RECOMMENDATIONS FOR SUSTAINABLE MATERIALS MANAGEMENT IN THE TOWN OF GENEVA

ENV351: Sustainable Community Development Capstone Final Report Spring 2016

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FINGER LAKES INSTITUTE

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Chapter 1
Introduction

Class Project

This report is the work of students enrolled in Hobart and William Smith Colleges’ ENV351: Sustainable Community Development Capstone taught by Assistant Professor Robin A. Lewis and Visiting Assistant Professor Tarah H. Rowse in the spring of 2016.

Students enrolled in this interdisciplinary experiential course undertook a wide range of community-based research including direct observation, archival research, and informal interviews in order to complete a sustainable community development (SCD) project with the Town of Geneva. Sustainable community development work involves a unique methodology that shapes how individuals (i.e., planners, community members, policy makers, politicians, and more) intervene into decisions about the built and natural environment. SCD work has a distinct history that emphasizes social equity, environmental conservation, livability, and economic opportunities for current and future generations.

In the spring of 2016, a group of 14 students from a range of backgrounds and majors worked alongside a steering committee of town officials and residents to develop a series of evidence-based recommendations concerning solid waste management in the Town of Geneva. While conducting their review of existing precedents for sustainable materials management, the students focused on identifying appropriate, cost-effective practices that would allow the municipality to increase its diversion rates while also allowing its residents to learn what else they can do to decrease their overall consumption rates.

Our Community Partners

We would especially like to thank our community partners, who provided hours of consultation, information, and feedback. Without their dedication and participation in the project, this work would not be possible.

Charlie Bracko, Water and Sewer Superintendent, Town of Geneva
Ken Camera, Geneva Green Committee Member, City of Geneva
Melissa Hegarty, Geneva Green Committee Member, City of Geneva
Eric Heieck, Resident, Town of Geneva
Carla Jordan, Senior Planner, Ontario County
Adam Maurer, Program Manager, HWS Office of Sustainability
Mark Palmieri, Assistant Supervisor, Town of Geneva
Rob Poole, Resident, Town of Geneva
Mark Venuti, Supervisor, Town of Geneva

We are also grateful to the many residents who attended our final presentation at the Town Hall on May 3, 2016 and provided the students with their perspectives on and feedback concerning current and future solid waste management practices in the Town of Geneva.
About the Sustainable Community Development Program

The Sustainable Community Development (SCD) Program was established in 2011 with support from the Isabel Foundation. In response to both growing student interest and public recognition of the need for communities to address a myriad of social, economic, and ecological challenges, Hobart and William Smith Colleges (HWS) developed the SCD Program to better prepare students for future careers in economic development, community planning, social justice, and stewardship of the natural environment.

The SCD Program is chaired by Assistant Professor of Environmental Studies Robin A. Lewis, and is overseen by the SCD Advisory Committee, comprised of Assistant Professor of Architectural Studies Jeffrey Blankenship, Assistant Professor of Architectural Studies Gabrielle D’Angelo, Professor of Economics and Environmental Studies Tom Drennen, and Finger Lakes Institute Director Lisa Cleckner.

Beyond the academic program, SCD offers student internships, community lectures, and the Finger Lakes Community Development Center (FLCDC). The FLCDC strives to provide Finger Lakes communities with innovative solutions that improve the built environment and quality of life while protecting the natural environment. More specifically, the FLCDC connects Finger Lakes communities seeking sustainable approaches to issues with well-prepared undergraduate students, faculty, and staff at HWS who actively conduct research on the multifaceted aspects of sustainable community development. Some services provided by the FLCDC include:

- Research and collaboration with municipalities, community leaders, agencies, and organizations regarding community sustainability strategies, green business and infrastructure development, sustainable practices in tourism and food systems, regional economic resilience planning, and land use policies.
- Publications, videos, and online resources to build leadership in sustainability in Finger Lakes Communities; and,
- Referrals to appropriate resources and programs for individuals seeking sustainable approaches to community issues and concerns.

Since its creation in 2012, SCD students, faculty, and staff have worked with community partners, including municipalities such as the City of Geneva, Town of Geneva, and Town of Canandaigua, as well as organizations such as the East Lakeview Neighborhood Association, NYS Office of Parks, Recreation, and Historic Preservation, and Ontario ARC, among others. Fifteen students have been awarded summer internships and many of these students have also contributed to other projects at the FLCDC and continued work in SCD through graduate studies in fields such as community planning, sustainable design, and regenerative studies.
Chapter 2
Class Process

Overview of the Class

This course examined the variety of approaches to sustainable materials management undertaken by different municipalities across the world. Through a service-learning project and partnership with the Town of Geneva, students navigated through the process of developing a series of recommendations for improving solid waste management practices in the Town by applying the skills and knowledge they developed in earlier stages of the course and from their own academic disciplines and training.

The nature of this course is unique because it combines the knowledge and skills offered by the students’ previous coursework in the fields of environmental studies, architectural studies, urban studies, economics, anthropology and political science. The importance of different skills and approaches to SCD research and analysis is invaluable in the community development process, where a diversity of perspectives and approaches is vital. The outcomes of this course therefore provide insight into the SCD process and the intricacies of each phase in this approach over the course of the spring 2016 semester. In SCD work, the process is the true outcome and each phase uncovers something new about the community, its residents, and the interactions between the built, natural, human, and social environments.

Course Approach, Timeline, and Outputs

In spring 2016, ENV351 was organized into three distinct phases, with assignments and outputs particular to each phase.

I. Background Research

During the first four weeks of the course, students became more familiar with the Town of Geneva and its defining characteristics, as well as current solid waste management practices in Ontario County, through completing the following course activities:

a) Document analysis
In the first two weeks of the course, the students conducted a thorough review and analysis of relevant documents and policies provided by the municipality, and various county, state, and federal agencies. From reviewing the Town’s comprehensive plan, the students gained insight into the community’s demographics, values, and visions for the future. The students simultaneously learned about municipal solid waste (MSW) and current strategies for managing MSW in the United States and Ontario County by reviewing government reports.

b) Community meetings
In the first week of class students met with Mark Venuti and Mark Palmieri to hear about what they hoped to gain from the Town’s partnership with our class. The class held its first meeting with the steering committee on the evening of January 26, 2016 to learn about the members’ perspectives on the state of solid waste management in both the Town and Ontario County more broadly (Figure 2-1).
c) Observations

Students also visited the transfer station on numerous occasions during the first course phase to conduct observations concerning how well the facility operates (Figure 2-2). Over two days in January, data was collected regarding the number of vehicles, type and quantity of materials brought, and the formal and informal patterns and processes that occur. Data analysis through descriptive statistics was completed. During the 15.5 hours observed, a total of 277 vehicles (Figure 2-3) visited the facility with an average of 18 vehicles visiting the transfer station per hour. That is, during the two day sampling period, a vehicle arrived approximately every 3.4 minutes.

In terms of daily usage of the transfer station, the students observed that slightly more than half of visits to the municipal facility occurred on Saturday. Students also noted that more residents visited the transfer station before or during the lunch hour than they did later in the day on Saturday. By comparison, the number of visits were nearly equal on Wednesday morning and afternoon.

![Figure 2-1. ENV351 students taking notes during our first meeting with the project’s steering committee on the evening of Tuesday, January 26, 2016 (Source: Robin A. Lewis)](image1)

![Figure 2-2. Members of the ENV351 class visiting the transfer station and speaking with Water and Sewer Superintendent Charlie Bracko on Thursday, January 21, 2016 (Source: Robin A. Lewis)](image2)

![Figure 2-3. Vehicle counts for the Town of Geneva Transfer station during the two day study period (Saturday, January 23 and Wednesday, January 27) (Source: ENV351 Class)](image3)
With regard to the types of materials brought to the transfer station by residents in this two day sampling period, approximately 81% of users dropped off recyclables while nearly 60% dropped off landfill materials (Figure 2-4). Meanwhile, yard waste and metal drop-offs were completed by around 4% of users and 1% of users, respectively (Figure 2-4).

d) **Existing conditions reports**
Divided into four teams, students worked to develop existing conditions reports that cataloged and analyzed relevant information about the Town and its current solid waste management practices. The reports generated during this portion of the class aimed to help the students more fully comprehend the context of the course project that they were undertaking, while also allowing them to document what was quickly and comprehensively discernable about the Town of Geneva and its approach to MSW.

**II. Precedent Analysis**
By mid-February, the students turned their attention from background research to actively researching best practices for solid waste management in locations around the world. During this phase of the course, students were assigned to one of three new teams to review existing precedents for one particular type of MSW. The three thematic areas used to guide the teams’ work during this phase of the class were landfill and recycling, organics, and household hazardous waste (HHW) and electronic waste (e-waste).

a) **Case studies**
First, students completed a case study assignment that allowed them to identify and describe an innovative precedent for solid waste management being implemented in another municipality elsewhere in the world. Each team then reviewed the range of best practices compiled and further refined their understanding of these management tools and their applicability to the town context using a strengths, weaknesses, opportunities, and threats (SWOT) framework.

b) **Precedent analysis reports**
With their case studies in hand, the students then moved forward in further identifying existing precedents (or best practices) for solid waste management. Working in their thematic teams, students organized their research findings into a report that categorized the best practices into three distinct strategy areas for solid waste management: education and outreach, infrastructure and programs, and policies and regulations.
c) **Midterm presentation**

On March 8, 2016, the students presented the findings of their precedent analysis research to the steering committee. Following the midterm presentation, teams stood by their precedent analysis posters and hosted informal discussions to gauge further insight into which best management practices most interested the steering committee members (Figure 2-5).

### III. Recommendations

Beginning in mid-March, the students shifted their focus to generating context-specific recommendations for sustainable materials management in the Town of Geneva. In this phase of the course, the students paid particular attention to the costs and benefits of any potential recommendations they may offer, as well as the specific timeframes in which these recommendations could be implemented.

a) **Recommendations reports**

Drawing on what they learned about solid waste management in the previous phases of the course, the students systematically evaluated which of the best practices they previously identified might be most effective in improving diversion rates in the Town of Geneva. Once they whittled down their initial ideas for the Town using a SWOT framework, each team was responsible for synthesizing the most pertinent information about each best practice and then providing insight into how the Town could tailor each practice to meet its needs.

b) **Final presentation and public forum**

Five days before the public forum, the class split into eight teams to deliver flyers door-to-door to town residents (Figure 2-6). On the evening of May 3, 2016, the class hosted a public forum for residents to learn more about its recommendations for enhancing solid waste management in the Town of Geneva (Figure 2-7). In the first part of their presentation, the students presented strategies for improving diversion rates through education and outreach, infrastructure and programs, and policies and regulations. In the second half of the forum, the students returned to their thematic teams to present their posters (Appendix A) and field questions from the audience.
Chapter 3
Landfill and Recycling

Introduction
According the Environmental Protection Agency (EPA), Americans produced 254 million tons of waste in 2013 (EPA, 2015). Yet, only 34.3 percent of this waste was recycled and therefore diverted from the waste stream (EPA, 2015). By comparison, however, Ontario County residents only diverted 11.5 percent of their waste in 2011 (Barton & Loguidice, 2014). The Town of Geneva and other municipalities in Ontario County have an obligation to increase diversion rates and reduce consumption in their communities. This chapter outlines best practices and recommendations for landfill and recycling practices in the Town of Geneva. Adopting improved waste diversion practices will allow the Town of Geneva to transform itself into a leader in sustainable materials management in the Finger Lakes and New York.

Best Practices and Detailed Recommendations

Education and Outreach

Experiential Learning through Field Trips
According to the Environmental Education Council of Ohio, environmental education is a process that involves life-long learning (EECO, 2000). However, environmental education is especially important for children because as Williams (2011) states, “It is in these early, formative years that children develop their attitudes towards and beliefs about the environment” (p. 2). While the exact age students should begin environmental education is still debated, studies suggest that basic environmental and ecological concepts are developed among students entering middle school (Evans et al., 2007). Furthermore, studies have determined that the type of teaching method used directly impacts how much children learn from the lesson. For example, according to Smith et al. (1997), “Significant differences were found for program types with more pro-recycling attitudes and behavioral changes, occurring as a result of the landfill visit compared to the classroom discussion” (p. 3). Research shows that environmental education programs and lessons are most effective for older middle school students when using active hands-on learning experiences to physically connect the larger lesson of sustainability to the child’s life for the maximum impact and change.

RECOMMENDATIONS IN BRIEF

- Add entrance sign and clearly label disposal stations at the Town Transfer Station
- Implement a swap shop pilot program in the old Town Hall building
- Add a landfill field trip to the fifth grade curriculum
- Encourage school-wide recycling through the addition of recycling bins and educational programming
- Update the Town’s website to include more information on solid waste management
- Launch a “Community Recycled Art Festival”
- Permit private haulers to increase municipal and citizen oversight
- Implement pay-as-you-throw programs to create an incentive for residents to recycle
- Implement a plastic bag tax
**Recommendation:** The Geneva Comprehensive Plan states, “With an appropriate level of planning, and action by the Town in collaboration with the City of Geneva and other public and private partners, the community can continue to evolve and prosper” (Frantz et al., 2015, p.8). Therefore, we recommend that the Town of Geneva collaborate with the City of Geneva and the Geneva School District to help implement an annual field trip to the Ontario County Landfill for all fifth graders. Studies indicate that children ages 11-13 who are taught sustainable waste disposal practices develop improved recycling rates and have the ability to positively impact how their households and families dispose of their waste (Grodzinska-Jurczak, Tarabula, & Read, 2003). We recommend that all fifth graders in the Geneva School District visit the Ontario County Landfill as the culminating field trip of their primary school education. The implementation of such a field trip has minimal economic costs. There are approximately 250 fifth grade students in the Geneva School District, which would require five school buses for transportation (pers. comm., April 16, 2016). The Ontario County Landfill is located roughly six miles from both the North Street and West Street Elementary Schools and houses Casella’s innovative zero-sort recycling system. Thus the Ontario County Landfill is the favorable location for such a field trip. A three hour field trip taking 250 students, on five school buses, for a total of 12 miles round trip would cost approximately $75/bus, resulting in the field trip having a total cost of 375 dollars (pers. comm., April 16, 2016). Once the funds are secured, the Geneva School District would need to dedicate half a school day for the field trip. The field trip has potential for easy integration into the curriculum, making this a viable and promising recommendation.

**School-Wide Recycling Programs**

According to the Virginia Recycling Association (2016), the most effective school-based recycling programs are ones that are “supported by the administration and/or district” (p.6). Furthermore, this support sets the foundation for an organized system with open, active, and ongoing communication between all participating parties (Bullman, 2007). This ongoing communication ensures that when problems arise, they can be immediately resolved, which prevents further deterioration of the program. Another key component of successful school-based recycling programs is funding. Proper funding ensures “recycling bins can be replenished, teacher resources and other program needs can be provided” (Bullman, 2007, p. 3). This funding often comes directly from the school district; however, there are grant opportunities to help reduce the cost to the district. One final key component of successful school recycling programs is having both teachers and students actively participate in the continued collection of recyclables (Bullman, 2007).

**Recommendation:** While a school based recycling program already exists within the Geneva School District, it has shown limited success (pers. comm., April 11, 2016). After speaking with an administrator, a member of the Facilities Department, and a high school teacher it became clear that there is a disconnect between policy and actual practice, regarding the school-based recycling program (pers. comm., April 7, 2016). According to Aaron Smith, Director of Facilities at the Geneva School District, there should be recycling bins in every classroom and office in all four schools (pers. comm., April 11, 2016). However, according to one local high school teacher, not all classrooms or offices have a recycling bin (pers. comm., April 7, 2016). The first step becomes acknowledging this problem and using active and open communication between all parties. Such communication should entail meetings between the administration, teachers, and janitorial staff. The next step is to get recycling bins where they are supposed to be throughout the schools. To reach this goal, the necessary funds must be acquired, which if the school district itself lacks can be done through securing grants. Finally, when the proper infrastructure is in place, all students and teachers must take an active role in recycling. High levels of involvement can be achieved through lessons and programs, such as classroom competitions.

**Municipal Solid Waste (MSW) and Recycling Website**

In order to interact with the breadth of the community, environmental education (EE) must not be limited to the confines of the classroom. The Ohio Reuse Education Project found that including reuse information and relevant services on websites was critical in improving the broader community’s environmental literacy (EECO, 2000). According to the Environmental Education Council of Ohio, program development and
implementation of EE programs and learning activities can take many different forms. One such form is the creation of an information rich and informative website (EECO, 2000). During the precedent analysis phase, we examined the municipal solid waste (MSW) websites hosted by Tompkins County, New York, and the City of Portland, Oregon. Both of these websites contained in-depth details on services and resources. Including such information on local websites has the potential to increase the resident’s knowledge for MSW resources, enhance overall environmental literacy, and increase diversion rates.

**Recommendation:** Ensuring that residents have access to information is fundamental to environmental education (EECO, 2000). Based on steering committee conversations, the Town of Geneva is aware that their website lacks information and educational services for residents regarding options for trash and recycling (pers. comm., January 26, 2016). We recommend that the Town of Geneva update and add more content to the municipal website under the trash and recycling tab. Providing details on services and resources would include:

- Curbside hauler information - prices, contact information, recycling programs
- Transfer station directions, permitted materials, hours, prices, and contact information
- Town waste management ordinances or codes
- Recycling pamphlets or other instructional information that contributes to EE
- Persuasive video demonstrations
- Important dates or pickup schedules
- Community events and tours

Updating website content should not stop at just landfill and recycling information however. Including relevant and important information on organics, household hazardous waste and electronic waste is also invaluable when seeking to increase diversion rates and decrease reliance on landfills (Barton & Longuidice, 2014). According to Town Supervisor Mark Venuti, the municipality does not currently have an employee in charge of website development or content updates, but they do have a high school senior that comes twice a week for about an hour to work on updates (pers. comm., March 31, 2016). In bringing this recommendation to fruition, we recommend working with an unpaid intern from Hobart and William Smith Colleges to make the necessary changes.

Figure 3-1. An example of produced art from a 2013 recycled arts festival in Japan (Neokentin, 2013)

Figure 3-2. Transfer station sign in Jackson County, Iowa (Sanitary Disposal Agency, 2015)
Community Trash Art Festival

According to the Ohio Environmental Education Office’s Environmental Education Best Practices, interactive and hands-on engagement yields higher retention rates than passive educational efforts (EECO, 2000). Engaging the community with hands-on activities provides a fun venue in which to discuss sustainable practices for MSW disposal. There are many options for best practices in the realm of community engagement for EE (Table 3-1). A common creative effort is recycled art festivals, or waste-not art festivals. These events enable communities to come together to learn more about local MSW issues and for local artists to produce recycled art for citizen enjoyment (Figure 3-1).

### Table 3-1. Suggestions for learning objectives and activities to enhance community outreach and education for environmental purposes (Adapted from Ohio Environmental Protection Agency Office of Environmental Education, n.d.; Source: Morgan Lucas)

<table>
<thead>
<tr>
<th>Examples of Program/ Learning Objectives</th>
<th>Activities to Support Objectives</th>
<th>Possible Evaluation Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>For adult/general public learners</td>
<td>• Hold community-wide festival on a local environmental issue</td>
<td>• Survey the general public before and after specific events</td>
</tr>
<tr>
<td>• Increase community awareness of a local environmental problem or issue</td>
<td>• Develop interactive display and promotional materials on local issues for use at fair, mall shows, and community events</td>
<td>• Hold focus groups to determine changes in understanding, attitude, and behavior</td>
</tr>
<tr>
<td>• Increase potential for environmental improvement through community involvement</td>
<td>• Coordinate community action projects such as stream clean-ups, tree planting, or litter prevention initiatives</td>
<td>• Describe new environmental protection plans or projects that have been developed</td>
</tr>
<tr>
<td>• Increase implementation of best management practices to improve environmental quality</td>
<td>• Establish community groups to work on environmental protection</td>
<td>• Interview community leaders to assess contacts they have had from their constituency on environmental issues</td>
</tr>
<tr>
<td></td>
<td>• Hold seminars for targeted groups (i.e. realtors, developers, construction companies, landowners, business and industry)</td>
<td>• Interview or survey program participants before and after training events to assess changes in knowledge, attitudes, and behavior</td>
</tr>
<tr>
<td></td>
<td>• Provide tours of farms, developments, and businesses that have successfully implemented best management practices</td>
<td>• Track the extent of best management practices implementation over several years</td>
</tr>
</tbody>
</table>

**Recommendation:** The Town of Geneva’s Comprehensive Plan seeks to emphasize community engagement when looking towards future town progress and improvement, stating that “it is critical that the citizens comprising the community influence this evolutionary process to ensure that their community evolves in the direction that they desire” (Frantz et al., 2015, p.5). From a county-wide perspective, implementation Task #10 of the **Ontario County Solid Waste Management Plan** seeks to highlight that “public outreach and education regarding waste diversion programs and responsible disposal of special wastes has been identified as a key component of the solid waste management program” (Barton & Loguidice, 2014, p.73). Creating a recycled art or trash art festival would be one way to address community engagement and EE. We recommend a collaborative effort on behalf of the Town and City of Geneva. The festival would display various works of art created with...
materials that were going to be disposed of. Anyone would be able to display their artwork, from local artisans to school children. In addition, we propose that the event include environmental education booths and booths from local businesses that wish to capitalize on marketing or sale of their foods, beverages, or goods. In addition, local musicians could also perform or be involved in the festival. Events such as this require extensive planning from those committed. In order to have a successful event, a Trash Art Festival Committee should be established.

**Infrastructure and Programs**

**Transfer Station Signage**

Transfer stations are designed to collect a municipality’s waste in a centralized location before taking the waste to a final disposal location. While transfer stations can be effective at collecting residents’ trash, they are most effective when the site has signs that clearly mandate the practices in place and information on proper disposal. A research group entitled Blue Environment specifies the need for entrance signs, as well as for individual disposal signs on each station for waste drop off (Wardle, 2014). The individual disposal signs should include, at a minimum, labels specifying materials collected. To be even more successful, signs could include detailed descriptions of materials and images demonstrating these objects. Further, the U.S. Environmental Protection Agency says that adding signs to a transfer station can greatly increase the levels of proper disposal that occur (EPA, 2002). Two transfer stations that have excellent examples of entrance signage are in the towns of Jackson, Iowa and Milton, New Hampshire (Figure 3-2; see also Iowa Sanitary Disposal Agency, 2015; Town of Milton New Hampshire, 2015). Both of these example signs name the location and specify hours of operation, website, and contact information. Other examples of signage exist at the Town of Canandaigua, where recycle and trash disposal sites are specifically designated by large, easy to read signs (Figure 3-3).

**Recommendation:** In order to increase the knowledge of the transfer station’s users, the Town of Geneva Transfer Station should improve their signage and be sure to include the types of waste accepted at each disposal station (Figure 3-4). Since there are currently two landfill compactors, two recycling compactors, a metal bin, a station for yard

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**CASE STUDY: RECYCLED ART FESTIVAL**

Clark County, Washington takes special interest in endorsing the Recycled Arts Festival (RAF) that it started over ten years ago. The Clark County Department of Environmental Services started the program as a way to effectively engage with the community on issues of MSW diversion and general waste reduction. The festival occurs annually and was voted by the community as “the best downtown event” in 2013 and 2014 (Clark County DES, 2011, n.p.). There are various booths selling and displaying recycled art and products created with recycled materials, ranging from furniture to clothing. In addition, there are educational booths that promote recycling, composting, and proper e-waste and household hazardous waste disposal (Clark County DES, 2011). There is also a sculpture garden, providing the community the “opportunity to slow down and really appreciate the craftsmanship of our artists and their creative reuse of materials” (Clark County DES, 2011, n.p.). The Department of Environmental Services described the RAF as a way to “educate and get the community excited about waste reduction, reuse and recycling in Clark County” (Clark County DES, 2011, para. 1).

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**Figure 3-3. Sign labeling trash at the Canandaigua Transfer Station**

(Source: Bridget Callea)
waste, and a tin can bin, there should be a sign for each of these places. The more specific the better, as Town residents, such as Professor Mary Kelly at Hobart and William Smith Colleges indicated confusion regarding disposal practices (pers. comm., April 14, 2016). Furthermore, installing a large entrance sign that specifies the location of the Transfer Station and includes hours of operation and contact information could help to create a more informed public (Figure 3-5).

**Pilot Swap Shop Implementation**
A “swap shop” is a community space that is transformed into a place where community members can exchange lightly used household goods (Figure 3-6). By creating a space to share goods, residents feel inclined to exchange such items rather than throwing away and replacing their items with new ones (Sustainable Woodstock, 2015). A temporary or permanent swap shop structure can capitalize on residents’ spring cleaning.

![Figure 3-4. Informational signs on how to recycle (New Mexico Recycling Coalition, 2009)](image)

![Figure 3-5. Transfer station entrance sign (Source: Bridget Callea)](image)
practices and provide them with a place to donate their usable but unwanted items (Barton & Loguidice, 2014). Swap shops do not have to be staffed in order to be successful, but staffing these community exchanges with resident volunteers can add value to the endeavor (Sustainable Woodstock, 2015). As communities work with local agencies to increase waste diversion and encourage sustainable consumption practices, a swap shop offers an innovative opportunity for a materials exchange that keeps items within their original communities and out of landfills (Bell, 1993).

**Recommendation:** We recommend that the Town of Geneva establish a six-month swap shop pilot program that would allow its residents to freely exchange unwanted items. By operating the swap shop on a six-month trial basis from May to October, the Town will be able to better ascertain residents’ interest in the municipality providing such a service and make a more informed decision as to whether to operate a swap shop on a continual basis. Given that the Town of Geneva’s Comprehensive Plan encourages use of existing public infrastructure and services (Frantz et al., 2015), we recommend that the old Town Hall be converted into a community swap shop. The space currently serves as an informal storage facility that could be renovated to host the swap shop at fairly minimal costs. In terms of materials that can be brought to the swap shop, we recommend that the Town develop a list of accepted materials prior to launching the swap shop pilot program. Our research indicates that swap shops typically accept clothing, small pieces of furniture, gardening tools, office supplies, children’s toys, and books (Lane et al., 2009). In addition, we recommend that the Town distribute informational brochures on the swap shop, its ground rules, and hours of operation to all residents prior to the swap shop opening. Town officials should also post the list of accepted items at the swap shop to help alleviate any confusion residents may have when dropping off or picking up items (Sustainable Wallingford, 2006).

**Policies and Regulations**

**Permits for Private Haulers**

Permitting private haulers has become a common practice in many counties, cities, and states. While it can be more challenging to implement such contracts in smaller municipalities, permitting still occurs in these settings. Normally, permitting occurs because there is some kind of information that the licensor wishes to attain from the licensee (pers. comm., April 11, 2016). The mandates that exist in the permit vary broadly, but can include monitoring materials collected, allowing oversight by outside sources (such as police officers or residents), creating fixed fees for services, and implementing specific programs such as pay-as-you-throw or bans.
**Recommendation:** Three private haulers (Casella, Lyons Road, and Feher Rubbish Removal) operate in the Town of Geneva, and concerns have been expressed by residents about the combination of recyclable and trash materials by private haulers (pers. comm., January 26, 2016). Because permitting of private haulers can take many forms, our research suggests that the most beneficial permitting scheme for the Town of Geneva would include the right for citizens to report private haulers for the illegal combination of materials. In this case, the permit would clearly state that all private haulers operating in the Town of Geneva must adhere to keeping recyclables and waste separate. There may be penalties for noncompliance, generally in the form of fines, attached to these standards. Implementing permitting schemes of private haulers has many phases. We recommend that the first step utilize a contractual agreement between the Town and each of the private haulers that service residences in the Town. A contractual agreement would allow residents to report private haulers when recycling and trash are commingled during curbside pick-up. Additional legislation, developed with citizen input and through community support, could be added to the Town Code, which already includes a section on Solid Waste (Chapter 132).

Currently, the Town of Geneva does not employ a Recycling Coordinator. However, as noted in the further information section, the DEC is required to provide state assistance for Recycling Coordinator salaries (NYSDEC, n.d.). Recycling Coordinators are held responsible for the local recycling program; public education and promotion; implementing recycling outreach strategies, establishing, monitoring, tracking and reporting; fostering intergovernmental recycling coordination; developing enforcement strategies; and management of relevant finances (NYSDEC, n.d.). If the Town does not wish to pursue the employment of a Recycling Coordinator, we suggest that the Town Clerk or a current Town Hall employee take on coordinating aspects of the contractual agreement. Such aspects include keeping track of filed complaints and delegating private hauler fines. Based on our research, fines range from $50 to $1,000 and are dependent on the level and quantity of the noncompliance. It would be up to the Town Board’s discretion to determine appropriate fines and sanctions.

Thus far, our research has demonstrated that some of the private haulers are already implementing permitting schemes for other municipalities in the area. Our research indicates that this is the case for Casella Resource Solutions (pers. comm., April 8, 2016; pers. comm., April 16, 2016). Therefore, some of the necessary infrastructure on the private hauler side is already established. A permitting scheme that holds private haulers responsible and gives community residents a voice would set a precedent. Such a precedent enables future opportunities for laws and regulations on MSW disposal and handling. In addition, our previous research has reflected an overall lack of information regarding waste generation and disposal within the Town of Geneva. Permitting opens a door that could lead to an increase in overall information and statistics of the Town of Geneva’s waste generation and disposal.

**Pay-As-You-Throw Programs**
Pay-as-you-throw (PAYT) programs, also called unit pricing or variable-rate pricing, have been successfully enacted in more than 7,000 communities throughout the United States (Skumatz, 2008). Rather than paying a fixed bill for weekly collection by private haulers, communities with PAYT programs treat waste disposal similar to an electric bill, charging residents based on household consumption (Skumatz, 2008). PAYT is a major contributor to lower diversion rates because citizens are incentivized to recycle and compost more in order to reduce the amount of waste they generate. As an example, in Mount Vernon, Iowa, households pay $1.75 for landfill tags, which are placed on containers no more than 30 gallons or 40 pounds (EPA, 2016b). For bulky items, multiple tags must be placed on the container. Homeowners also receive a $7 solid waste bill monthly (EPA, 2016b). Five years after implementing the program, the city estimated that the amount of solid waste the typical resident sent to the landfill decreased by about 40 percent, dropping from about 45 pounds per week to 27 pounds (EPA, 2016b). Similarly, in Westerly, Rhode Island, the community began a PAYT program where residents were required to purchase special orange bags that came in two sizes: 15 gallon bags for $0.50 and 33 gallon bags for $1.00 (RIDEM, n.d.). Town officials reported that recycling increased 13 percent and solid waste dropped by 11 percent in the first six months of the program (RIDEM, n.d.).
produce less solid waste (Skumatz, 2008). The EPA states that the average community that implements a PAYT program reports a 15 to 28% reduction in the amount of waste production and recycling rates increase dramatically (EPA, 2016a). One of the most useful aspects of PAYT programs is the flexibility of payment plans, billing options, and pricing systems that can be tailored to meet the unique needs of the Town. The EPA outlines pricing systems such as variable rate pricing, proportional pricing, and multi-tiered pricing, which all have different advantages and disadvantages depending on the size and goals of a community (EPA, 2016c). Municipalities can also choose between variable cans, prepaid bags, or prepaid tags and stickers to create a uniform system of waste containment from house to house. Another positive aspect of PAYT programs is that they inherently promote environmental sustainability and equity. Equity is an important factor because residents only pay for the waste they produce, rather than paying a flat rate, regardless of the amount of waste they put in the landfill (Skumatz, 2008). Despite these benefits, PAYT programs face challenges in the form of illegal dumping and economic problems for low income families (Skumatz, 2008). According to studies on PAYT communities, illegal dumping must be monitored by the municipality and only one-quarter of the communities reported illegal dumping as a short term problem (Skumatz, 2008). For low income families, subsidies can be enacted to relieve some of the burden, especially if the family is large in size (Skumatz, 2008).

**Recommendation:** We recommend that the Town of Geneva consider implementing a PAYT program, primarily because residents would have the economic incentive to decrease consumption and divert more materials from the landfill. Implementing a PAYT program in the Town of Geneva would require planning and community involvement in order to ensure success. Multiple meetings between town leaders and residents should be held to discuss the benefits of a PAYT program and assess the public’s reaction to the proposal. Once the specifics of the PAYT program have been decided on by the Town, a pilot program would have to be enacted to judge the community’s response to the change. Private haulers (i.e., Casella, Feher, and Lyons Road) would need to be brought on board with the Town’s plan and an effective public outreach campaign would have to be enacted to demonstrate the benefits and details of PAYT. After a pilot program is completed, the Town can decide whether or not a PAYT program is a successful fit for residents.

**Plastic Bag Tax**

Economic incentives and disincentives play a critical role in shaping how individuals choose to act. Plastic bag taxes or bans are both means to limit consumption of plastic bags at retail locations. However, sometimes plastic bag bans are met with extreme resistance from consumers and storeowners alike (Surfrider Foundation, 2016). Putting a tax on plastic bags has been done successfully at national, state, county, and city levels. When customers are economically disincentivized to use plastic bags, they change their behavior accordingly (Surfrider Foundation, 2016). Weeks after Ireland put a tax on plastic bags, plastic bag usage dropped by 94% (Pilloton, 2008). The exact price of the tax placed on plastic bags varies, but it commonly falls between ten and twenty-five cents (Surfrider Foundation, 2016). Finally, effective plastic bag taxes must also include effective advertising campaigns and have public support.

**Recommendation:** As the majority of the stores and businesses that use plastic bags are located in the City, it is absolutely imperative that both the City and Town create a tax on plastic bags. Therefore, the first step taken must be determining if the City is interested in this potential partnership. If there is mutual agreement, each municipality must pass legislation, likely using ordinances, which puts a tax on plastic bags. While tax prices vary greatly, a 10 cent per bag tax is a good starting point (Surfrider Foundation, 2016). If the Town and City start with a 10 cent tax, and residents and business alike respond positively, the tax could be raised to twenty or twenty-five cents per bag. One possible method that the City and Town could use to get the business within the municipalities to support the tax is economic incentives. A portion of the tax could be kept by the businesses or go to the municipality, with another option being a portion going to charity. The Town and City of Geneva should create an advertising campaign that educates and promotes the plastic bag tax to the public.
### Implementation Table

<table>
<thead>
<tr>
<th>Category</th>
<th>Recommendation</th>
<th>Project Type</th>
<th>Actions</th>
<th>Cost/Funding</th>
<th>Involved Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short Term</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Infrastructure & Programs   | Signage at the Transfer Station        | Upgrade      | • Create and mount durable signs indicating the types of materials accepted in the different bins at the transfer station  
• Create and mount entrance sign on White Springs Rd | $320 total estimate  
• $140 for bins signs ($20 per sign)  
• $180 for entrance sign (signs.com, 2016) | Town             |
| Education & Outreach         | Fifth Grade Field Trip to the Landfill | New          | • Have the Town encourage and promote the field trip to the City and GSD  
• Help the City and GSD wherever possible; ideas, grant writing, getting public support | $300-$400  
• 250 students, 5 buses, 10 miles round trip, 3 hours ($75/ bus) | Town & City      |
| Education & Outreach         | School-Wide Recycling                  | Upgrade      | • Engage all stakeholders in a recycling policy and practice discussion  
• Determine the number and size of recycling bins that are needed and seek funding  
• Engage students and teachers in recycling through lessons and programs | Cost Varies:  
• Free if grants are used  
• Small recycling bins $5.50 each  
• Large recycling bins $15-$20 | Town & City      |
| Education & Outreach         | Website                                | Upgrade      | • Compile all relevant information regarding trash and recycling in the Town  
• Employ student intern to incorporate information onto pre-existing trash and recycling page and ensure accessibility, interactivity, and readability of web page  
• Maintain website, update as needed | Unpaid intern | Town             |
| Infrastructure & Programs   | Swap Shop Pilot Program                | New          | • Hire a contractor to estimate renovation of old Town Hall building  
• Designate hours of operation and develop list of accepted materials  
• Advertise for local volunteers for staffing and promote the opening and use | $2,000 total estimate  
• $100 per/hr contractor  
• $1,500 for materials (NCDENR, 2003).  
• $400 public advertising | Town             |
<table>
<thead>
<tr>
<th>Category</th>
<th>Recommendation</th>
<th>Project Type</th>
<th>Actions</th>
<th>Cost/Funding</th>
<th>Involved Parties</th>
</tr>
</thead>
</table>
| Policies & Regulations  | Permitting     | New          | • Propose permitting at a Town meeting and schedule a public hearing for the law  
• Engage with private haulers  
• Delegate either a Recycling Coordinator or a current employee at Town Hall to oversee the contractual agreements | • Seek grant for a Recycling Coordinator  
• Develop plan for any fines                                                                                                   | Town & eventually City & County                                                                       |
| Education & Outreach    | Community Art Events | New          | • Survey town and city residents on interest and reach out to possible planning committee members (e.g. City Green Cmte)  
• Seek interest from local artists, schools and other institutions within the town and city  
• Approach local business owners and private haulers who may be interested in running booths for marketing, sales, or education  
• Set dates and begin planning logistics                                                                                           |                                                                                                  | Town & City                                                                                           |
| Policies & Regulations  | PAYT            | New          | • Determine which type of pricing/billing system would work best for the Town  
• Gather community support and inform citizens about the details  
• Work with private haulers to ensure support  
• Hold Town Board meetings and vote  
• Enforce and regulate the rules of the program (monitoring illegal dumping, private hauler responsibilities, etc.). |                                                                                                                                                      | Town can set price of waste disposal in various ways (per bag, by weight, container size, etc.)       | Town & eventually City                                                                 |
| Policies & Regulations  | Plastic Bag Tax | New          | • Gain support from private businesses  
• Determine distribution/use of the revenue  
• Have Town and City pass legislation implementing a tax on plastic bags  
• Create an advertising campaign that educates and promotes the new tax                                                                 | Advertising campaign costs can vary depending on the scope of the campaign                                      | Town & City                                                                                           |
Further Information

Swap Shop Implementation
- NCDENR (2003) provides a list of practices, budget plans, and case studies of swap shops in North Carolina that act as an example for how to effectively budget and maintain a swap shop building. This document provides examples for public advertising and contact information in order to educate residents.
- Bell (1993) provides a step-by-step on the benefits and possible challenges on how to develop a community swap shop and how to maintain a constant flow of materials through community engagement. This also includes an overview of a swap shop initiation plan in Oak Ridge, Tennessee.

Field Trips to Landfills
Jerry Leone is a Casella employee who can be a potential contact for field trip planning.
Contact Information: Jerry Leone, Casella Regional Engineer. Phone Number: (585) 526-4420

School-wide Recycling
Bullman (2007) and Virginia Recycling Association (2016) are examples of educational recycling programs. They include possible methods and ideas that could be used as reference points as the Town of Geneva tries to encourage the City and GSD to increase their school based recycling program.

Municipal Websites
Although there is no perfect municipal trash and recycling website, Tompkins County (www.recylctompkins.org) and the City of Portland Oregon (www.portlandoregon.gov) offer great case study examples. Both are rich with pertinent information including recycling dates, instructional videos or images, and lists of services within the town. In addition, both websites contain outside information such as green businesses, information for multi-home curbside pickup, and community environmental events.

MSW Art Festivals
There are many different recycled art festivals internationally. Clark County Department of Environmental Services (2011) and Recycle Santa Fe (n.d.) have had successful events in the past. The YouTube clip offers a great example of how an arts festival works and how it is beneficial to the community.

Private Hauler Permitting
Tompkins County has an extensive permitting scheme that includes fines for various levels of noncompliance, as well as a great infrastructure for the program. Putnam County has a great example of a permitting application that lays out all aspects of the program.
Pay as You Throw Programs
The EPA provides multiple resources for all aspects of PAYT programs and how to effectively implement them in communities of all sizes. This Rhode Island Department of Environmental Management website highlights five communities in Rhode Island that have implemented successful PAYT programs: http://www.dem.ri.gov/programs/bpoladm/stratpp/payt/payt.htm. Each program is uniquely based on the needs of the community and can offer insight into the benefits of a successful program.

Plastic Bag Bans & Taxes
The following provides a compilation of plastic bag tax and ban case studies.

Grants (Education, Infrastructure, Permitting)
- NYSDEC State Assistance Program grants for waste reduction: http://www.dec.ny.gov/about/92815.html
- New York State Pollution Prevention Institution Community Grants Program: https://www.rit.edu/affiliate/nysp2i/community-grants-program.
- Environmental Protection Agency (Solid Waste) Grants: https://www3.epa.gov/region9/waste/solid/funding.html
Works Cited


Works Cited cont’d


Chapter 4
Household Hazardous Waste and Electronic Waste

Introduction
Household hazardous waste (HHW) are those household products that have the potential to adversely affect human health due to their toxic, corrosive, ignitable, and/or reactive characteristics (Managing and Disposing Household Hazardous Waste, 2016; Table 4-1). The United States Environmental Protection Agency (EPA) reports that the average American produces approximately four pounds of HHW per year with a total of 530,000 tons of HHW being generated each year in the U.S. (EPA Pacific Southwest Region, 2016). Residents of New York State produce 100,000 tons of HHW per year (NYSDECa, n.d.) and, in Ontario County alone, residents produce approximately 5,700 tons of HHW each year (Barton & Loguidice, 2014). At present, despite alternative diversion methods being available in many municipalities across the country, HHW is often landfilled or incinerated. Such improper disposal of HHW is less than ideal, given the potential of HHW to “pollute the environment and pose a threat to human health” (Snohomish County, 2016, para. 3; see also Slack, Gronow, & Voulvoulis, 2005). Given its commitment to developing a comprehensive solid waste management plan (Barton & Loguidice, 2014), the Town of Geneva is in a position to become a leader in sustainable materials management within Ontario County and beyond. In this chapter, we present our recommendations for enhancing municipal management of HHW, as well as electronic waste (e-waste), in the Town of Geneva as a means by which to help the municipality achieve its goal of increasing municipal diversion rates over the course of the next few years.

Table 4-1. Common HHW products and their relative contributions to the HHW stream each year (Adapted from EPA, 1997)

<table>
<thead>
<tr>
<th>Product</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household maintenance items (paints, thinners, glues, etc.)</td>
<td>36.6</td>
</tr>
<tr>
<td>Household batteries</td>
<td>18.6</td>
</tr>
<tr>
<td>Personal care products (nail polish and remover, hair spray, etc.)</td>
<td>12.1</td>
</tr>
<tr>
<td>Household cleaners</td>
<td>11.5</td>
</tr>
<tr>
<td>Automotive maintenance products (grease, oil, etc.)</td>
<td>10.5</td>
</tr>
<tr>
<td>Pesticides, fertilizers, and pet supplies</td>
<td>4.1</td>
</tr>
<tr>
<td>Other (pool chemicals, lighter fluid, etc.)</td>
<td>3.4</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>3.2</td>
</tr>
</tbody>
</table>

RECOMMENDATIONS IN BRIEF

- Upgrade the Town’s website with clear, relevant information on HHW and e-waste disposal techniques and alternatives
- Hold a community reuse festival in partnership with the City of Geneva for creative ways to reduce the amount of waste entering landfills
- Institute a community paint exchange at the old town hall
- Pilot an e-waste and HHW collection event in the Town of Geneva
- Support implementing a state wide HHW ban
- Support statewide Extended Producer Responsibility legislation through signing petitions
Best Practices and Detailed Recommendations

Education and Outreach

Website Education
Municipalities across the country use websites as educational tools to disseminate important information about MSW to their residents. With regard to HHW and e-waste in particular, website education is one of the most effective tools for increasing the public’s knowledge of the hazards associated with buying and discarding this form of MSW. While municipal websites range in their content, clarity, and purpose, the most effective websites are those that include a combination of educational tools and diversion options. For example, HHW-focused websites often include search bars that allow visitors to find out where and how they can safely dispose of their items. Additionally, effective websites provide visitors with lists of alternatives for the most common HHW products (Table 4-2) in hopes of influencing consumer choice (CCRRA, 2014). Two of the country’s most effective websites for HHW and e-waste education are hosted by the municipalities of San Francisco and Seattle, where diversion rates are 80% and 57%, respectively (SFEnvironment, 2016; Seattle Public Utilities, 2016).

Table 4-2. Example list of some HHW products, their associated problems, and alternatives from a municipal website (Adapted from Household Hazardous Waste, 2014)

<table>
<thead>
<tr>
<th>Product</th>
<th>Problems</th>
<th>Alternatives</th>
</tr>
</thead>
</table>
| Bug killers                      | Petroleum insecticides are all toxic. Some also cause long-term health problems associated with the nervous & reproductive systems. A few also increase cancer risk. | • Biological controls  
• Plant-derived insecticides  
• Prevention techniques |
| Weed killers & lawn chemicals    | Most herbicides are suspected or proven cancer causers. Phenoxy/2 (an Agent Orange relative) also causes nervous & reproductive system problems. | • Manual pulling of weeds  
• Higher cutting heights when mowing |
| Oil paints, varnishes, & nail polishes | Most solvents in these products are central nervous system depressants. | • Latex (water-based) paints  
• Solvent-free paints |

Recommendation: In 2010, the New York State Beyond Waste report called for “fundamentally chang[ing] the way discarded materials are managed...by progressively reducing the amount of materials that go to disposal” (NYSDEC, 2010, p.5). The Town of Geneva can make strides toward achieving this goal by improving its municipal website to include information concerning the disposal of and alternatives for HHW and e-waste. In order to make this recommendation a reality, we recommend that the Town partner with Hobart and William Smith Colleges (or another regional college or university) to offer a year-long website development internship opportunity for an undergraduate student. The intern should begin by compiling and posting a list of local businesses that offer residents environmentally safe opportunities to dispose of their HHW and e-waste. For instance, battery and cellphone recycling facilities are available at both Lowe’s and Wegmans, while car batteries and motor oil can be dropped off at any automotive service establishment that sells more than 500 gallons of motor oil per year (NYSDECa, n.d.). Likewise, old yet still working televisions and computers, as well as other small electronic items, can be donated to the nearby Salvation Army store. The many regional HHW and e-waste recycling facilities in the Finger Lakes (e.g., RCR&R in Victor)
should also be highlighted, as well as the specific types of items they accept, and their operational hours. Additionally, the intern should ensure that the town’s website include information on local and regional HHW and e-waste collection events to which residents could bring their items. Finally, the intern should work with town officials to devise a list of helpful web resources concerning HHW and e-waste such as factsheets and outreach materials provided by the EPA, lesson plans developed for children, and any relevant consumer product safety guides. Enhancing the town’s website will be an important first step toward encouraging residents to modify their HHW and e-waste disposal habits and could eventually allow for broader changes in HHW and e-waste consumption patterns within the municipality.

Community Reuse Festival

Community reuse festivals are a way for municipalities to educate residents about the impacts of sending e-waste to landfills. Municipalities often partner with local environmental groups to incorporate arts into community reuse festivals as a means to encourage residents to creatively divert e-waste from landfills (Maryland Department of the Environment, 2012). Such community festivals have been successful in municipalities such as Baltimore, Maryland and at various sites throughout the State of Pennsylvania.

Recommendation: Working with the City of Geneva, the Town could host a community festival that brings residents from both municipalities together to learn more about reuse and sustainability in a hands-on manner. This reuse festival should be advertised on both municipalities’ websites, as well as on local community boards such as GenevaNow.com and WEOS Community Calendar. In order to maximize participation in the reuse festival, we propose a single pilot festival be held during a summer month in conjunction with “Geneva Night Out,” as this is already a popular event. Furthermore, we recommend that the municipalities’ partner with local environmentally

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**CASE STUDY: COMMUNITY E-WASTE ART**

Diversion rates in the state of Maryland are estimated at 40 percent (Maryland Department of the Environment, 2012). One of the unique ways by which residents of the state are able to learn about the myriad benefits of reducing MSW rates is through community arts festivals like the one hosted by the City of Baltimore. The annual event encourages residents to learn about the impact of their waste while developing a unique piece of art made from recyclable materials. The Maryland Department of the Environment typically sponsors the event to promote creating a piece of art out of e-waste material (Maryland Department of the Environment, 2012). One award-winning participant made a giraffe out of e-waste materials such as records, compact disks, and other reusable material (Figure 4-1; Maryland Department of the Environment, 2012). Such reuse-focused community events encourage residents to think about the types of HHW and e-waste materials they purchase and the range of options available for ensuring these products do not end up in landfills or incinerators.

**Figure 4-1. Award-winning participant in the Baltimore Community Art Festival with her first place creation (Trash to Treasure, 2012)**
focused groups such as Sustainable Finger Lakes and Nature Conservancy to promote the festival. Additionally, representatives from the Town Sustainability Group, the City Green Committee, HWS Campus Greens and Roots and Shoots could attend the event to promote sustainability. These organizations should establish informational booths to educate residents on how to properly dispose of waste. As an incentive to help promote the festival we recommend that an art competition be held. This competition will involve residents from the Town and City of Geneva to create an art sculpture strictly made of e-waste or other recyclable goods. There should be two completion categories, one for adults and one for children. Officials should judge submitted art to award prizes. The Town and City should encourage local businesses to donate prizes for this competition. Based on the success of the event, the frequency of the festival might need to be increased.

Infrastructure and Programs

Community Paint Exchange
A community paint exchange is an opportunity for residents to reuse and donate paints they no longer need. Municipalities can operate paint exchanges to help divert this form of HHW from entering the MSW stream and ultimately ending up in landfills. Community paint exchanges offer paint to residents at a discounted rate, remix paint to be redistributed to community members and local charities, or donate paint to community art festivals such as the Reuse Center in Boston, Massachusetts, Tillamook, Oregon, and Fulton County, New York, respectively (NYPSC, 2015). Moreover, such paint exchanges typically only accept latex (water-based) paints due to permitting requirements and/or environmental safety regulations for municipalities wishing to store HHW in their facilities (NYSPS & PSI, 2015, p. 4).

Recommendation: Provided that the Town’s paint consumption patterns mirror national trends, the Town of Geneva can expect that a maximum of 262 gallons of paint are purchased by its residents each year (California Integrated Waste Management Board, 2008). Yet, according to the Environmental Advocates of New York, approximately ten percent of paints purchased in New York goes unused (EAONY, 2016, para. 1). Therefore, municipalities like the Town of Geneva have the opportunity to capture value from paints that may not otherwise be used by its residents for the community as a whole. We recommend that the Town of Geneva establish a pilot community paint exchange program that would serve as the first of its kind in the Finger Lakes region and limit participation in the pilot program to town residents alone. In terms of infrastructure for the community paint exchange, we recommend renovating a small portion of the old town hall to serve this purpose and outfitting the space with two metal shelving units (Figure 4-2), as well
as signage clearly indicating which types of paints are accepted and those paints that are strictly prohibited. Residents should be notified (via signage and promotional materials) that the maximum number of paint containers that can be dropped off or departed with should be five or less per visit. In addition, we suggest that the paint exchange be monitored by a town employee or volunteer who ensures that only latex paints are being collected and residents are abiding to the quotas in place. Until further details on demand for this particular service can be ascertained, we suggest initiating the pilot program during the summer with the community paint exchange being open, at minimum, during other HHW and e-waste collection events hosted by the Town of Geneva. If the paint exchange is used regularly during these events, the municipality could expand the operational hours of the pilot program to include paint drop-off and collection when the transfer station is open. At the completion of the pilot community paint exchange program the town should assess whether or not to extend this program in the future with the possibility of collaborating with city residents.

**HHW and E-Waste Collection Days**

Numerous municipalities across the country hold collection days for HHW and e-waste. At such events, residents can drop off HHW products such as oil, paint, pesticides, aerosols, and other toxic materials and e-waste at specific approved locations on registered collection days (Figure 4-3). The most successful HHW and e-waste collection events occur at centralized locations easily accessible to residents, and events are organized in a way that allows for the fluid movement of vehicles through the drop-off site (Figure 4-3). Larger municipalities may hold multiple collection events a year, while collection events may be less frequent in smaller municipalities, especially those in rural areas. For example, HHW and e-waste collection events in Los Angeles, California occur several times a year (County of Los Angeles Department of Public Works, 2014; Indiana University Bloomington Office of Sustainability, 2016) while Ontario County, New York currently offers only one collection event per year (Barton & Loguidice, 2014). Regardless of the frequency of these events, in order to host such collection events, municipalities are typically required to register collection events with a relevant state agency and secure permits for storing HHW and e-waste for extended periods of time. Once the collection events occur, the municipalities hosting the events are responsible for ensuring that the materials collected are safely transported to a permitted regional collection facility.

Recommendation: Due to the limited availability of HHW and e-waste collection events in Ontario County, we recommend that the Town of Geneva consider implementing its own HHW and e-waste event. In order to better ascertain the need for such events by its residents, we suggest that the Town initially offer one collection event per year as part of a HHW and e-waste collection pilot program (Table 4-3). The Town could host this event on its facility on White Springs Road by placing additional dumpsters and drums to collect HHW and e-waste materials near the old town hall and other municipal building located before the transfer station entrance. The event should be staffed by town officials and/or trained volunteers who can help residents carry items and place these materials in the appropriate dumpsters/drums so that opportunities for cross-contamination of HHW and e-waste materials can be minimized.
Due to state laws prohibiting the long-term storage of these materials in non-permitted facilities, the Town would need to relocate the collected materials to a regional processing facility (e.g., Environmental Products and Services of Vermont located in Syracuse that collects both HHW and e-waste) within five days of when they were collected (NYS DECC, n.d.). To do so, the Town could haul the materials to the facility itself or contract with a private hauler to provide this service to the Town. In planning for the collection event, the Town should keep in mind that New York State laws require municipalities to inform the Department of Environmental Conservation of the events sixty days prior and be prepared to subsequently report which materials were collected and their respective quantities (NYS DECC, n.d.).

When considering whether to implement this recommendation, the Town should also note that the costs of hosting HHW and e-waste collection events can be quite high, particularly in regard to the fees processing facilities charge for dropping off such materials (Table 4-3; Environmental Products and Services of Vermont, Inc.). Fortunately, there are at least two means for the Town to offset the costs of hosting such events for its residents. First, the Town should charge residents a nominal fee per pound of material dropped off during the event. Our research indicates that between fifty cents to one dollar per pound should be sufficient to generate revenue for the Town to offset disposal costs while also making dropping off HHW and e-waste materials at the event affordable to its residents. Second, the Town should apply for funding from the New York State Environmental Protection Fund, which offers to reimburse municipalities up to 50% of the costs associated with HHW collection events (NYSDEC, 2014).

<table>
<thead>
<tr>
<th>Collection Detail</th>
<th>Material Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HHW</td>
</tr>
<tr>
<td>Permitting requirements</td>
<td>Submit collection proposal 60 days prior to proposed event</td>
</tr>
<tr>
<td>Holding time limit</td>
<td>Up to five days annually</td>
</tr>
<tr>
<td>Final disposal site</td>
<td>Environmental Products &amp; Services of Vermont, Inc. in Syracuse</td>
</tr>
<tr>
<td>Materials needed</td>
<td>Two 10-yard dumpsters, six 55-gallon drums, scales, staff, and advertisement</td>
</tr>
<tr>
<td>Estimated cost for materials</td>
<td>$3,850 + hauling</td>
</tr>
<tr>
<td>Estimated annual tonnage</td>
<td>4</td>
</tr>
<tr>
<td>Estimated annual disposal costs</td>
<td>$4,425</td>
</tr>
<tr>
<td>Funding available</td>
<td>NYS Environmental Protection Fund (up to 50% of total event costs)</td>
</tr>
</tbody>
</table>

(Table 4-3. Comparison of the requirements for hosting HHW and e-waste collection events in the Town of Geneva (Source: Mikhail Fischer))
Policies and Regulations

Hazardous Household Waste & E-Waste Bans
HHW and e-waste bans are an effective way to divert recyclable and toxic materials from the MSW stream. These bans are accomplished through passing laws and other forms of legislation. Several municipalities around the world have implemented HHW bans, including a statewide ban in California and a citywide ban in Dublin, Ireland (CalRecycle, 2014; Dublin City, 2013). Such bans require HHW to be recycled or safely disposed of in order to prevent pollution of the local ecosystem, protect public health, and encourage the reuse of recyclable products. Some bans impose fines on those who violate the law. For instance, the State of California levies fines of up to $25,000 for violating its HHW ban (San Diego County Environmental Health, n.d.). Additionally, in order for such bans to be successful at diverting HHW and e-waste from landfills and incinerators, it is essential to ensure that a sufficient number of HHW and e-waste collection programs are in place. In the case of California, grant money is available for the creation of these collection programs in rural and underserved areas (Public Resources Code Section 47200-47203, 2016).

Recommendation: To date, New York State has enacted several pieces of legislation to ban particular types of HHW and e-waste from the waste stream, a statewide ban on these wastes has yet to be enacted. Consequently, “more than 100,000 tons of [HHW] are emptied into trash cans” (NYSDECa, n.d., n.p.) each year in the state. In order to encourage the development of HHW and e-waste bans on HHW within Ontario County, we recommend that the Town of Geneva work with other interested municipalities to initiate a county-wide dialogue concerning the benefits of diverting HHW and e-waste from the Ontario County Landfill. Furthermore, the Town should actively support any statewide efforts to enact such bans by considering the implementation of a municipal-wide HHW and e-waste ban.

Extended Producer Responsibility Programs
Extended Producer Responsibility (EPR) programs are an innovative policy approach that aim to shift the burden of disposing HHW and e-waste from taxpayers and municipalities to the product producers themselves (“Managing and Reducing Waste,” 2013). EPR programs are created and funded through advanced disposal fees paid where HHW and e-waste products are sold or, alternatively, through the implementation of an additional fee included in the price of the product (Recycling Council of British Colombia, 2011). In addition, producers of HHW and e-waste must have an approved plan in place that complies with EPR programs in order to sell or distribute such products (Queen’s Printer BC, 2014). To date, most EPR programs have been successfully implemented at the state/province level (e.g., British Columbia, Canada) or national level (e.g., Sweden) (Nahibina, 2006) yet the implementation of EPR programs are theoretically possible at the regional and local levels as well.

CASE STUDY: HHW BANS

Legislation is a powerful top-down approach to reforming waste disposal practices, especially in terms of HHW and e-waste. In 2014, the state of California banned HHW from entering the waste stream through passing a state regulation requiring residents and businesses to recycle or otherwise safely dispose all HHW items in their possession (CalRecycle, 2014). The regulation places the impetus for diverting HHW on the public in an effort to protect local ecosystems while simultaneously encouraging reuse of recyclable items. Meanwhile, the state is responsible for helping residents and business owners to locate appropriate disposal options in their area by keeping a comprehensive and up-to-date list of HHW disposal locations by county (San Diego County Environmental Health, n.d.; CalRecycle, 2014). While it is too early to discern the exact impacts of this statewide ban on HHW from the MSW stream, anecdotal evidence suggests that, given the size of its population, California is set to further increase diversion rates across the state.
Recommendation: While New York State has targeted HHW e-waste disposal practices through various state regulations, a formal statewide EPR program has yet to be established. Yet, the New York State Electronic Equipment and Reuse Act has overlaps with EPR programs enacted elsewhere. For instance, this 2010 law requires “free, convenient, and environmentally compliant electronic recycling programs for all consumers throughout the state” (Barton & Loguidice, 2014, p.81). As a result, businesses throughout the state now offer collection bins for various HHW and e-waste products. The Town of Geneva therefore has the opportunity to support safe disposal of HHW and e-waste through advertising existing EPR-focused programs available in the local area. The Town can also take an active role in supporting statewide EPR efforts by applying pressure on state officials to develop a more comprehensive EPR program at the state level and further enhance existing legislation requiring producers of HHW and e-waste to provide consumers with a cost-free means by which to dispose of these items.

Implementation Table

<table>
<thead>
<tr>
<th>Category</th>
<th>Recommendation</th>
<th>Project Type</th>
<th>Actions</th>
<th>Cost/Funding</th>
<th>Involved Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short Term</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education &amp; Outreach</td>
<td>Town Website Upgrade</td>
<td>• Apply for NYS LGE grant&lt;br&gt;• Hire website manager or intern to update website information&lt;br&gt;• Provide detailed information about proper disposal practices for HHW and e-waste</td>
<td>• Web designer or intern&lt;br&gt;• Fee to maintain the website URL</td>
<td>Town</td>
<td></td>
</tr>
<tr>
<td>Education &amp; Outreach</td>
<td>Community Reuse Festival New</td>
<td>• Gauge interest with town and city residents&lt;br&gt;• Collaborate with town sustainability group, Geneva Greens Committee, and HWS Campus Greens&lt;br&gt;• Partner with city&lt;br&gt;• Advertise event&lt;br&gt;• Enact event</td>
<td>• Advertisement&lt;br&gt;• Informational pamphlets&lt;br&gt;• Prizes</td>
<td>Town &amp; City</td>
<td></td>
</tr>
<tr>
<td>Infrastructure &amp; Programs</td>
<td>Community Paint Exchange New</td>
<td>• Gauge interest with town and city residents&lt;br&gt;• Establish pilot program&lt;br&gt;• Establish collection location&lt;br&gt;• Determine hours of operation (Sat.)&lt;br&gt;• Establish guidelines for collection&lt;br&gt;• Hire staff or volunteers&lt;br&gt;• Determine future of program</td>
<td>• Advertisement&lt;br&gt;• Information pamphlets&lt;br&gt;• Building upkeep&lt;br&gt;• Shelving units&lt;br&gt;• Staff payroll</td>
<td>Town &amp; City</td>
<td></td>
</tr>
</tbody>
</table>
## Implementation Table cont'd

<table>
<thead>
<tr>
<th>Category</th>
<th>Recommendation</th>
<th>Project Type</th>
<th>Actions</th>
<th>Cost/Funding</th>
<th>Involved Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short Term</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Infrastructure & Programs | HHW & E-waste Collection Days | New          | • Gauge resident interest in the event  
• Establish contract with Environmental Products & Services of Vermont INC  
• Purchase required collection materials  
• Research and establish per pound fee for residential drop-off  
• Determine and advertise collection event date  
• Recruit and train event volunteers  
• Register and host event  
• Report types and amounts of materials collected  
• Apply for state funding  
• Determine whether to continue the program and at what frequency | • Advertisement  
• Information pamphlets  
• Required collection materials (estimated at $7,000 in year 1 and $0 in year 2 forward)  
• Hauling costs  
• Disposal costs (estimated to be $7,000 before state aid and resident disposal fees) | Town            |
|                         |                              |              |                                                                                                                                          |                                                                                                        |                  |
| **Long Term**           |                              |              |                                                                                                                                          |                                                                                                        |                  |
| Policies & Regulation   | HHW & E-waste Bans            | New          | • Begin a dialogue with surrounding towns to create an initiative to ban HHW disposal in Ontario County                                  | Staff/Council Time                                                                                      | Town & State     |
| Policies & Regulation   | Extended Producer Responsibility (EPR) programs | New          | • Promote awareness of EPR  
• Support politicians in favor of statewide EPR programs  
• Adopt the Resolution Supporting Extended Producer Responsibility | Staff/Council Time                                                                                      | Town & State     |
Further Information

A list of all HHW Collection Facilities in New York State

Companies Required to Collect Electronic Waste: http://www.dec.ny.gov/chemical/82084.html
A list of companies registered to take back electronic equipment that they produce.

The required collection report that must be filed after the collection event and sent to DEC headquarters.

An interactive list of all E-waste collectors in any region.

HHW Program Grant Application: DEC Page http://www.dec.ny.gov/chemical/8778.html
An eight step procedure for applying for State funding to help subsidize the costs of municipal HHW collection events.

This website provides step by step information on how to develop a community paint exchange. Included is information pertaining to how municipalities can advertise a paint exchange.

Website Education: http://www.hazwastehelp.org
This website provides useful HHW information, as well as lesson plans developed for school age children. These lesson plans may prove useful in disseminating information to school age children.

Website Funding: http://www.dos.ny.gov/LG/lge/index.html
This URL links to the New York State Local Government Efficiency Grant (LGe). The Town can apply to this program to improve the existing website. The application process in described in the provided link. A representative of the Town will need to fill out an application detailing how a LGE grant will be utilized to increase government efficiency.
Works Cited


Chapter 5
Organics

Introduction

Food scraps in the municipal waste stream is a large problem across the United States. According to the Environmental Protection Agency (EPA), food waste makes up 14.6% of waste in American landfills (EPA, 2016b). When food waste is improperly disposed of in landfills, greenhouse gas emissions increase because methane is released (Figure 5-1). In addition, food scraps waste landfill space and resources (U.S. Composting Council, 2001). One method for diverting food waste from the waste stream is composting discarded food items. Compost is a collection of decayed organic materials. It is important to manage food waste through composting programs in order to “mitigate climate change, reduce the pressure on existing landfills (as well as the need to create new ones), and improve agricultural soil quality” (Sussman & Gifford, 2011, p. 324). By composting, food waste is diverted from the municipal solid waste stream thereby decreasing landfill methane emissions (EPA, 2016b). Additionally, when compost is reused as a fertilizer, it can reduce the cost spent on commercial fertilizers and can increase soil properties (EPA, 2016a).

Figure 5-1. A depiction of how food waste in landfills has harmful effects on the environment by releasing methane, a harmful greenhouse gas (tumbleweed.com, n.d.)

RECOMMENDATIONS IN BRIEF

- Develop and distribute a survey to town residents to gauge interest in organics management
- Advance educational resources available to residents of Geneva through passive and active education initiatives
- Subsidize the cost of kitchen caddies and outdoor compost bins through state level grants
- Mandate composting by creating a municipal ordinance
- Expand the Geneva Transfer Station to include composting
Currently Ontario County does not have a county wide food waste collection program, however, it does support municipalities and organizations interested in such efforts (Barton & Loguidice, 2014). Due to the lack of a county wide food waste collection program, Ontario County has seen little food waste diversion; in 2011, the county only recovered 0.05% of food waste (Barton & Loguidice, 2014) when food waste in Ontario County totals up to 13% of the municipal solid waste (MSW) stream (Barton & Loguidice, 2014). Like Ontario County, Geneva does not have a town-wide solution to manage its food waste. This leads food waste to be included in the MSW stream and ultimately end up in the Ontario County landfill. In an effort to divert food waste from the municipal waste stream, Geneva should promote food waste management through a combination of educational practices, infrastructural arrangements, legal action and governmental incentives. Taking the steps to make Geneva a composting community would make the town a leader within Ontario County.

**Best Practices and Detailed Recommendations**

**Education and Outreach**

Education is an important tool for municipalities in that it helps to ensure residents are aware of local sustainability practices, such as those related to solid waste management. A framework proposed by Kaiser & Fuhrer (2003) suggests that the best method for sustainable education “centers on four different domains of knowledge as an organizational tool: declarative (factual/technical socio-ecological information), procedural (how-to information and skills), effectiveness (subjective understanding of impacts/efficacy), and social (subjective understanding of normative trends and social expectations)” (cited by Redman & Redman, 2013, p. 148). In order to change residents’ behaviors it is imperative not to just provide facts and information. Education techniques need to be informative, suggestive, and provide clear direction on how to improve. Two platforms to relay such information are websites and pamphlets. In addition, facilitated learning, where information can be personalized and discussed, could address hands-on how-to skills such as at home composting. For lessons addressing hands-on practices, online training is not as successful as in person, interactive education (DePalma, 2011). Therefore, it is important to consider what information is being disclosed to determine which method of conveying that information will reach residents most effectively. Education is a proven means for helping communities increase their diversion rates, particularly with regard to food waste. For instance, over the last decade, nearby Tompkins County has invested in composting education through hosting how-to workshops, promoting composting on its website, and distributing informational pamphlets on composting practices. As a result of its efforts, the county has seen a steady increase in the number of its residents actively composting over the past ten years (Michaelides, 2012).
Websites
Effective websites should include relevant links to information on composting organic waste, instructional videos, pamphlets, posters, and brochures (e.g. CCE: Tompkins County, n.d.; Recycling and Solid Waste Tompkins County, n.d.). Recently, individuals have been increasingly drawn to finding information on the Internet as opposed to other methods of education. Effective websites use designers that are qualified in HTML and CSS-based layout practices (Johnson, 2011). For organics management, the most effective websites include resources on definitions of what composting is, how to compost, and information regarding the resources available within the municipality (Figure 5-2).

Recommendation: To help residents learn more about composting options, the Town of Geneva should update their website to include existing resources from other municipalities that can help residents learn more about organics waste management (NERC, n.d.). In order to design a user-friendly website, the Town of Geneva will need to hire someone to design and maintain the website. The town should consider the possibility of working with an HWS student intern to keep up with the maintenance each semester in order to keep costs low (or absent) and give a student hands-on experience with website design. Content should include information that is already available elsewhere online, compiled into one central location within a Solid Waste Management header on the Geneva town website.

Pamphlets
Pamphlets are a cost-effective and efficient way to promote education and increase awareness of local topics and news throughout the community. Pamphlets can be mailed out, handed out, or left at businesses and buildings around town (Town of Whately, n.d.). However, pamphlets are received best when residents can choose whether or not they want to take them, so they are not overlooked as junk mail (City of Chicago, 2016).

Recommendation: Pamphlets are a short-term solution to help residents of the Town of Geneva be more aware of their composting options. The Town of Geneva would have to hire or assign an employee or volunteer to design and distribute the pamphlets. The best distribution method would be to hand the pamphlets out at community events or leave the pamphlets at the transfer station and/or town hall (City of Chicago, 2016). Pamphlets should include content for how to compost and why residents should be interested in composting (Figure 5-3).

Figure 5-3. An example pamphlet from GreenPlanet that shows compostable materials, how to make a compost pile, and why composting is important (Kateeleigh, 2014)
Community Surveys
Interest surveys are an important tool for communities looking to initiate a new program (The Communication Solutions Group, n.d.). When survey results show that the residents support an important change, the municipality will have the validation and support it needs to continue with that change (The Communication Solutions Group, n.d.). Effective community surveys “ensure [that] the mode of distribution is appropriate to the targeted population and research topic” (McGuirk & O’Neill, 2006, p. 212). To ensure that residents have the chance to express their opinions on a topic or program, communities should utilize a wide variety of survey administration techniques in order to maximize response rates (McGuirk & O’Neil, 2006) and provide equal opportunities to be in the sample (Work Group for Community Health and Development, 2015). In communities with aging demographics, it is important to remember that, while 88% of adults 18 to 64 years in age use the internet, 43% of people age 65 or older do not do so (Pew Research Center, 2014). Thus, communities wishing to conduct surveys should plan on not limiting their data collection to solely internet/web surveys; instead, communities should administer surveys both online and by phone/mail or in person. No matter the mode(s) of survey administration, the survey instrument itself should be kept as concise as possible with the survey questions listed in a logical order that allows residents to efficiently complete the survey in a short period of time (McGuirk & O’Neill, 2006; Work Group for Community Health and Development, 2015).

Recommendation: Before implementing a community-wide food waste management program, the Town of Geneva must first gauge interest in a municipality-led program and consider what residents may already be doing with their current food scraps. In terms of content for this community survey, we recommend that three basic questions should be asked:

- What do you currently do with your food waste?
- Do you currently compost? If not, are you interested in composting?
- Would you be more interested in backyard composting and/or bringing your food scraps to the transfer station?

In addition, in order to capitalize on its working relationship with Hobart and William Smith Colleges, we recommend that the Town reach out to faculty, staff, and students at Hobart and William Smith Colleges who could assist in the development and administration of a community-wide food waste survey.

As the Town of Geneva embarks on its survey efforts, it is important that the municipality take into account the fact that not all of its residents may have access to high speed internet (Harding, 2015). Given the fact that 16% of the town is described as agriculture (Frantz et al., 2015) and high speed Internet is not available in all rural areas of New York state (Harding, 2015), it is possible that some of the town’s residents may not have regular access to internet. Moreover, with 21% of its residents 65 years of age or older, the town should remain attentive to the fact that not all residents can or will take online surveys. For these reasons, we recommend that the Town of Geneva offer opportunities to provide residents with a variety of ways to complete its organic waste survey including an online/web survey, a telephone or mail survey, and/or in-person survey.
Workshops
Workshops should give step-by-step technical instruction on how to compost and facilitate discussion to make the experience best for residents in attendance (CWMI, 1998; City of Gold Coast, n.d.). Some benefits of hosting workshops sponsored by the town are that awareness of the problem surrounding organics management would increase, the town could gauge how many residents are interested in food waste, and it would represent the town’s dedication to addressing the community issues (Nagy, 2015).

Recommendation: The Town of Geneva should organize compost workshops that are open to residents of both the town and the city in a location such as the town hall or the community center. Allowing members of the city to attend the workshop would permit more people to take part and create a more uniform understanding of composting throughout the entire community. In addition, using a location that is familiar and accessible to all interested parties could help encourage attendance and participation. The workshop should be designed so that residents are taught what their composting options are, how to compost at home, and why food waste is a pressing local issue. As a first step, the town should see if anyone locally is willing to volunteer to teach the compost workshop. If that doesn’t work, the town should contact Tompkins County to see if they would be willing to send one of their “master composters” to teach the workshop in Geneva or allow a non-resident of Tompkins County to take their training course to become a master composter. The Tompkins County course to become a trained master composter costs $60, but is refunded upon completion of the 40 hours of training, spread out over 10 classes, and 20 hours of volunteering teaching workshops (CCE: Tompkins County, 2015).

Youth Programs
According to Didonet (2008) “the structure of values and attitudes built in the early years are the strong and permanent roots for one’s entire life” (p. 26). In order to have adults that care for the planet, it is important to include the study of environment and nature in early childhood education (Didonet, 2008). For that reason, when considering who to target to create a more sustainable future for any municipality it is crucial to consider educating children. Successful youth composting programs can teach students to be more responsible consumers and consider their local food systems and food waste disposal (City of Gold Coast, n.d.; Figure 5-4).

Recommendation: The Town of Geneva should actively support youth programs that focus on teaching children about the food waste issue and the solutions composting offers. Programs that support sustainability amongst children, like Roots and Shoots, already exist and could be benefited by town support. The town should contact program leaders to encourage composting tutorials that would actively encourage children to develop sustainable practices regarding food waste.
Infrastructure and Programs

Transfer Station Food Scrap Collection
Drop-off locations for food scraps are an ideal option in communities where residents actively utilize the local transfer station (Northern Tilth, 2013). Importantly, transfer stations with food scrap drop-off programs have the potential to divert organic material from the waste stream (Table 5-1). Among the most important parameters for such transfer station food scrap collection programs is providing staff to help residential food scraps drop-offs run smoothly (NERC, 2014; Town of Yarmouth, n.d.). Additionally, the most successful local food scrap collection programs typically involve municipalities subsidizing residents’ purchases of kitchen pails (NERC, 2014; Town of Sherborn, n.d.), as well as municipalities taking an active role in educating its residents about the compost program it is implementing (NERC, n.d.; Town of Sherborn, n.d., Town of Yarmouth, n.d.). It is also important for the collected food scraps to be picked up and processed within a short period of time so that potential odors do not attract pests (Northern Tilth, 2013). Municipalities that have the ability to offer and sustain curbside organics collection can make an even greater impact on a community’s ability to keep organic materials out of landfills (Northern Tilth, 2013). Yet, in rural municipalities with smaller populations, transfer station food scraps drop-off programs offer an important first step toward increasing organics diversion rates from such communities (Northern Tilth, 2013).

Table 5-1. Estimated diversion rates of organic materials in New England municipalities with transfer station drop-off programs (Adapted from Northern Tilth, 2013)

<table>
<thead>
<tr>
<th>Community</th>
<th>Population</th>
<th>Tons Collected Annually</th>
<th>Pounds/Person/Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northfield, MA</td>
<td>3,000</td>
<td>40</td>
<td>27</td>
</tr>
<tr>
<td>Whately, MA</td>
<td>1,500</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>New Salem, MA</td>
<td>1,000</td>
<td>4.5</td>
<td>9</td>
</tr>
<tr>
<td>Northampton, MA</td>
<td>28,500</td>
<td>80</td>
<td>6</td>
</tr>
<tr>
<td>Chittenden County, VT</td>
<td>158,000</td>
<td>350</td>
<td>4</td>
</tr>
<tr>
<td>Cambridge, MA</td>
<td>105,000</td>
<td>75</td>
<td>1</td>
</tr>
<tr>
<td>Yarmouth, ME</td>
<td>8,060</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

CASE STUDY: FOOD SCRAP COLLECTION

The Town of Sherborn, Massachusetts with a population of about 4,000 (Census.gov, 2014), implemented a pilot program for a portion of its residents to dispose of food scraps at their transfer station at no charge. The first 50 residents of the town who participated in this pilot program were given five-gallon pails with screw-on lids to collect food scraps in their kitchen (Town of Sherborn, n.d.). In order to decrease costs, HomeDepot donated the first 25 pails and the town purchased the next 25 pails (Freedman, 2014). Once residents fill their kitchen pails, they take the pails to the transfer station to empty into the food scraps collection cart. The collection cart is subsequently emptied on a weekly basis by a private hauler (Freedman, 2014). In order to maximize the program’s success, the Town of Sherborn provides residents with an educational flyer outlining which types of food scraps can be placed in the collection carts (Freedman, 2014). As a result of its efforts, the Town of Sherborn estimates that, by participating in the municipality’s food scraps program, a typical family of four has the potential to divert 52 tons of food waste away from the municipal solid waste stream annually (Town of Sherborn, n.d.).
**Recommendation:** Like other municipalities with similar population sizes, the Town of Geneva could implement a food scraps drop-off program at its transfer station during already established open hours. Until further information on residents’ level of interest in such a program can be ascertained, we recommend that the town offer this service to its residents as part of a yearlong pilot program that aims to increase food waste diversion rates and composting in the municipality. We recommend that the town hire regional food scraps collection and composting service provider Cayuga Compost to pick up the food scraps on a weekly basis for a monthly fee of $750 that includes up to ten 64-gallon collection bins being provided to the town by the company (pers. comm., March 1, 2016). In order to recoup the estimated $9,000 in annual costs of contracting food scraps collection with Cayuga Compost, we recommend that the town implement a vehicle decal program similar to the one it currently operates for residents who wish to bring recyclables to the transfer station. If the town were to charge $25 per sticker for a food scraps drop-off service at the transfer station, it would take only 360 residents participating in the program for the town to break even on its investment in increasing food waste diversion rates in the town. Additional recommendations: 1) provide training for transfer station staff (or volunteers) and the public on acceptable food waste type and quantities, and 2) incentivize participation by subsidizing kitchen caddy costs.

**Policy and Regulation**

**Subsidizing Composting Materials**
Applying for government subsidies is a smart decision for communities interested in starting home composting programs and who are looking to receive financial support to decrease the initial costs of compost implementation. A grant can provide the financial resources needed to purchase composting material, such as kitchen caddies and outdoor bins, or expand an existing facility to include composting. Providing free or low cost compost bins to residents can increase interest in composting programs making them more successful overall (Sherman-Huntoon, n.d.). Subsidizing backyard composting is strongly recommended, as it is one of the most effective components of a successful composting initiative (Sherman-Huntoon, n.d.).

**Recommendation:** The town of Geneva should apply for government subsidies in order to subsidize the cost of kitchen caddies and outdoor bins (Figure 5-5). This would make the composting program more convenient for residents while also saving the town and participating residents’ money. We recommend the town of Geneva apply for monetary support in order to reduce the cost of kitchen caddies and outdoor bin materials for residents interested in composting on their own property. Funds could also be used to purchase kitchen caddies for residents interested in bringing food scraps to the Geneva transfer station. For these residents, kitchen caddies would be supplied free of charge upon purchase of a transfer station composting card. We suggest that the town of Geneva look at the Municipal Waste Reduction and Recycling Program (MWR&R) grants offered by the New York State Department of Environmental Conservation (NYSDEC). If awarded this grant, Geneva would need to use town funding to jump start the program, and upon the completion of implementation, the NYSDEC would repay 50% of the bill (DEC, 2016). If this reimbursement style does not work for the town of Geneva, additional funding could be obtained through the New York State Pollution Prevention Institute (NYSP2I) which offers Community Grants from $10,000-$20,000 for environmentally focused projects (NYSP2I, 2016). With the help of these grants Geneva

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**Figure 5-5.** An example single outdoor bin wire composter from Gardener’s Supply Company (2013), and a kitchen caddy from Kitchen Compost Caddy (2016)
would be able to cover the cost of home composting kitchen caddies, larger collection bins for backyard compost, and educational materials.

**Banning Organics from the Waste Stream**

A ban disallowing organics from the entering the MSW stream results in households diverting compostable materials from landfills. A number of U.S. states have yard debris and food waste bans (Figure 5-6). Such municipal ordinances typically include a definition of compostable materials as an addendum to their ordinance (e.g. City of Seattle, 2016; City of Portland, 2016). Banning organics from the waste stream therefore requires residents and/or businesses to adopt specific practices with the common goal of minimizing and eliminating disposal of organic materials with other materials that are ultimately landfilled. While doing so, it is important that the local government partners with the private haulers in order to enforce this policy (Bureau of Waste Prevention: MA, 2014; ILSR Admin, 2011). educating private haulers and customers while setting detailed guidelines and keeping good records is essential in the enforcement of the ban (Massachusetts Bureau of Waste Prevention, 2014). Private haulers need to work with their customers to develop a cost-effective system to process organic waste (Recycling District of Nanaimo, n.d.). One way to enforce the ban is to charge haulers 50% of the disposal fee when their landfill waste is inspected at the drop-off location (Metro Vancouver, 2015). Prior to the adoption of an organics ban, it is important that municipalities support or provide educational programming for their residents to learn about the alternative methods of disposing food waste (MIT Sloan, n.d.). In municipalities where organics bans are already in place, multi-family households are typically given notifications for having more than a certain percentage of food waste per volume in trash containers (City of Seattle, 2016; Metro Vancouver, 2015).

![Figure 5-6. Map showing which states ban organics (yard debris and food scraps) from their landfills (Biocycle Magazine, 2014)](image-url)
While a range of enforcement mechanisms exist, municipalities with organics bans typically use fines or written warnings to inform residents of any violations. Fines can be imposed by the municipality adding a fee to a resident’s waste bill (City of Seattle, 2016; City of Vancouver, 2014).

Recommendation: Over time as the town aims to divert food scraps from the landfill, they will be able to maximize the cost of tipping fees by only disposing of the proper materials. Currently, only 0.64% of food scraps are being diverted from the landfill (Barton & Loguidice, 2011). After reviewing the town’s results of the composting interest, implementation of legislation on organic waste management should be considered. We recommend that the Town of Geneva Sustainability Committee head the procedure of researching and proposing a municipal-wide organics ban. The town might consider working with the city in order to research and propose an ordinance. The research team would take on the responsibility of researching and drafting the ordinances for banning organics from entering the town’s municipal waste stream. This research should include examples from other municipalities’ ordinances and bans. Additionally, precedents for implementation and enforcement of this ordinance should be included. Within this phase should be ideas on how to contract with private haulers to enforce this new regulation. The committee and private haulers need to mutually agree on the appropriate penalties for residents and/or businesses who are found to be in violation of the new ordinance. We recommend that the residents are allowed 10% or less of their food scraps to be collected in landfill waste containers. To promote success in this movement, the Sustainability Committee should educate households about what organic waste is unacceptable in the waste stream. By educating residents regarding this ordinance, the town has the opportunity to encourage and foster a community of sustainability.

CASE STUDY: ORGANICS POLICY AND PROGRAMS

The city of San Francisco with a population of 864,816 (US Census, 2014), has implemented a goal to have zero waste going to the landfill by 2020 (SFEEnvironment, n.d.). The city has taken major strides to achieve this goal by enforcing every household to separate recyclable, compostable, and landfill materials. Their success since 2000 has been mandated by three tenets: “enacting strong waste reduction legislation, partnering with a like-minded waste management company to innovate new programs, and working to create a culture of recycling and composting through incentives and outreach” (Gokaldas, 2012, n.p.). San Francisco’s waste management partner, Recology, oversees all of the weekly maintenance to uphold the country’s highest landfill diversion rate at 80% (EPA, n.d.). All residential and commercial properties receive collection service and are required by the city ordinance to sort their compostable waste into separate bins (SFEEnvironment, n.d.). Most of the residents are very receptive to the overall environmental goal. To get people more involved and educated about composting, the city subsidizes programs to train gardeners and composting teachers who can lead classes on how to properly compost (San Francisco Public Utilities Commission, 1999). San Francisco’s results are unparalleled: the city collects over 600 tons of organics each day and about 220,000 tons annually, which is more than any other city in the country (Sullivan, 2011).
## Implementation Table

<table>
<thead>
<tr>
<th>Category</th>
<th>Recommendation</th>
<th>Project Type</th>
<th>Actions</th>
<th>Cost/Funding</th>
<th>Involved Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short Term</strong></td>
<td></td>
<td></td>
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</tbody>
</table>
| Education & Outreach      | Website         | Upgrade      | • Hire someone to upgrade the current site to a user friendly website for residents  
• Bring an intern on to maintain website  
• Include relevant composting links such as informational links, how-to videos, pamphlets, posters, and brochures                                                   | • Website designer and maintenance fees  
• No cost if the town works with a HWS student as an intern.                                                                                                                                                    | Staff/Town Time                                        |
| Education & Outreach      | Pamphlet        | New          | • Design pamphlets for distribution  
• Will need to mail out, hand out, or leave pamphlets at town hall or transfer station                                                                                                                 | 25 pamphlets would cost the town $19.99 (Brochure Printing, n.d.)                                                                                                                                              | Staff/Town Time                                        |
| Education & Outreach      | Interest Survey | New          | • Design survey instrument  
• Organize survey distribution methods  
• Distribute surveys online, at the transfer station and other public venues  
• Analyze and synthesize survey results                                                                                                             | • Staff time to create and distribute survey  
• Print costs: 1,500 B&W pages at Staples ~ $31.50                                                                                                                                                    | Staff/Volunteers  
Potential HWS reps                                                                                                           |
| Education & Outreach      | Workshops       | New          | • Town should determine who will host and where to host workshops in the town, open to all residents (both city and town)                                                                              | Dependent on who the Town hires to teach workshops.                                                                                                                                                           | Collaboration with CCE in Tompkins County             |
| Education & Outreach      | Youth Involvement| Upgrade      | • Identify targeted youth programs  
• Contact program leaders to determine interest in food waste management  
• Provide resources to program leader so they can establish compost pilot program.                                                                                                                   | Supportive funds to supplement budget of already established program                                                                                                                                     | Roots and Shoots (Nan Arens), Community Center       |
| Policies & Regulations (Incentives) | Subsidizing Compost Bins for Residents | New       | • Work with grant writer to apply for competitive funding  
• Purchase necessary materials and distribute throughout community for free or low cost                                                                                                                   | Staff time                                                                                                                                                                                                 | Town  
Geneva residents                                       |
<table>
<thead>
<tr>
<th>Category</th>
<th>Recommendation</th>
<th>Project Type</th>
<th>Actions</th>
<th>Cost/Funding</th>
<th>Involved Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Term</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Infrastructure &amp; Programs</td>
<td>Residential Drop-off of Food Scraps at the Transfer Station</td>
<td>New</td>
<td>• Agree to contract with Cayuga Compost (e.g. fees, day and frequency of pick-up)</td>
<td>Costs: $750 per month</td>
<td>Transfer Station Employees</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Publicize this new service to town residents</td>
<td>Funding: Aim to sell composting stickers at $20 each, with incremental increases if needed</td>
<td>Cayuga Composting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Set up a sticker system with residents to charge for the service</td>
<td></td>
<td>Residents of the Town of Geneva</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Receive 10, 64-gallon dumpsters that is included in the costs</td>
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<td></td>
<td></td>
<td></td>
<td>• Educate a compost monitor to help residents with what can and cannot be disposed of in the dumpsters</td>
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<td></td>
<td></td>
<td></td>
<td>• If interest and costs can’t be covered within the Town of Geneva, consider expanding to the City or surrounding small towns</td>
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<td></td>
<td></td>
<td></td>
<td>• Continue to develop the program and monitor its successes and failures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policies &amp; Regulations</td>
<td>Ban on Organic Waste in the Landfill Waste Stream</td>
<td>New</td>
<td>• Town of Geneva Sustainability Committee could research logistics of ban</td>
<td>Costs: Town and volunteer time to research</td>
<td>Town of Geneva Sustainability Committee</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Study best practices and precedents</td>
<td>Funding: Town budget</td>
<td>Potential Partners (City of Geneva, Volunteers)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Decide on necessary implementation steps/phases</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Decide on how policy will be enforced (e.g. private haulers, residents, etc.)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Propose legislation to the town</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Educate the public on how to comply with new policy</td>
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</tbody>
</table>
Further Information

Education & Outreach

Cornell Cooperative Workshops
In Tompkins County they hold workshops through the Cornell Cooperative to teach residents how to compost. Geneva could reach out to Tompkins County and see if they would be willing to share resources, education tools, and potentially hire someone from CC to teach the compost course in Geneva. Website: http://ccetompkins.org/gardening/composting

Cornell’s Waste Management Institute
Cornell’s waste management institute uses this website to label all of the composting facilities in upstate New York. This resource can help give the town more options for potential partners for long term projects. Website: http://compost.css.cornell.edu/maps.html#205

Infrastructure & Programs

Bear Path Farms
Bear Path Farm, the farm that Whately, MA brings their food scraps to. This is an idea that the town could entertain to work with a nearby compost farm. Website: http://www.bearpathcompost.com/compost.html

Cayuga Composting Contact
This is the main website for Cayuga composting and Bobby Seymour’s contact information. Connor Simon has been in touch with him to find out pricing and logistics about working with Cayuga composting to haul organic food waste from the town of Geneva. Contact: Bobby Seymour, Compost Operations and Marketing Manager, P & S Excavating, LLC/Cayuga Compost, Website: http://cayugacompost.com

Institute for Local Self Reliance
This website, the Institute for local self-reliance’s “mission is to provide innovative strategies, working models and timely information to support environmentally sound and equitable community development”. This link specifically describes their work with an organic recycling mandate in Connecticut. Website: https://ilsr.org/rule/food-scrap-ban/connecticut-organics-recovery/

Policies & Regulations

Backyard Composting Subsidy Grants
This website is the Department of Environmental Conservation’s State Assistance Programs for Waste Reduction, Recycling and Household Hazardous Waste Programs. The town of Geneva should look at the following website for more information about grants that could help subsidize backyard composting efforts. Website: http://www.dec.ny.gov/pubs/4776.html

Massachusetts Organics Case Studies
Here are two case studies from the towns of Hamilton and Wenham Massachusetts. These are very similar size towns to Geneva and display all of the major aspects that the municipalities dealt with prior to setting their programs in place. Website: https://nerc.org/documents/Organics/Case%20Study_Hamilton%20MA.pdf
Works Cited


Harding, R. (2015, Mar 8). Eye on NY: Cuomo’s $1 billion broadband plan: Bringing high-speed Internet to rural, unserved areas. AuburnPub.com
Works Cited cont’d


Works Cited cont’d


Works Cited cont’d


Chapter 6

Conclusion

As a capstone course in Sustainable Community Development, the goal is to learn about local capacity, explore the interplays between people and the environment, develop professional skillsets, and provide an opportunity for interdisciplinary work and a service-learning experience. The group work, research, experiential learning, and conflict resolution skills that the students gain from taking this course are valuable tools to supplement their classroom and academic studies. The students are also able to gain a sense of pride and confidence by providing quality recommendations to the local area and helping to empower the community through a vision of hope and a more sustainable future (Figure 6-1). By building upon steering committee visions and ideas and incorporating evidence-based best practices, the class recommendations provide a platform for advancing community and sustainability goals.

Next Steps

An essential component of the success of this course, both as a tool to facilitate learning and as a service to the community, is the involvement of the community partner. For this class, this means the municipal government and residents of the Town of Geneva. Because this project originated with their vision for advancing solid waste management, it also concludes in their hands. This report, along with the stakeholder meetings and final public forum (attended by over 60 community members), serves as the main deliverable to the community partner. Two specific recommendations that could be advanced through the continued support of Hobart and William Smith Colleges, are the implementation of a town survey (organics focused) and the establishment of an intern position to assist with information collection and website development. Our hope is that the Town of Geneva is in a position to continue to work with HWS, town residents, and the City of Geneva to promote their vision for sustainable materials management in their community.

Figure 6-1. ENV351 class picture with Mark Palmieri (center front, fourth from the left) and Mark Venuti (far right) taken at the end of the public forum on May 3, 2016, where students have just presented their final recommendations (Source: Amelia Littleton)
Landfill and Recycling Recommendations for the Town of Geneva

Bridget Callea, Alex Cirra, Conner Hartigan, Morgan Lucas, and Gus Pierce
ENV 351: Sustainable Community Development

Do Now

**Add Signs to the Transfer Station**
Labeling drop off stations, as well as adding an entrance sign with hours of operation and contact information will increase diversion at the transfer station. If residents are more aware of recycling practices, they will be more able to recycle.

**Plan a Field Trip to the Landfill for Fifth Graders**
Allowing children to visit the Ontario County Landfill will help influence diversion rates with children, as well as their families.

**Update the Municipal Trash and Recycling Website**
There is already a website for trash and recycling in the Town of Geneva but including more information will help inform residents of proper recycling practices.

Do Soon

**Further Implement Recycling in the Schools**
There is already a recycling program in place but the schools need to increase accessibility to recycling bins. It could also be helpful to coordinate with a group to help teach students and instructors how to recycle properly.

**Implement a Swap Shop Pilot Program**
Swap shops are effective for reusing materials that may have previously ended up in landfills. By using the old Town Hall, residents may be likely to recycle old clothes, furniture, and toys, rather than dispose of them.

**Begin Permitting All Private Haulers**
Permitting private haulers would give residents the ability to report private haulers for comingling trash and recycle and could result in profits.

Do Later

**Plan Community Art Festivals**
Art festivals will help foster community around the topic of Trash and Recycle practices.

**Incorporate Pay as You Throw Programs**
Charging for disposal by weight or bag creates incentive to recycle more and consume less.

**Implement a Tax on Plastic Bags**
Adding taxes on plastic bags creates charitable profits, as well as an economic incentive for the businesses involved. The number of plastic bags in the landfill will also be reduced.

Appendix A

By: Lino Chimienti, Mikhail Fischer, Anna Hartnett, and Patrick Ware
ENV 351: Sustainable Community Development Capstone

**Education & Outreach**

**Municipal Website**
- Include search bars to identify where and how to safely dispose of HHW & e-waste items
- Identify alternatives for the most common HHW products, as well as existing locations for HHW & e-waste disposal
- Provide dates & locations for HHW & e-waste collection events

**Community Reuse Festival**
- Provides an innovative opportunity for residents to learn about the impact of their waste
- Partner with local sustainability-focused organizations to host the event
- Hold a competition in which residents enter pieces of artwork made of e-waste & other recyclable materials

**Infrastructure & Programs**

**Community Paint Exchange**
- Provide residents an opportunity to donate paint they no longer need or want
- Establish a pilot paint exchange program, which would be first of its kind in the Finger Lakes Region
- Collect and exchange latex paint at old town hall once a month during the summer

**HHW & E-Waste Collection Days**
- Implement a pilot program for municipal HHW & e-waste collection
- Apply for state assistance and impose disposal fee to help cover costs
- Partner with Environmental Products & Services of Vermont Inc. in Syracuse for disposal of collected materials

**Policies & Regulations**

**Disposal Ban**
- Initiate a dialogue with other municipalities in Ontario County to propose a HHW disposal ban
- Inform municipalities in Ontario County about the importance of removing HHW from the MSW stream

**Extended Producer Responsibility (EPR)**
- Ratify the New York Product Stewardship Council resolution to support a state-wide EPR policy
- Support any local or county-wide initiatives to implement EPR programs
Organic Waste Recommendations for Geneva

Emily Blanchard, Mackenzie Olson, Emily Ott, Connor Simon & Caeleigh White
ENV 351: Sustainable Community Development Capstone

United States National Organics Statistics

- Organic waste makes up 20% of the U.S. solid waste stream.
- In 2014, an estimated 133 billion pounds of food were wasted.
- The estimated value of wasted food is $161.6 billion.
- Residential areas are responsible for roughly 40-50% of all food waste.

Short-Term Goals

Education & Outreach

Update Town of Geneva Website
- Include links to information on composting organic waste, how-to-do videos, pamphlets, and posters

Create Informational Pamphlets
- Alternative method to provide composting information that can be provided at Transfer Station and Town Hall

Do a Community Survey
- Assess what residents are currently doing with their food scraps and gauge interest in a municipality-led composting program

Host How-To Workshops
- Teach residents what their composting options are, how to compost at home, and why food waste diversion is a pressing local issue

Support Youth Programs
- Actively encourage youth programs, such as Roots and Shoots, to teach composting tutorials

Policies & Regulations

Apply for Grants
- Grant money would cover cost for updates to town infrastructure and subsidize cost for at home composting bins for town residents

Long-Term Goals

Infrastructure & Programs

Municipal Organics Collection
- Upgrade Geneva Transfer Station to include a drop-off area for residential food waste
- Charge residents annual fee for organics drop-off (similar to the current recycling sticker program)
- Hire Cayuga Compost to collect food waste on a weekly basis and provide collection dumpsters

Policies & Regulations

Ban Organics from the Waste Stream
- Use at home and municipal composting to alleviate eventual transition of banning organics from the landfill waste stream

Organics Ban in San Francisco, CA
- Goal to have zero food waste going into landfill by 2020
- Strides to reach this goal through enforcing sorting of recyclable, compostable, and landfill material at the household level, as well as working with residents to create a culture of composting through educational how-to workshops