

***Solid Waste Master Plan for the Town of Amherst:
Addressing 21st Century Challenges***

September 17, 2015

Prepared by:
Town of Amherst Recycling and Refuse Management Committee

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**Amherst's Solid Waste Master Plan:
A Proactive Plan to Address 21st Century Challenges**

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Executive Summary

The Amherst Town Manager requested that the Recycling and Refuse Management Committee (RRMC) advise the Town on how to best meet current solid waste management challenges in Amherst. After a review of Amherst's solid waste management system, the RRMC has concluded that due to local, national and global developments and challenges, solid waste management in Amherst has reached a critical stage. It is imperative that the Town address industry and social changes while maintaining our deep commitment to sustainability and ecological concerns. Amherst's solid waste system has many strengths, such as an informative website and an excellent transfer station. The changes in the regulatory environment, recycling markets, business drivers, and waste disposal landscape require that we continue investing in and improving our waste planning and operations.

This document reviews the following areas and their current functions:

- Regulations for Refuse Collection and Mandatory Recycling
- Single-family Residential Recycling and Waste Management
- Multi-family Residential Recycling and Waste Management
- Business Recycling and Waste Management
- Public Space Recycling and Waste Management
- Public School Recycling and Waste Management
- Transfer Station Operation
- The Recycling Coordinator Position
- Funding Amherst's Municipal Solid Waste and Recycling Program

Recommendations are made in each of these areas with the following priorities, and with the acknowledgement that some recommendations would be quite easy to implement, while others would require significant changes:

Overarching recommendations

- Pursue ways to improve funding for Amherst's Municipal Solid Waste and Recycling Program
- Strengthen waste reduction education for all residents and businesses with special emphasis on composting and enhanced recycling

Regulations for Refuse Collection and Mandatory Recycling

- Update Board of Health (BOH) regulations, the Waste Hauler Agreement and related Town bylaws.
- Enforce BOH regulations and Town bylaws.

Single-family Residential Recycling and Waste Management

- Review current waste collection system and migrate toward a more efficient system that will save residents money while improving the Town's carbon footprint and air quality.
- Identify cost effective methods to increase composting opportunities for residents.

Multi-Family Residential (MFR) Recycling and Waste Management

- Develop an improvement strategy for MFR within Town limits.

Business Recycling and Waste Management

- Develop a downtown waste storage plan in partnership with the Business Improvement District (BID) and the Amherst Area Chamber of Commerce.

Public Space Recycling and Waste Management

- Increase public recycling accessibility.

Public School Recycling and Waste Management

- Fashion a billing approach for waste services provided to the school district that covers all costs and provides financial incentive to reduce waste.

Transfer Station (TS) Operation

- Improve the TS data collection and accounting system to allow for easier and better data analysis.
- Implement options for expense reduction and increased income at the TS.

The Recycling Coordinator Position

- Sustain the Recycling Coordinator position after clarifying responsibilities and identifying priorities.

The RRMC respectfully requests an opportunity to discuss these recommendations with the DPW Superintendent, the Select Board, and the Town Manager and offer our assistance with addressing the issues and challenges.

I. Introduction:

The Town of Amherst's solid waste management has reached a crucial stage. U.S. municipal waste has grown in complexity over the last ten years with the growth of electronic and plastic waste, chemical hazards, and a new awareness of its impact on climate change. Regulatory issues have become more complicated with new state waste bans and product stewardship developments. Local colleges and neighboring communities are adopting pay-as-you-throw trash collection systems with enforced limits and/or single stream recycling.

Our residents, businesses, visitors, colleges, and town departments continue to produce waste, yet fewer local disposal options exist due to the recent closure of local landfills, and the Solid Waste Enterprise Fund is struggling for solvency. Additionally, the Town's recycling coordinator position was recently eliminated after 25 years.

There is mounting international awareness that governments, institutions, and individuals must take dramatic steps to ensure the continued habitability of our planet. The Zero Waste movement is making a powerful impact with regards to waste reduction. It involves reducing consumption and disposal rates in order to preserve natural resources and minimize our global carbon footprint, and requires changing our perspective regarding discarded material from "waste" and "trash," to "residual product" and "potential resource." This change spurs creative problem solving with regard to cost and environmental impact reduction. We believe this approach should be applied to Amherst's future waste reduction efforts, and zero waste concepts are found throughout this document.

In 2010, the Town formally adopted a Master Plan that was the product of extensive community input and town resources, but management of the Town's solid waste was not addressed. It is now time to evaluate Amherst's waste (or residual product) situation and create a plan to ensure that future Town of Amherst waste management aligns with Town values and is cost effective for our residents with minimum effect on the environment.

We have reviewed nine key areas of Amherst's current waste enterprise in order to provide a comprehensive analysis and useful recommendations. The structure of the report is as follows:

- I. Regulations for Refuse Collection and Mandatory Recycling
- II. Single-family Residential Recycling and Waste Management
- III. Multi-family Residential Recycling and Waste Management
- IV. Business Recycling and Waste Management
- V. Public Space Recycling and Waste Management
- VI. Public School Recycling and Waste Management
- VII. Transfer Station Operation
- VIII. The Recycling Coordinator Position
- IX. Funding Amherst's Municipal Solid Waste and Recycling Program
- X. Conclusions and Key Recommendations

The information and recommendations within this report are intended to provide constructive information to the Select Board as it considers how to best manage solid waste in the future.

I. Regulations for Refuse Collection and Mandatory Recycling

Current Situation

Amherst Solid Waste services are governed by the Board of Health's regulation for Refuse Collection and Mandatory Recycling (see <http://www.amherstma.gov/DocumentCenter/View/26670>). These Regulations provide the requirements that waste haulers, property owners and managers, and tenants must meet with regards to solid waste management, and includes information about ownership of material, penalties, enforcement, and variances.

Operating under the Amherst Board of Health's (BOH) guidelines, the Department of Public Works (DPW) administers the Town's solid waste management activities, which have been funded by the Solid Waste Enterprise Fund (SWEF) since 1982. The SWEF operates a full service Transfer Station (TS) and recycling center at the site of one of two capped landfills in southeast Amherst off Belchertown Road. Residents of Amherst, Pelham and Shutesbury can purchase an annual sticker giving them access to all TS services, including pay-per-bag pay-as-you-throw (PAYT) household trash and composting programs and free household recycling. Residents are required to contract with a private hauler for weekly pickup unless they exercise the PAYT disposal option at the TS.

BOH regulations mandate that residents and businesses recycle paper, cardboard, and containers. Employees paid from the SWEF operate the TS, pick up trash and recycling from schools and select Town buildings, maintain two capped landfills, operate specialized town-wide collections (including household hazardous waste), and provide public education through web- and print-based communications, public events and school and business collaborations. Waste haulers and property owners, managers, and tenants are subject to

monetary fines for various violations spelled out in the Regulations, which are enforceable by the BOH, the DPW, and the Police Department.

The BOH grants licenses annually to trash haulers who collect, transport or transfer municipal solid waste within the Town of Amherst for an annual permit fee. Residential haulers must offer weekly pickup with a unit-based user fee system (based on the number of refuse receptacles emptied) and must offer recycling services bundled with the fee charged for pickup of refuse. Haulers are required to reject loads of trash containing more than 5% recyclable material by volume, and are prohibited from accepting hazardous, liquid and banned waste or sewage unless they are appropriately licensed and permitted. Haulers are also required to maintain a customer list. Ten residential and commercial haulers currently hold licenses to operate in Amherst.

BOH regulations require that all Town of Amherst property owners, managers and tenants:

- contract with a private, licensed waste hauler for weekly refuse pickup (this is also known as a “subscription service” waste program). Residents of owner-occupied units have a second option of PAYT at the Amherst Transfer Station (purchase of a Transfer Station permit is required);
- include no more than 5% by volume of recyclable materials (containers and paper products) in refuse;
- separate recyclable paper and mixed containers;
- develop a recycling plan;
- properly dispose of banned, electronic and/or hazardous waste and any other materials requiring special handling; and
- make special arrangements for excess or bulky waste to be picked up within one week.

Hampshire College, Amherst College, and the University of Massachusetts compost discarded food and paper waste in their dining halls and manage their waste independently from the Town. Amherst College and the University of Massachusetts recently adopted a single stream recycling system, while Hampshire College has a dual stream recycling system.

Issues

- Accurate disposal data are critical for monitoring and analysis, yet haulers are not currently able to provide information about the tonnage of curbside refuse that they collect because their trucks are not weighed before or after crossing town borders.
- Allowing town residents complete freedom of choice in selection of a residential curbside hauler has created a situation in which as many as six different garbage and recycling trucks traverse each street in Amherst every week. This system is inherently inefficient, wastes resources, increases air and noise pollution, and results in higher costs for residents. Individual choice has a high financial and environmental price for the entire community.
- The current curbside waste system does not provide adequate incentives to reduce household waste. Under the existing system, households generating highly disparate amounts of waste are charged the same amounts for weekly pickup.
- The BOH lacks the resources to consistently enforce solid waste disposal regulations.
- The Town has no control of or influence on waste collection methodology, fees, education, and other important factors affecting waste reduction.

- Discarded waste is not being inspected to ensure that items banned in the Commonwealth from household trash (such as thermostats and compact fluorescent bulbs) are not being disposed of appropriately.
- The Town's General Bylaws regarding refuse collection and recyclable materials are outdated. *Littering* (1939), *Transporting Garbage or Rubbish* (1947), *Collecting and Dealing in Used Articles* (1939), *Refuse Collection and Recyclable Materials* (1990) and *Disposal of Refuse, Rubbish, Etc. on Highways* (1994) and associated fines for violations of these regulations are all in need of review.

Recommendations

1. The BOH should evaluate, update and strengthen its regulations and the Hauler Permit Agreement. Consider:
 - adding a requirement that all compostable material (including discarded food, food-tainted paper and cardboard, and yard waste) be excluded from household trash and that haulers offer curbside collection of organics;
 - requiring that haulers accurately track Amherst's curbside waste tonnage;
 - instituting a single hauler system to provide cost savings to residents (through anticipated reduced hauler fees), reduce unnecessary noise pollution and fossil fuel combustion; *or*:
 - dividing the town into three regions (North, Central, and South Amherst) and allowing local haulers to bid for curbside collection in one or more regions;
 - improving the existing unit-based user fee system with a pay-per-bag PAYT system in which only specially designated bags (purchased locally) would be accepted for curbside collection by haulers, providing a financial incentive for residents to maximize diversion of recyclables; and
 - providing ongoing education about recycling and/or trash reduction to all residential and commercial customers in Amherst.
2. Determine sustainable and effective enforcement methods for all BOH waste regulations.
3. Review waste, recycling, and reuse-related Town bylaws and update as appropriate.

II. Single-Family Residential Recycling and Waste Management

Current Situation

Amherst Trucking, Duseau Trucking, and Alternative Recycling Systems are currently licensed by the BOH to offer curbside residential pickup in Amherst. All of these companies are locally owned and operated. Amherst Trucking and Duseau Trucking deliver refuse to the Valley Regional Recycling & Transfer Facility in Northampton, from where it is taken to landfills in Hudson, MA, Southbridge, MA, and Seneca Falls, NY for disposal. Alternative Recycling Systems hauls their refuse to the K&W Materials and Recycling transfer station in West Springfield; K&W then delivers this refuse to various incinerators in Maine and elsewhere in New England, as well as to the Southbridge and Seneca Falls landfills. Haulers offer unit-based pricing; fees are based on volume, measured either by the size or the number of barrels utilized for weekly pickup.

Participants in the curbside program place color-coded bins (blue for paper and red for containers) curbside for weekly pickup of household recyclables. The cost of curbside recycling collection is bundled in the hauler's residential waste collection fee per BOH Regulations. Currently, Alternative Recycling Systems is the only hauler offering curbside collection of discarded food and other household compostable organics (such as paper towels and soiled cardboard). Residents who contract with Alternative Recycling for refuse

and recycling collection currently pay \$11 per month for every-other-week pickup of organics in a 65-gallon receptacle, while non-customers pay \$20 per month for this service.

Amherst residents have the option of purchasing a permit (sticker) that entitles them to dispose of their refuse at the Transfer Station (TS) for one year, utilizing prepaid plastic trash bags. The permit grants access to other TS services as well, including fee-based bulky waste disposal and an array of popular free programs – paper and container recycling, food scrap composting, grass clipping/leaf disposal, and a drop-off shed for books and household items (“Take It or Leave It”). TS permits are available to all town residents, regardless of which household trash disposal option they select.

A Hazardous Household Waste (HHW) collection is conducted annually in September or October. Town residents may bring up to 25 gallons or pounds of common household hazardous waste items for free, safe and professional disposal. Participants may also bring fluorescent light bulbs (charges apply) and motor oil. Very small commercial generators of hazardous waste that operate within Town limits may participate if they pay the Town’s cost for disposal. Residents may also participate in other communities’ HHW collection events; Amherst is a member of the regional DEP-inspired, reciprocal HHW partnership. Recently, New England Disposal Technologies (NEDT) opened a privately owned, year-round HHW collection center in Westfield. Amherst residents who choose to participate in the reciprocal partnership or utilize the regional NEDC option must pay the disposal cost (the Town does not pay or reimburse).

A curbside collection of bagged leaves is scheduled twice each autumn (early November and early December), weather permitting. Residents, businesses, and farms may request delivery of large quantities of the collected leaves. Residents are permitted to help themselves to curbside bagged leaves in the days leading up to the Town’s collection.

Issues

- There is a lack of town-wide, hauler-driven and/or local government-coordinated public education about the environmental impacts of waste and the beneficial effects of waste stream reduction through enhanced recycling and food scrap composting.
- Residents have insufficient incentive to consistently separate containers and recyclable paper products from their refuse.
- Residents have limited options and incentive for separating compostables from their refuse.
- There is limited awareness and no enforcement of the state regulation requiring property owners, managers, and tenants to include no more than 5% contamination of recyclable containers and paper products in their refuse.
- Two of the three haulers do not offer pickup of compostable organics.

Recommendations

1. Launch a comprehensive educational campaign for residents about the economic and environmental benefits of recycling, composting, and the proper disposal of banned items. Inexpensive delivery systems such as inserts in water and sewer bills are available, and promotion of TS services can be achieved at the same time.
2. Require each hauler operating in Amherst to provide curbside pickup of organics (including discarded food, non-recyclable paper products, leaves, grass, and yard trimmings).
3. Determine methods to make composting convenient and easy for all residents. Promotion of backyard composting and additional compost drop-off locations, such as farmer’s markets,

schools, and grocery stores should be explored. Expand public access to composting equipment by offering countertop compost buckets and backyard bins for sale at locations beyond the TS (such as the DPW office and at public events).

4. The BOH and DPW should work together to adopt an effective enforcement method for residential waste regulations. The Massachusetts DEP Sustainable Materials Recovery Grant provides two-year support funding for a community Enforcement Coordinator to issue warnings and fines. This and other options should be explored.

III. Multi-Family Recycling and Waste Management

Current Situation

A Multifamily Residence (MFR) is defined as three or more dwelling units located on the same property site. MFRs range in size from triplexes to large apartment complexes, and may be publicly or privately owned. Virtually any building or structure used to house groups of people can be considered a MFR, including elderly housing facilities, dormitories, sororities, and fraternities. As each college campus operates its own solid waste program, we do not include student housing at our local colleges in this discussion.

Approximately 55% of Amherst housing units were in MFR complexes between 2009 and 2013 (<http://quickfacts.census.gov/qfd/states/25/2501360.html>). Most MFR residents are students, but a significant number of low-income families and some non-student individuals and couples also reside in MFRs.

As described in section IV above, each MFR must contract with a licensed waste hauler for weekly pickup of refuse and recyclables and have a recycling plan describing how, where, and in what containers recyclables and refuse are to be placed.

Issues

- Separation of recyclables is required by BOH regulations. A properly managed recycling program can reduce disposal fees for MFR owners while providing environmental benefits to the entire community. Although half of Amherst's population resides in MFRs, the Town does not currently conduct any outreach or compliance activity with owners, managers, or residents.
- No data are available regarding rates of recycling diversion at Amherst's MFRs. Waste haulers are required to maintain records of their customers and of services provided and to make this information available upon request. However, they are not required to maintain or provide data about the quantity of refuse and recyclable material collected.
- A 1999 U.S. Environmental Protection Agency guidance document on multifamily recycling (EPA530-F-99-010, Multifamily Recycling: A Golden Opportunity for Solid Waste Reduction) reports a 20% recycling diversion rate for the best MFR recycling programs. No information is available about the recycling diversion rate at Amherst MFRs; however, we believe it is unlikely that the Town meets the highest national standards since we are not aware of any efforts to maximize recycling at Amherst MFRs.
- There is no enforcement of penalties as stipulated by BOH regulations for improper dumping of waste at Amherst MFRs. The amount of refuse discarded by MFR residents often exceeds the

contracted quantity for weekly removal during the “move-out” months of May, June, and August. Uncollected waste at MFRs is both an eyesore and a public health issue.

- MFRs do not offer separate disposal areas or pickup of compostable organics.
- MFRs may not provide effective signage for recyclables, resulting in high rates of contamination of containers and paper products in refuse.

Recommendations

1. Review and revise the BOH recycling mandate and waste hauler regulations. Clarify that residents in MFRs are required to recycle, haulers serving these complexes are required to provide collection of recyclable containers and paper, and that haulers must maintain and provide detailed records of material collected from each MFR. This information will enable Town representatives to identify problems, address issues, and measure progress over time.
2. Convene a task force with waste hauler, MFR owner/manager, and Town public health and public works representation to design simple and convenient processes to guarantee effective MFR waste stream reduction efforts and prevention of overflow problems and recycling contamination. Tenant education concerning waste reduction, local mandates, and delineation of waste-related responsibilities in lease agreements should also be addressed.
3. Enforce all waste-related regulations, administering fines and other designated penalties as appropriate.
4. Conduct periodic public education campaigns to educate Amherst residents about the environmental benefits of recycling. MFR property owners and managers should also be advised of the financial advantages (lower disposal costs) of recycling and composting.
5. Provide advice to MFRs on how to improve recycling rates and urge them to involve tenants in the development or updating of an MFR recycling plan prior to submission for review and approval.
6. Require that MFRs divert organics from the solid waste stream.

IV. Business Recycling and Waste Management

Current Situation

Through BOH regulations, the Town requires every commercial property owner, manager, or tenant to contract with a licensed waste hauler for weekly pickup of refuse and recyclables. In addition, every business owner or manager must develop and maintain written refuse storage, disposal, and recycling plans and make them available to the BOH upon request.

The Recycling Coordinator has built awareness of business waste reduction practices through positive relationships with the business community and work with the Amherst Area Chamber of Commerce, the Business Improvement District (BID) and its predecessor, Promoting Downtown Amherst. As a result of these efforts, the Taste of Amherst, a major public event, has adopted composting and stronger recycling practices as a public demonstration of best practices in waste reduction. More significantly, Amherst joined a national movement to ban expanded polystyrene (EPS, commonly referred to as Styrofoam®) in January, 2014, both to reduce the volume of waste generated by food service establishments and to reduce public health risks associated with exposure to the hazardous chemicals in EPS. Food service establishments operating in Amherst may no longer dispense prepared food using EPS serveware.

Aside from these efforts, however, little attention has been devoted to educating Amherst’s business community about waste reduction, and no compliance-related activity has taken place for many years. Many

businesses do not consistently follow the BOH regulations, particularly with regard to mandatory recycling; however, some takeout food establishments have begun accepting responsibility for waste generated on downtown streets by their customers. The BID now pays a contractor to sweep, perform snow removal, water plants, and pick up litter within its borders.

Exacerbating the problem is the location and accessibility of privately managed waste receptacles, a challenging issue for downtown businesses. Waste storage sheds erected in the downtown area in the 1990's through a DEP grant provided convenient trash and recycling storage as well as the opportunity to operate a safe and sanitary composting program. Unfortunately, the sheds were removed when the Boltwood parking garage and the Knights of Columbus building addition were being constructed and have not been replaced.

Issues

- There is no business-focused enforcement of BOH recycling regulations or State waste bans. As a result, banned waste, including but not limited to recyclable paper and containers, hazardous waste and organic yard waste, is not separated properly.
- Most restaurants are not composting discarded food, which can account for up to 50% of their waste stream by weight.
- Amherst business community members have not received waste reduction education or support for many years. They would especially benefit from information on the financial and environmental cost savings involved with discarded food composting.
- Limited space is available for downtown restaurants to store and secure their waste at a convenient distance from their premises.
- Trash dumpsters assigned to residential tenants living in the downtown area can be a significant walking distance from dwellings, resulting in illegal dumping in public waste receptacles. These larger bags of trash can block access to receptacles or fill them prematurely.
- Much of the waste collected in public trash receptacles downtown is generated by the customers of downtown businesses.
- Only a small number of Amherst businesses take advantage of Transfer Station (TS) services.

Recommendations

1. Provide adequate resources for inspections, responses to complaints, and enforcement of hauler regulations, BOH regulations, and sanitary code-related issues, including those concerning waste overflow and illegal dumping.
2. Educate owners and tenants of commercial property about waste reduction (including organics management) and proper trash disposal. Consider posting informative signage on or near problem public receptacles and/or adding raised covers that will deter illegal dumping and reduce accumulation of precipitation.
3. Collaborate with the Chamber of Commerce and the BID to create a workable waste storage plan for downtown trash and recyclables, and to address problems resulting from high-volume waste generated by businesses with heavy takeout traffic and/or outside seating.
4. Promote the use of the TS to Amherst's business community and extend its use to include businesses that are operating in Amherst but are currently unable to purchase commercial TS stickers because they have an out-of-town business address.
5. Take advantage of educational opportunities afforded by high-profile events such as the Taste of Amherst and the annual BID Block Party. Create business recognition programs to promote

- awareness of commendable sustainable practices.
6. Require that restaurants divert organics from their solid waste streams.

V. Public Space Recycling and Waste Management

Current Situation

For Amherst residents and visitors alike, having clearly marked recycling bins in public spaces demonstrates the Town's commitment to best practices in solid waste disposal. Amherst's first efforts toward implementing a public area recycling program began in the downtown in August, 2014. Under this Town-supported pilot program, seven recycling receptacles were placed in strategic downtown locations with instructional signs prominently displayed on and near each bin designating the types of items that can be deposited there. Other than these seven units, Amherst's public recycling receptacles are identical to those used for non-recyclable trash. Many Town parks and much of the downtown area do not have distinctly marked recycling containers; also, there are no recycling bins at public school fields and most bus stops. The DPW offers advice about waste handling requirements and the services it can provide to organizers using the Town Common for large public events, but the DPW does not have the authority to mandate use of best solid waste disposal practices for these activities.

Issues

- There are no recyclable paper and cardboard bins and an inadequate number of recyclable container bins in public spaces. This is contrary to the Town's recycling mandate and the "green community" reputation that residents and town leaders endorse. Valuable recyclable material is being wasted, which sends a confusing and contradictory message to visitors and residents.
- The recycling bins currently utilized in the pilot program are difficult to distinguish from non-recyclable trash bins, and the resulting confusion may increase trash contamination and disposal costs to the Town.
- Groups and individuals holding events on Town of Amherst property other than the Town Common (such as Mill River Recreational area and Kendrick Park) receive no information about Town waste reduction and recycling requirements; users of the Town Common do not consistently receive this information.

Recommendations

1. Place recycling bins next to all existing public space trash receptacles emptied by Town employees at recreational fields, parks, public schools, the downtown area, and bus stops. A visible, well-managed program will maintain and strengthen the Town's "green" image.
2. Select recycling bins that are clearly identifiable so that they cannot be confused with trash receptacles and use them consistently throughout public spaces. Grant money may be available to offset the purchase of these bins.
3. Ensure that all users of Town properties (including park pavilions and the Town Common) for public and private events are made aware of Town regulations concerning waste reduction and recycling and the resources offered by the DPW to enable compliance. Opportunities for recycling of food and other organics should be promoted. Information should be provided on permit and reservation forms; separate handouts could also be created.
4. Weigh and maintain records of the contents of trash and recycling receptacles seven days a week.

This will allow for careful observation of trends and issues so that appropriate action can be taken in a timely manner.

VI. Public School Recycling and Waste Management

Current Situation

The Amherst Central School District (ACDS), which operates the elementary schools, and the Amherst-Pelham Regional School District (ARPS), which operates the middle and high schools, share a superintendent and staff. All Amherst public schools have paper and container recycling programs, and most have active discarded food collection programs (see table below for detail and school abbreviations). During the school year, refuse is collected from eight-yard dumpsters at each site by the DPW for a fee of \$100 per ton, as measured by a scale on the trash truck. The DPW covers its costs of collection and disposal of all trash, recycling, and compost from the tonnage fee. This refuse is taken by the DPW to Valley Recycling in Northampton.

Paper and cardboard is collected in eight-yard dumpsters, and beverage cartons, bottles, and cans are collected in 96-gallon wheeled totes. ARMS and ARHS containers are delivered to the TS by school district employees, while PE's is collected by Amherst Trucking (AT), which operates a weekly (Saturday) recycling collection for their Pelham clients in the school parking lot. As noted above, recycling for Amherst elementary schools is collected by the DPW.

The DPW contracts with Alternative Recycling Services (ARS) for removal of discarded food and other compostables from the three elementary schools, and ARPS contracts with TTT Trucking to collect organics from the high school. Crocker Farm Elementary School conducted on-site composting of fruit and vegetable waste in bins located behind the school from 2007 - 2013.

School	Trash pickup	Container pickup	Paper pickup	Discarded food pickup
Crocker Farm Elementary School 280 West Street	2x weekly DPW	2x weekly DPW	as needed DPW	weekly by ACSD
Fort River Elementary School 70 South East Street	2x weekly DPW	2x weekly DPW	as needed DPW	weekly by ACSD
Wildwood Elementary School 71 Strong Street	2x weekly DPW	2x weekly DPW	as needed DPW	weekly by ACSD
Pelham Elementary School (PE) 45 Amherst Road	Weekly ARS	Custodian recycles	as needed AT	no collection (animal concerns)
Amherst Regional Middle School (ARMS) 170 Chestnut Street	2x weekly ARPS	ARPS takes to TS	as needed ARPS	use of garbage disposal for food scraps
Amherst Regional High School (ARHS) 21 Mattoon Street	2x weekly ARPS	ARPS takes to TS	as needed ARPS	weekly by TTT Trucking
Southeast Street School 1001 South East St.	as needed	as needed	as needed	local pig farmer & on-site compost pile

Public schools collect scrap metal, delivering it to the TS, and handle fluorescent bulb disposal internally. End-of-year cleanout information is provided to the schools, with extra trash and recycling pickups available as needed. Schools are also invited to participate in the annual Hazardous Household Waste Collection event in the fall.

Issues

- Because schools are paying low fees for waste removal, there is limited incentive for them to pursue school waste stream reduction efforts.
- Schools have little ownership over the success of their composting and recycling programs due to a lack of commitment and resources available to leverage learning opportunities.
- The current collection situation is inefficient and unnecessarily expensive, as two different waste haulers collect refuse and recyclables from our schools.
- ARMS is discarding food in garbage disposals, which consumes water unnecessarily and increases handling costs at the wastewater treatment plant.

Recommendations

1. Improve data collection techniques of school waste to monitor and incentivize progress.
2. Streamline compost collection process to maximize efficiency and cost effectiveness by contracting with a single hauler and composting or repurposing discarded food instead of using garbage disposals.
3. Leverage the educational opportunities afforded by Amherst's existing waste reduction programs by identifying links to Massachusetts State educational curriculum requirements and advocating for change within the schools.

VII. Transfer Station Operation

Current Situation

The Town of Amherst operates a Transfer Station and Recycling Center (TS), which serves as a collection point for trash and recyclable items for local businesses, various Town departments, and residents of Amherst, Pelham, and Shutesbury. All items accumulated at the full-service TS are moved to other locations such as the Materials Recycling Facility (MRF) in Springfield, a regional landfill, or a licensed hazardous waste disposal facility. The Amherst Transfer Station and Recycling Center is open year-round on Tuesdays, Thursdays, and Saturdays from 8:00 AM to 2:00 PM.

Use of the TS requires the purchase of an annual Vehicle Sticker, and approximately 2,000 stickers were sold in FY14. Vehicle Sticker fees (currently \$85 for a residential permit and \$110 for a commercial permit) fund TS overhead expenses, including the transport of waste and recyclables, salaries, and many TS services. Some materials also require disposal fees, which cover disposal or recycling costs or support other expenses.

The TS is well managed and offers residents a cost-effective alternative to contracting with a private waste hauler to provide curbside trash and recycling pickup. The TS also provides Town residents and businesses the opportunity to conveniently dispose of materials banned by the Commonwealth from being placed in landfills and sent to incinerators, such as yard waste, appliances, tires, lead acid (automotive) batteries, and

items containing mercury (including older thermostats, thermometers, and compact fluorescent bulbs). TS services are also available to Town departments at a very reasonable cost.

For a relatively small TS operation, the breadth of services provided to permit holders at this one location is remarkable (see <https://www.amherstma.gov/159/Transfer-Station-Services>). TS operations are funded by the Solid Waste Enterprise Fund (SWEF). The major sources of SWEF revenue are annual sticker sales and TS disposal fees collected from a relatively small number of Amherst, Pelham, and Shutesbury residents. Revenue is also generated from services rendered to Town departments.

Issues

- The computer system used to track TS information crashed in April, 2014 and has not yet been replaced; thus it is not possible to know with certainty if the TS is financially self-supporting at this time. The current accounting system does not supply accurate or detailed revenue and expense information, and it is possible that non-TS expenses are being charged to TS accounts.
- Many Amherst residents (as well as those of other participating towns) are not aware of the TS waste disposal option, as was clearly demonstrated in the 2012 Town of Amherst Solid Waste Survey. Some residents who are aware of the option are unable to afford the annual sticker fee or consider it to be too expensive.
- Solid waste program funding is problematic. Annual TS stickers, fees, and revenue from Town departments have been insufficient to support all Town services and expenses supported by the SWEF. Over the last ten years, the shortfall has been subsidized by revenue previously generated by the Town's landfill operation, which closed in 2004. These funds are now depleted.

Recommendations

1. The TS is a critical component of Amherst's waste reduction efforts and should remain operational if at all possible.
2. The TS accounting system needs to be improved. As the TS is the major source of income for the Solid Waste Enterprise Fund, it is important to understand which expenses are actually related to its operation.
3. Develop a business plan for ongoing and sustainable operation of the TS. Ensure that all non-TS income and expenses are separated from the TS budget.
4. TS income must be increased and expenses reduced to ensure its financial solvency (see Section IX, Funding Amherst's Municipal Solid Waste and Recycling Program for details).

VIII. Management of Solid Waste Initiatives and Programs

Current Situation

The position of Recycling Coordinator (RC) was initially created as a full-time position in 1990. It played an important role during Amherst's active landfill era, and was downgraded to 15 hours a week in 2005, a year after the landfill's closure. More recently, it was a 20-hour per week position reporting to the Superintendent of Public Works. The RC position was funded by the Town through June, 2015; it is not included in the Town's fiscal year 2016 budget.

The most recent RC made public education a primary focus. An informative website was established, posters and handouts were created for distribution at the Transfer Station, awareness programs (Annual Trash Free Lunch Day, Jack-O'-Lantern Round Up) were initiated in the schools, strong school recycling and composting programs were advocated, an educational Earth Day newspaper insert was produced annually in partnership with area colleagues, and relationships with downtown businesses were developed through involvement with the Taste of Amherst (Chamber of Commerce), the Sustainability Festival (Eco Hero Hunt), and other town events.

The RC has been responsible for writing and managing grants, interfacing with the Springfield Materials Recycling Facility, keeping current with solid waste and recycling current events and trends, managing the annual hazardous household waste collection event, providing administrative support, acting as Town liaison to the RRMC, administering composter and rain barrel sales programs, and providing research and graphic design assistance to the Transfer Station. In addition, the RC has been available to colleges, local non-profits, and town businesses to provide recycling and waste-related technical assistance. The RC also contributed significant time and expertise to the passage of a Styrofoam ban in 2013 that prohibited Town food providers from using expanded polystyrene to serve prepared food.

Issues

- The part-time benefitted RC position is not included in the FY 2016 Town budget. We believe that quality programs will lack the attentive management required for them to continue or grow, and new initiatives will be difficult or impossible to achieve without dedicated employee support.
- The RRMC has endorsed a path toward Zero Waste. Changes required for continued reduction of waste will need more, not less, support.
- The 2014 Massachusetts Commercial Food Waste Disposal Ban (mandating that all businesses and institutions disposing of one ton or more of organics divert these materials from the solid waste stream), pending future waste bans, as well as closure of regional landfills, continued incinerator moratoriums, and waste reduction through composting and enhanced recycling will continue to be important topics for proactive municipalities. It will be very difficult for Amherst to participate in these initiatives without staff support.
- As discussed throughout this document, compliance with solid waste regulations in Amherst has a long history of lax enforcement. This is a responsibility that will require the devotion of a significant amount of time and expertise.

Recommendations

1. It is very difficult for a part-time employee to promote and implement change; progress is slow and the risks of frustration, oversimplification, and mediocrity are high as time limitations inhibit quality work. We believe that the job will be most effective as a full-time Waste Reduction Manager.
2. We recommend a review and redefinition of the position's responsibilities, to prioritize particular aspects of responsibility, including: enforcement of local and state regulations and waste bans; working to increase rates of recycling and composting in Town; coordinating cost-effective trash and recycling services for Town departments and the schools; and advocating for high standards of solid waste management town-wide.

3. The source of funding for the position should be reconsidered. It is not reasonable to fund a position that serves the entire Town from the proceeds of an enterprise (the TS) that generates income from a select few. Instead, we recommend that the position be funded by the Town.

IX. Funding Amherst's Municipal Solid Waste and Recycling Program

Current situation

Funding of the Town of Amherst's municipal solid waste and recycling program is complex, involving many issues affecting both revenue and expenses. For the purposes of this document, we will focus on issues related to TS operation, the RC position, and the recycling and waste disposal needs of schools, parks, and Town special events.

Most of the funding for current Town-supported solid waste programs is generated by user fees associated with use of the TS. Annual sticker fees, as well as fees associated with certain items brought to the TS account for most of this revenue. Town departments are assessed fees for solid waste services provided to them by the DPW, and these fees are based on tonnage collected.

Issues

The funding plan currently in use was designed when the Town's landfill was generating significant income from tipping fees and therefore Town departments were able to dispose of material at a very reasonable rate. In 2015, eleven years after the closure of the Town's last landfill, this plan is still in place without the benefit of supporting revenue from tipping fees. In addition, it has been difficult to understand or monitor which costs and revenues are associated with each component of the Town's solid waste program (including TS operation, Town department related services, etc.) because of an inadequate tracking system.

Recommendations

The RRMC analyzed TS operations and concluded that there are a number of feasible opportunities to increase TS income and/or decrease TS expenses that should be explored before considering major funding cuts or service changes.

Options for Increasing TS Revenue

- Increase the number of TS stickers sold. Although the TS offers many attractive services and the pay-per-bag PAYT trash disposal option can result in significant savings for those who participate, its availability and accessibility are not widely known by Town residents. Awareness of these services could be raised through inserts in tax bills and other town-wide mailings, Amherst Bulletin advertisements and articles, Council on Aging mailings, postings at the libraries, and education of Town employees and committee members.
- Offer TS access to residents of neighboring towns. It is our understanding that the DEP may be amenable to this type of change to our permit.

- Consider instituting changes to the current sticker system (such as a one-time day-use option and surcharges to out-of-town residents).
- Sell PAYT bags for TS refuse disposal in convenient locations such as stores, town halls, and public libraries in Amherst and other towns with TS access, and track sales data.
- Collect detailed data on income and expenses related to all non-bagged refuse. Ensure that all fees cover disposal expenses.

Options for Reducing TS Expenses

- Evaluate TS staffing to determine the number of paid positions that are required to accomplish the needs of the TS.
- Evaluate daily and seasonal use of the TS and determine optimal hours of operation and staffing.
- Ensure that all non-TS income and expenses are kept distinct from the TS budget.
- Ensure that charges for non-TS related use of TS staff (such as collection of refuse and recycling from schools) are billed so that all employee-related expenses (including salaries, benefits, and retirement) are reflected.
- Analyze how overtime pay (approximately \$11,000 in FY14) is generated and ensure that it is directly related to TS operation.

Other Considerations:

- Design and implement an efficient computer-based data collection system that is regularly backed up.
- Investigate best practices of municipal TS operation with Valley Recycling and other transfer stations as possible models.
- Consider whether it would be more cost effective to contract out any or all TS functions.
- Consider consolidating contracts for municipal waste collection (waste from Town departments is currently collected by the DPW and several private haulers).
- Consider recommendations generated by the RRMC at its September 18, 2014 meeting (see <https://www.amherstma.gov/ArchiveCenter/ViewFile/Item/6875>).

X. Conclusions and Key Recommendations

It is a challenging and exciting time in the history of solid waste management both locally and globally. Solid waste is emerging as a global problem, and reducing the amount of waste generated by both production and consumption of goods is an increasingly important priority to ensure our planet's continued habitability.

We believe that the issues presented in this document warrant prompt attention and action. A summary of recommendations is offered below, the most important of which is to fund a full-time Waste Reduction Manager in order to ensure that every component of solid waste management in Amherst can be adequately addressed.

Summary of Recommendations

- ✓ Update BOH regulations, the Waste Hauler Agreement and related Town bylaws.
- ✓ Enforce BOH regulations and Town bylaws.
- ✓ Improve efficiency of waste collection system.
- ✓ Plan and implement a waste reduction education campaign targeting and actively involving all sectors of the community, with special emphasis on composting and enhanced recycling.
- ✓ Identify and implement cost-effective methods to increase composting opportunities for residents.
- ✓ Identify and implement strategies for waste reduction at multi-family residences in Amherst.
- ✓ Develop a downtown recycling plan in partnership with the BID and the Amherst Area Chamber of Commerce.
- ✓ Increase public recycling accessibility.
- ✓ Create a billing approach for waste services provided to the school district that covers all costs and provides financial incentives to reduce waste.
- ✓ Improve Transfer Station data collection and accounting system.
- ✓ Identify and implement options for reducing expenses and increasing revenues at the Transfer Station.
- ✓ Fund a full-time Waste Reduction Manager position after clarifying responsibilities and identifying priorities.

The RRMC respectfully requests an opportunity to discuss these recommendations with the Town Manager, DPW Superintendent, Select Board, and Board of Health. We offer our assistance in addressing challenges and opportunities of solid waste management in Amherst in the years to come.