Municipalities can apply for 80 hours of technical assistance from a MAC on a single project.

Action steps:

- **Municipalities** should consider opportunities to partner with other municipalities and/or create and participate in regional waste authorities.

- With additional funding, DEEP should consider the MassDEP model of providing technical assistance to municipalities.
- DEEP Provide technical assistance for municipalities that elect to regionalize Recycling Coordinators and facilities

Links With: All working groups.

Potential Partners: COST, CCM, other regional groups/waste authorities.

Resources: [MassDEP Recycling Municipal Assistance Coordinators \(MACs\) guide](#), Brooke Nash #2 Working Group meeting; Gabrielle Frigon, CT DEEP [presentation](#) #4 Working Group meeting; Brian Bartram, Salisbury/Sharon [presentation](#) #1 Working Group meeting; [The Recycling Partnership BMP for MRF Contracts suggests important elements in a MRF contract](#); Rob Taylor, The Recycling Partnership [contract presentation](#) and [market update presentation](#) #5 Working Group meeting

30. Support End-Market Development, Recycled Content Standards, Increase Demand

Recycled content standards create a market for recycled materials like fiber/paper, glass, metal and plastic products that moves with the supply and demand for recyclables. Keeping materials in the economy for as long as possible and then recovering them to be reused and recycled into new materials and products necessitates strong and consistent demand for recycled materials and depends on manufacturers integrating recycled materials into their new products and packaging.

Minimum Recycled Content legislation is being discussed on a regional level, which can lead to consistency between states. A group of states including Connecticut, have been working with NERC-NEWMOA to create minimum recycled content legislation based on California and New Jersey's standards. Minimum recycled content standards help establish localized markets for recyclable materials which in turn ensures demand for those materials.

Recycling-related businesses need access to capital. Recycling businesses include companies whose primary purpose involves collecting or separating recyclable materials for resale; reuse, processing, composting or converting of recyclable materials into marketable products; manufacturing products that use recycled materials; and wholesaling or retailing of recycled feedstocks or products containing a significant percentage of recycled materials.

California currently has recycled content standards for beverage containers sold in the state. AB 739 (2020) establishes minimum content requirements for beverage containers (15% 2022, 25% 2025, 50% 2030). New Jersey has introduced legislation to establish recycled content standards for plastic containers, glass containers, paper carryout bags, reusable carryout bags made of plastic film, and plastic trash bags; it also prohibits the use of polystyrene loose fill packaging.

Government procurement ties in directly to the state agency waste reduction goal in Executive Order 1. There are existing statutes which focus eliminating single use and disposable products and purchasing recycled content products which can be optimized with additional outreach and education.

Action steps:

- **2021 Legislative Session** Establish recycled content standards for consumer goods sold in Connecticut
- **Legislation** Require state agencies and municipalities to purchase recycled content products.
- **DEEP** and **Municipalities** Government procurement of products with recycled content, Environmentally Preferred Purchasing, aids in supporting and expanding end-markets.
- **DEEP** Continue regional and national stakeholder engagement in 2021, with an aim to introduce minimum recycled content legislation in 2022

Links With: Packaging EPR, Recycling jobs, REI studies

Potential Partners: CT DECD, NERC, NEWMOA, EPA, RecycleCT

Action Required (DEEP, municipality, legislative):

Resources: [U.S. EPA – Recycling Market Development](#), [U.S. EPA – Recycling Economic Information study](#), RecycleCT – Recycling Economic Information for Residential Recycling study (to be published Dec 2020); Brand owners, CT-based MRF operators, waste industry, Institute of Scrap Recycling Industries, NERC, NEWMOA, National Waste and Recycling Association.; California’s Minimum Recycled Content Standards [legislation](#), New Jersey’s [proposed legislation](#); [U.S. Plastic Pact](#), [NERC’s Government Recycling Demand Champions program](#); [Buying Recycled - DEEP](#); [Massachusetts Recycling Loan Fund - BDC Capital](#)

Education

31. Expand Education to residents and students

Educating residents on how to correctly separate their recyclables – including “blue bin” materials, additional items “beyond the bin” and other issues regarding proper disposal require ongoing education which requires on-going resources – funding and staff. In addition,

promotion and outreach to ensure residents understand they may not be sorting properly, the needs to #RecycleRight and where they can find the answer is key to reduce contamination and increase participation in community recycling programs. To create an effective program to educate and provide outreach that will change behavior requires time and funding and staff capacity.

Additionally, increasing education for students via the CT Green LEAF schools project, a collaboration with CT DEEP, DPH and Department of Education, coordinated by CT Outdoor & Environmental Education Association (COEEA) and EdAdvance can provide resources and support for CT schools to implement sustainability and environmental programs. CT Green LEAF focuses on reducing environmental impact and cost, while improving health and wellness and environmental education, specifically working towards goals that align with CT's Environmental Literacy Plan. Green schools raise student academic achievement and save money for schools.

Potential Partners: RecycleCT, Sustainable CT, CT Green LEAF schools, Environmental Organizations, CET, nature centers, stewardship organizations, CT Dept of Education, CT Zero Waste School Alliance, Green Schools Alliance – CT Chapter, UConn Extension, 4-H, Girl Scouts, nature centers

Links With: Education, EPR, municipal recycling coordinator support, reducing contamination, enforcement

Resources: [Community-Based Social Marketing](#), C.J. May, Waterbury, [Presentation](#) at first CCSMM meeting, Kim O'Rourke, Middletown [Presentation](#) from #1 Working Group meeting, [Sherill Baldwin, CT DEEP Presentation](#), #5 Working Group meeting, [CT Green LEAF Schools Program](#)

Unit-Based Pricing

Unit-Based Pricing (UBP) or pay-as-you-throw programs create a structure where residents are charged for the collection and disposal of municipal solid waste based on the amount they throw away. Traditionally, residents pay for waste collection through property taxes or a fixed fee, regardless of how much—or how little—trash they generate. UBP breaks with tradition by treating trash services just like electricity, gas, and other utilities. Households pay a variable rate depending on the amount of service they use. This creates a direct economic incentive for residents to change their behavior - to recycle more and to generate less waste to be disposed. UBP programs are the driver for participation and optimization of other materials management programs.

UBP is the critical first step, as the price signal driver, to achieve sustainable materials management and for municipal residential participation in all other reuse, recycling and other diversion programs. Participation in curbside food waste collection programs, EPR programs,

and recycling programs is higher in communities with UBP and therefore should be prioritized as a first step for optimizing diversion from disposal. In order to be effective, UBP models should include a minimum cost that covers collection (fixed) and disposal (variable) with a pricing scale that is directly related to container or bag sizing.

UBP programs create a sustainable revenue structure for municipal materials management costs. Such programs reduce municipal cost burden by shifting costs to the user just like a utility charges for electricity or water. Residential waste generation is reduced by an average of 44% immediately after implementing UBP programs. In Connecticut this would result in a waste per-capita disposal rate of 350-500 pounds compared to the current state average of 740 pounds per capita. Such a decrease would significantly reduce WTE capacity demands in the state.

The UBP Working Group's discussions have included potential pathways to UBP program implementation including: Municipal/individual; Regionally/WTE facility; and State-wide bases. The UBP WG has also evaluated cart-based, bag-based and hybrid programs for UBP; and the WG has touched on municipal oversight and third-party oversight of the administrative/financial implementation of such programs. What follows is a distillation of the concepts and approaches discussed and resulting potential actions:

32. Statewide Mandate

Explanation: Legislation that drives municipalities/authorities to implement programs, systems or strategies to achieve waste reduction. **(High Impact)**

Action Steps:

2021 Leg. Session

- **Legislative** Establish a per capita waste generation performance measure with a future phase-in date(12/31/2022)
- **Legislative** Require municipalities to establish UBP by 12/31/2022
- **Legislative** Authorize municipalities or other administrative body to implement UBP program and require Haulers' support/participation
- **Legislative** Require a specific administrative structure (i.e., individually, regionally, or in collaboration with WTEs) for UBP program implemented by 12/31/2022) and/or UBP system (bag-based, cart-based, hybrid) to be adopted.
- **Municipal** Petition legislators for state-wide UBP program adoption
- **Municipal** Establish ordinances for UBP program participation
- **Municipal** Require UBP program support/implementation by registered haulers
- **DEEP** provide resources and support through technical guidance and grants

Links With: Organics diversion, Increasing recyclables diversion, Segregation of glass from other recyclables and MSW

33. Establish Unit-Based Pricing through a Municipal Program or Ordinance

Unit Based Pricing (UBP) programs can work successfully at the individual municipal level to provide significant, immediate and sustained waste reduction. Implementation is flexible, and can be based on the collection system that is already in place. **(High Impact)**

Action Steps (DEEP, municipality, legislative):

January 2021

- **Municipalities** Establish UBP programs as individual towns, or as regional groups. Implementation may require contract negotiation with collector, or ordinances may be necessary in subscription communities.
- **Municipality** Through ordinances, require haulers to register and comply with UBP
- **Municipality** Through ordinances, require haulers to adopt a cart-based pricing structure that linearly tracks with cart capacity
- **Municipality** Itemize solid waste charges on property tax bill for transparency.
- **DEEP** Provide technical assistance and sample ordinances to facilitate adoption
- **DEEP** Provide technical guidance regarding municipal service agreements
- **DEEP** Provide resources and support through grants

Links With: Organics diversion, Increasing recycling (segregation of glass from other recyclables and MSW)

34. Form Regional Coalitions for UBP Implementation

Explanation: Existing regional waste authorities (e.g. HRRRA, SCRRA), COGs or ad-hoc coalitions of municipalities implement and oversee a UBP program. **(High Impact)**

Action Required (DEEP, municipality, legislative):

January 2021

- **Municipality** works with regional entity to establish UBP program
- **Municipality** Through ordinances, require haulers to register and comply with UBP
- **Municipality** Through ordinances, require haulers to adopt a cart-based pricing structure that linearly tracks with cart capacity
- **DEEP** Provide technical assistance and sample ordinances to facilitate adoption
- **DEEP** Provide technical guidance regarding municipal service agreements
- **DEEP** Provide resources and support through grants

Links With: Organics diversion, Increasing recyclables diversion, Segregation of glass from other recyclables and MSW; Bottle Bill

35. Implementation of UBP with Waste-To-Energy (WTE) Facilities

Explanation: WTE facilities implement a bag-based UBP program for their Municipal Service Agreement Towns (and possibly their commercial customers). **(High Impact)**

Action Required (DEEP, municipality, legislative):

Leg. Session 2021

- **Legislative** Require WTE facility operators/owners to implement UBP programs (by 12/31/2022) to qualify for Class II RECs
- **Legislative** Establish a per capita waste generation performance measure with a future phase-in date(12/31/2022)
- **Municipality** May require renegotiation of municipal service agreements to include UBP program
- **Municipality** Negotiate lower tip fee for UBP program compliance
- **Municipality** Itemize solid waste charges on property tax bill for transparency.
- **DEEP** Provide technical assistance and sample ordinances to facilitate adoption
- **DEEP** Provide technical guidance regarding municipal service agreements
- **DEEP** Provide resources and support through grants

Links With: Organics diversion, Increasing recyclables diversion, Segregation of glass from other recyclables and MSW