Ulster County
Food Waste & Recovery
2021-2022

Is your business ready?

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Ulster County Department of the Environment
Environmental Outreach Manager

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Sustainable Food Program Manager and a Senior Pollution Prevention Engineer
New York State Pollution Prevention Institute
About the Food Waste and Recovery Act

This local law expands food scrap recycling requirements by regulating generators of food scraps, by including schools and hospitals, and through other extensions beyond State law.

The full text of the Act can be found here: https://ecode360.com/36623724
About the Food Waste and Recovery Act

Adopted 12/18/2019

Food Recovery Hierarchy

- **Source Reduction**: Reduce the volume of surplus food generated
- **Feed Hungry People**: Donate extra food to food banks, soup kitchens and shelters
- **Feed Animals**: Divert food scraps to animal food
- **Industrial Uses**: Provide waste oils for rendering and fuel conversion and food scraps for digestion to recover energy
- **Composting**: Create a nutrient rich soil amendment
- **Landfill/Incineration**: Last resort to disposal

Ulster County Department of the Environment 2021
Who is Impacted?

Large generators of food scraps who produce:

- Greater than 2 tons of food scraps per week (starting January 1, 2021)
- Greater than 1 ton of food scraps per week (starting January 1, 2022)
- Greater than 0.75 tons of food scraps per week (starting January 1, 2023)
- Greater than 0.5 tons of food scraps per week (starting January 1, 2024)
Why it matters

Food takes up the most space in our Landfills
Why it matters

Methane verse CO2

METHANE IS 21 TIMES MORE HARMFUL TO OUR PLANET THAN CARBON DIOXIDE
Why it matters

In 2018, 101,379 tons of municipal solid waste (MSW) was generated in the County.
Where does food waste come from?

- **Industrial**
  - Food Processors like dairy, fruit, vegetable processors, and breweries
- **Institutional**
  - Schools, colleges, universities, correctional facilities, hospitals, and nursing homes
- **Commercial**
  - Restaurants, grocery stores, fast food, retail establishments, hotels, hospitality, and event centers
- **Residential**
  - Homes, apartment building etc.
As it is right now.
The Goal.

Reduce → Donations → Animal Feed → Anaerobic Digestion → Composting → Land Fill

X
How does the County identify large food scraps GENERATORS?

Ulster County uses the Organic Resource Locator dataset developed and maintained by the New York State Pollution Prevention Institute (NYSP2I) to identify large food scraps generators who are regulated under the law.

https://www.rit.edu/affiliate/nysp2i/organic-resource-locator
What’s the Difference between the State Law and the County Act

<table>
<thead>
<tr>
<th>Effective Date</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>Notes</th>
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<tr>
<td></td>
<td>January</td>
<td>July</td>
<td>January</td>
<td>July</td>
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<tr>
<td>Ulster County Food Waste Prevention and Recovery Act</td>
<td>&gt; 1.0 TPW</td>
<td>&gt; 0.75 TPW</td>
<td>&gt; 2.0 TPW</td>
<td>&gt;2.0 TPW health care only</td>
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<tr>
<td>NYS Food Donation and Food Scraps Recycling Law</td>
<td>&gt; 0.75 TPW</td>
<td>&gt; 0.5 TPW</td>
<td>&gt; 2.0 TPW</td>
<td>&gt; 2.0 TPW</td>
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New York State Food Donation & Food Scraps Recycling Law

Agenda

• Overview of NYS Law
• Relationship to County law
• Relevant resources

Europa McGovern
Ulster County Department of the Environment
Environmental Outreach Manager
New York State Food Donation & Food Scraps Recycling Law

WHEN IS IT EFFECTIVE?
January 1, 2022

WHO WILL THIS IMPACT?
Large generators of food scraps (more than 2 tons of wasted food and food scraps per week on average)
Examples: Restaurants, grocery stores, hotels & motels, colleges & universities, malls, event centers, etc

WHAT ARE THE REQUIREMENTS?
Large generators of food scraps must:
• Separate and donate edible food
• Separate and recycle all remaining food scraps if within 25 miles of an organics recycler

WHO IS EXCLUDED?
• Hospitals, nursing homes, adult care facilities, K-12 schools
New York State Food Donation & Food Scraps Recycling Law

• Webpage: https://www.dec.ny.gov/chemical/114499.html

• June 1, 2021: NYSDEC published:
  - (first) list of designated food scraps generators (DFSGs)
  - waiver & annual report forms
  - methodology for identifying designated food scraps generators
  - resources
    • list of food scraps transporters
    • list of food scraps recyclers
    • food donation (under development)

• NYS Pollution Prevention Institute (NYSP2I)
  - under contract with NYSDEC to support implementation of the NYS Food Scraps law
  - Organic Resource Locator mapping tool, Food Waste Calculator, and other resources
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How to identify Large Food Scraps Generators

- Site-specific information on food scraps generated is not readily available (or in many cases, not even known by the generators)
- To identify DFSGs, proxy factors were used to approximate the amount of food scraps generated
  - based on other known information
  - such as number of employees, students, inmates, etc...
- **NYS Methodology**
  - Food Scraps Generation Factors selected include:
    - Supermarkets and convenience centers
      - 3,000 lb/employee/year
      - Minimum employees for 2 tons per week = 69 employees
    - Hospitality
      - 1,983 lb/employee/year
      - Minimum employees for 2 tons per week = 105 employees
    - Full Service Restaurants
      - 3,000 lb/employee/year
      - Minimum employees for 2 tons per week = 69 employees
How to identify Large Food Scraps Generators

• Regulated Sectors include:
  - Colleges & Universities
  - Correctional Facilities & Jails
  - Full & Limited Service Restaurants
  - Food Wholesale & Distribution
  - Hospitality
  - And other generators

• To obtain proxy factors:
  • For businesses:
    - D&B Hoovers database
    - NAICS (North American Industry Classification System) or SIC (Standard Industrial Code)
    - # of employees, etc...
  • For non-businesses (colleges & correctional facilities):
    - publicly available information was used
    - # of students, inmates, etc...
New York State Pollution Prevention Institute (NYSP2I) Resources

• **NYS P2I Organic Resource Locator**
  – Use to find organic waste resource State-wide, including:
    • Large food scraps generators
    • Organics recycling facilities
  – Data available for download*

• **NYS P2I Food Waste Estimator Calculator**
  – Use to estimate food waste generated for various industry types (using proxy methodology)

• **Reimbursement Program**
  – Available to businesses or not-for-profits that produce, haul, or recycle greater than one ton of food waste per week
  – Offsets costs for projects (up to 44%) which result in an increase of food waste diversion from landfill or incineration through the use of equipment or technologies

• Other technical support to businesses
NYS P2I Organic Resource Locator
NYS P2I Organic Resource Locator
# NYS P2I Food Waste Estimator Calculator

## Pick A Category
- Colleges and Universities - Residential
- Colleges and Universities – Non-Residential
- Corporate Cafeterias
- County Jails and Other Institutions
- Food Wholesale and Distribution
- Grocery, Specialty Foods, and Convenience Stores
- Hospitals
- Lodging and Hotels
- Nursing Homes
- NYS Correctional Facilities
- Residential Households

### Restaurants - full service
- Restaurants - limited service
- Schools - elementary

## Food Waste Generation Factor

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<tr>
<th>NYS P2I Food Waste Estimator Calculator</th>
<th>57.69 lb/employee/week</th>
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<tr>
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<td>1.00 lb/meal</td>
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## Input Fields

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<tr>
<th>Field</th>
<th>Value</th>
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<tr>
<td>Number of Employees</td>
<td>35</td>
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OR

<table>
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<td>Number of Meals</td>
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<table>
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<td>lb/week</td>
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<td>tons/week</td>
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CONCLUSION

• NYS regulates >2 tons per week large food scraps generators (not under County law)

• Ulster County primarily uses the NYS methodology (ORL data) to identify County-regulated generators as well

• Relevant resources are available via NYSDEC webpage & NYSP2I
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How to Set up a Food Scraps Diversion Program for Your Business

Missy Hall, Food Waste Diversion Program Manager
November 15, 2021
NYS Pollution Prevention Institute

- Reduce the environmental footprint of New York State by working with businesses, non-profits and municipalities
- Direct 1:1 assistance, outreach and education, grant programs, research
- 5 partner universities, HQ in Rochester, NY at RIT
- $3.9M in annual NYS funding administered through the NYS Department of Environmental Conservation
Examples of assistance projects:

- **Food waste inventory** including **source reduction solutions** for a food manufacturer to achieve waste reduction targets.
- **Food waste strategy development** and **implementation support** for a restaurant to grow a diversion program.
- **Technology assessment** for an organics recycler to evaluate feasibility and viability of alternate processing methods.
- **Process improvement** support for an institution managing its food waste on-site.
Food Waste Reduction & Diversion Reimbursement Program

- Reimbursement funding for equipment purchases
- Eligible projects must divert food waste from landfills or incinerators
- Eligible applicants include NYS businesses and non-profits that generate, recycle or haul >1 ton/week of food waste
- Funding available until May 2022 or until funds run out
- Reimbursement up to 44% of eligible equipment expenses, in most cases not to exceed $100K

Process
1. Apply to the program
2. Enter into contract
3. Purchase equipment/implement project to divert food waste
4. Document food waste diverted and purchase made
5. Receive a reimbursement

nysp2i.rit.edu/collaborations
Examples of approved projects:

- **Inventory management software** allowing a grocery chain to reduce their shrink across all NYS stores

- **Food waste collection & storage equipment** allowing a food manufacturer to collect and store food scraps to be picked up for recycling

- **Composting equipment** used to establish composting on site at a large resort

- **Aerobic digester** providing an on-site recycling option for a hotel kitchen

- **De-packaging unit** used at a food manufacturer to reclaim and recycle out of spec canned items
Steps to Launching a Diversion Program

Form a team → Get to know your waste → Organize your plans → Navigate solutions → Start your program
Form a team
Form a team

A Diverse Team  A Champion  A Knowledge Expert

Benefits of forming a team
• Those doing the work know best
• Inclusion yields sense of ownership
• Team members help facilitate the culture change as trainers, ambassadors, etc.
Get to know your waste
What to look for

- **Walk the floor with your team**
  - See the waste, listen and observe
  - Where is it generated, where does it go, why was it wasted

- **Estimate food waste**
  - Proxy measures
  - Weighing
  - Volume estimates
  - Visual inspection
  - Company or waste records
Estimate food waste: proxy measures

Available at nysp2i.rit.edu/resources
# Estimate food waste: tracking volume/weights

<table>
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<tr>
<th>Month</th>
<th>Week</th>
<th>Type</th>
<th># Containers / week</th>
<th>Container Type</th>
<th>% Full (on average)</th>
<th>Density</th>
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<td>2</td>
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<td>240</td>
<td></td>
<td>general kitchen food scraps</td>
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<td></td>
<td>Post</td>
<td>3</td>
<td>35 gallon tote</td>
<td>75% med</td>
<td></td>
<td>337</td>
<td></td>
<td>general kitchen food scraps + prep for party went bad in walk-in</td>
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<tr>
<td></td>
<td>2</td>
<td>Pre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>230</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>3</td>
<td>Pre</td>
<td>5</td>
<td>35 gallon tote</td>
<td>25% low</td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td>4</td>
<td>Pre</td>
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</tbody>
</table>
Estimate food waste: conducting an audit

Conducting a food waste assessment allows you to not only quantify your food scraps but also begin to understand the primary sources and potential causes for its generation in the first place. Performing an assessment is a practical first step to right sizing a diversion program as well as identifying opportunity areas for food donation and waste prevention, which often leads to cost savings.

How-To Guide

- Best Practices
- Log Sheet
- Results Worksheet

Available at nysp2i.rit.edu/resources
Estimate food waste: conducting an audit

1. Planning
   - Step 1: Determine your goals
   - Step 2: Define assessment logistics
   - Step 3: Gather supplies, including Log Sheets
   - Step 4: Communicate plan

2. Self-Assessment
   - Step 5: Setup for assessment
   - Step 6: Collect waste per schedule
   - Step 7: Separate waste as required
   - Step 8: Weigh, record, and properly manage
   - Step 9: Wrap up

3. Analysis & Improvement
   - Step 10: Download Results File and enter data
   - Step 11: Review and analyze results
   - Step 12: Document improvement plan & communicate it
What your waste can teach you

▪ Learning areas
  • Context for goal setting
  • Potential challenges: space, contamination, etc.
  • Wasted food items available for donation
  • Waste reduction opportunities

▪ Important Aspects
  • There will be a lot to process
  • Beware of analysis paralysis
  • Prioritize ideas
  • Every company journey is different
Organize your plans
Organize your plans

Benefits of planning and goal setting

- Public commitment and accountability
- Visibility into targets and progress
- Clear expectations and prioritization
- Sense of program ownership

Goal Examples

- Increase food donated by 10% by end of next quarter
- Train all wait staff by the first of the month
- Improve production yield by 5% before the end of the year
- Go one month with no contamination incidences reported
Navigating Solutions
Navigating Solutions

- Level of visibility into the recycling process
- Staff availability
- Budget – initial vs. ongoing
- Desired level of control
- Use for output material
- Available space
Starting your program
Source separation

- Collection bins
- Clear signage
- Staff training
- Timing
- Contamination
- Costs
Collection bins

- Different and consistent
- Intuitive placement
- Appropriate number
- May be supplied by hauler
- Supplement if necessary
Clear signage

- Paired with every bin
- Clearly visible
- Sized appropriately
- Pictures > words
- Specific to your operation
- Update as necessary

Food Scraps

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>• Dairy</td>
<td>• Stretch wrap</td>
</tr>
<tr>
<td>• Meat</td>
<td>• Straws</td>
</tr>
<tr>
<td>• Bones</td>
<td>• Packaging</td>
</tr>
<tr>
<td>• Paper napkins</td>
<td>• Wax paper</td>
</tr>
<tr>
<td>• Onion cores</td>
<td>• Gloves</td>
</tr>
<tr>
<td>• Plate scraps</td>
<td>• Take-out boxes</td>
</tr>
<tr>
<td>• Vegetables</td>
<td>• Cardboard</td>
</tr>
<tr>
<td>• French fries</td>
<td>• Plastic</td>
</tr>
<tr>
<td></td>
<td>• Coasters</td>
</tr>
<tr>
<td></td>
<td>• Cloth napkins</td>
</tr>
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</table>
Staff engagement and training

- Assign a champion
- Engage from the start
- Listen to feedback
- Regular checks
- Positive reinforcement
Timing

- Consider a phase – in approach
- Easier areas first
- Expand over time as habits are formed
- Adjust if necessary
Contamination

- Contamination issues don’t all have the same cause
- Uninformed solutions may not address the problem
- Work with a team to understand and solve the issue

Program seen as unimportant
Run out of clean bins by end of shift
Unclear what belongs in compost bin
Bin is not conveniently located
Limited time/space to separate

- Increase signage and retrain staff
- Add tabletop compost bins
- Reduce/eliminate contamination sources
- Discuss program outcomes regularly at daily huddle meetings
- Work with hauler to update bin style/collection schedule
- Rearrange work flow
Costs

• Ongoing fee for service
  ▪ Variables: # bins, # of pick ups
• Additional bins
• Sign printing
• Negotiate trash bill
  ▪ Depends on billing structure
  ▪ Decrease # pick-ups
  ▪ Decrease size of bin
Final thoughts

...and stick with it

New habits take time to form, mistakes will be made. Encourage dialogue, track progress and use those learnings to make stronger programs.
Thank You

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Resources


• New York State Pollution Prevention Institute (NYSP2I): https://www.rit.edu/affiliate/nysp2i/organic-resource-locator
• Food Bank of the Hudson Valley: https://foodbankofhudsonvalley.org/donate-food/
• New York State Association for Reduction, Reuse and Recycling (NYSAR): https://www.nysar3.org/page/strategies-for-businesses--institutions-129.html
Already regulated under the New York State Food Donation and Food Scraps Recycling Law?

Submit a Waiver form and supporting documentation by November 30

https://www.dec.ny.gov/chemical/114499.html
Thank you for attending!

https://ulstercountyny.gov/environment/department-environment

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