

PLASTIC

and Its Impacts

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Learning Outcomes

01.

Intro

What is plastic?
How is it produced & used?
What is the scale & impact
of plastic pollution?

02.

Local

What local laws
reduce plastic waste?
What are the local
recycling
opportunities &
limitations?

03.

Solutions

Plastic Free July Challenge
How to Reduce Plastic Use
at Home
Additional Resources

01.



UCRRA managed over 140,000 tons of Municipal Solid Waste and Construction & Demolition debris in 2021.



ULSTER COUNTY RESOURCE RECOVERY AGENCY
999 Flatbush Road Kingston NY 12401
845-336-0600 WWW.UCRRA.ORG @UCRRA



Seneca Meadows Landfill

UCRRA Recycling Outreach Team

Ulster County Resource Recovery Agency
Waste Reduction and Recycling Guide
 For Businesses, Schools, and Institutions

Ulster County Resource Recovery Agency
Food Waste Reduction Guide

Ulster County Resource Recovery Agency
Backyard Composting Guide

HOME COMPOSTING DEMONSTRATION GARDEN
 CALL 845-336-0600 TO SCHEDULE A GUIDED TOUR

Be Plastic-Free because Plastic Pollutes!

According to NY Department of Environmental Conservation, "Plastic made up 13% of all municipal waste generated in New York, and approximately 17% of the material buried in landfills (2016). 4% of plastic produced today is used for packaging, which is used once and then discarded. In this waste stream it could take more than 500 years to break to basic elements. Most of the plastic used today cannot be recycled because!"

Guía de reciclaje de doble flujo

Plásticos botellas, jarras, cubetas y tapas
Vidrio botellas/botines
Metal latas, tapas y botellas de aluminio

Papel Mixto periódicos, revistas, carpetas, sobres, etc.
Cartón Corrugado cajas de cartón

0% ZERO WASTE Seminar Project

SP21 New York State Pollution Prevention Initiative

999 Harbush Road Kingston NY 12401 • www.UCRRRA.org • 845.336.0600 • @UCRRA



RECYCLABLES ONLY
NO TRASH PLEASE!
¡SOLO RECICLABLES!
NO BASURA, POR FAVOR!

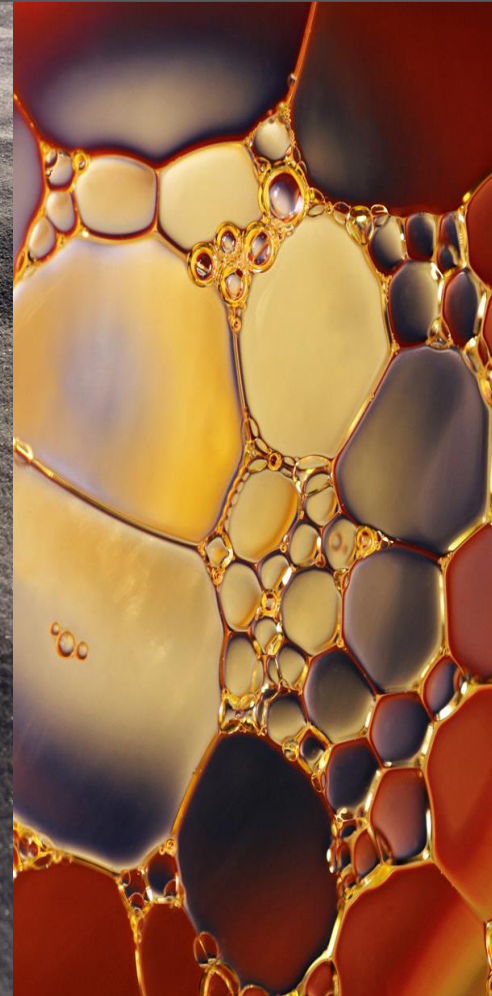
TRASH ONLY
NO RECYCLABLES PLEASE!
¡SOLO BASURA!
NO RECICLABLES, POR FAVOR!

FOOD SCRAPS ONLY
NO TRASH PLEASE!
RESIDUOS DE COMIDA SOLAMENTE
NO BASURA, POR FAVOR!



01/01/2017

01.



Raw Material Extraction

01.



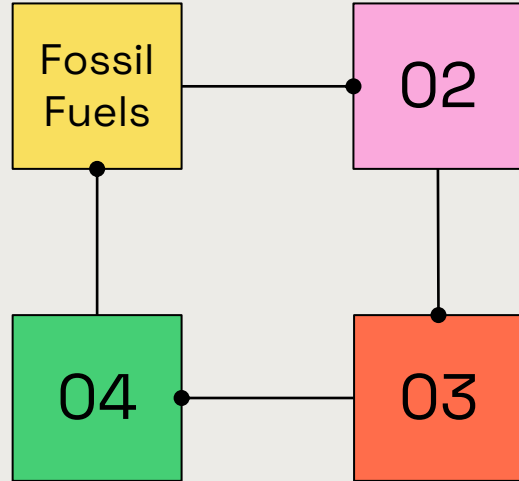
Plastic Production

Photo Credit: blog.bizvibe.com

01.

Plastic

Fossil fuels are sent to refiners where they're converted into several products (ethane, propane).

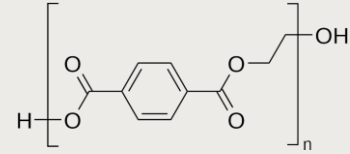


Manufacturing

These materials are easily molded and shaped under heat and pressure. Polymers can be pellets ("nurdles") fibers, or flakes for manufacturing factories to melted and mold them into various containers or objects.

Processing

At "cracker plants" materials are broken down into smaller molecules (ethane - ethylene; propane - propylene).



PETE - polyethylene terephthalate

Polymers

Next, a catalyst is added to link the molecules together and form polymers or *resins* (ethylene - polyethylene; propylene - polypropylene).



01.

BIPOC (Black, Indigenous, People of Color) and people living in poverty are significantly more likely to live near hazardous chemical facility zones, including plastic production facilities.

BIPOC make up nearly half the population in chemical facility zones (11.4 million) and are twice as likely as white Americans to live near dangerous chemical facilities.

BIPOC children make up almost 2/3 of the 5.7 million children who live within 1 mile of a high-risk chemical facility in the U.S.

1.8 million Latinx people in the U.S. live within half a mile of an oil and gas facility.

A disproportionate number of chemical facility incidents occur in neighborhoods that are predominantly populated by BIPOC.

BIPOC face a 28% higher health burden due to living in proximity to facilities emitting particulate pollution like soot. Black Americans, face a 54% greater health burden.



01.

Consumer Use



01.

There are thousands of chemicals in use today... 144 chemicals or chemical groups are known to be hazardous to human health.

Researchers assert that exposure can occur during the entire lifespan of plastic products, from the manufacturing process to consumer contact, recycling, to waste management and disposal.

These chemicals are used extensively in packaging, construction, flooring, food production and packaging, cookware, health care, children's toys, leisure goods, furniture, home electronics, textiles, automobiles and cosmetics.

Source: Plastics, EDCs, & Health, Report by the Endocrine Society and the International Pollutants Elimination Network, (IPEN). Learn more: <https://ipen.org/site/plastics-pose-threat-human-health/>

Plastic polymers may include additives such as: colorants, antioxidants, antimicrobials, foaming agents, plasticizers, UV-stabilizers, lubricants, or flame retardants.

Additives impart specific mechanical, chemical, or physical qualities such as: protecting against degradation by light/heat/bacteria/dust, provide product color, improve surface appearance, reduce friction, add flame retardancy, etc.

Harmful Chemical Additives in Plastics

01.

BISPHENOLS (BPA)

Used in reusable food and beverage containers, reusable water bottles, the linings of food cans, medical and sports equipment, eyeglass lenses, thermal paper receipts, and plastic water pipes.

UV STABILIZERS

Used to protect plastic building materials, automotive parts, waxes, and paints from deterioration due to UV radiation.

PHTHALATES

Used in PVC consumer, medical, and building products, personal care cosmetics, in medications and dietary supplements, food and beverage packaging, and children's toys.

DIOXIN

Occur in the production of plastic products with BFRs and when they are incinerated or heated in a recycling process to be re-molded into new products. There is no safe level of dioxin exposure.

BROMINATED FLAME RETARDANTS, BFRS

Used in firefighting foams, polystyrenes, and epoxy resins that are used for electronic casings and wire coatings, textiles, furniture foams, carpets, building materials, and plastic children's toys.

PERFLUORINATED COMPOUNDS

Used in food contact wrappers, lubricants, carpet treatments, paints, cookware, and as a dispersant in firefighting foams, as well as other industrial and consumer applications.

ALKYLPHENOLS

Used in latex paints, pesticides, industrial cleaners, detergents, personal care products, and many different kinds of plastics as UV stabilizers.

01.

**PLASTIC
TAKES
500
YEARS
TO
DECOMPOSE**

@LilacCompany

Mogul X



Materials Management

01.

The Plastic Problem

36%

of all plastic
produced is for
single use
applications

12.2%

of all municipal
solid waste
generated

4.5%

Of materials
recycled

18.5%

of material
buried in
landfills

16.3%

of material
incinerated

EPA, 2018

01.



Litter & Mismanagement

INGESTION

Hungry animals mistake the small, colorful floating plastic for food. This causes loss of nutrition, internal injuries, starvation, and even death!

Plankton, shellfish, filter-feeders, over 40% of sea birds, 56% of all marine mammals (whales, manatees, seals), and all seven species of sea turtles have been confirmed to ingest plastic debris. (NOAA)



ENTANGLEMENT

Some wildlife become caught in fishing nets and large debris. This can make it difficult for them to swim and cut into their bodies. Abandoned fishing gear can also continue to trap fish and animals, called ghost fishing.



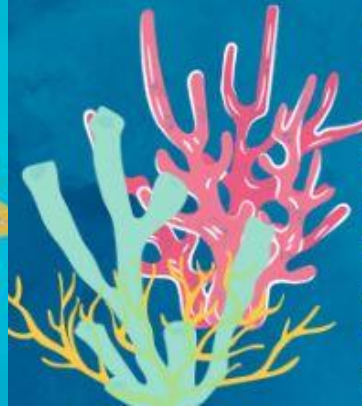
INVASIVE SPECIES

Some marine debris can pick up "hitchhikers" and transport plants or creatures to locations where they would not otherwise be found. Once a new species has spread, it is deemed **invasive** and is extremely difficult to tackle, costs billions of dollars to regulate, and can compete for resources such as sunshine, space, and food with native plants and animals.



HABITAT DESTRUCTION

Marine debris can be found in wildlife habitats such as wetlands and mangroves, salt marshes, and sandy beaches. Marine debris can affect habitats by crushing or suffocating fragile plants and corals, as well as lowering the amount of light or oxygen required for survival.



01.

Microplastics are microscopic plastic fragments that are less than 5 mm (0.2 inches).

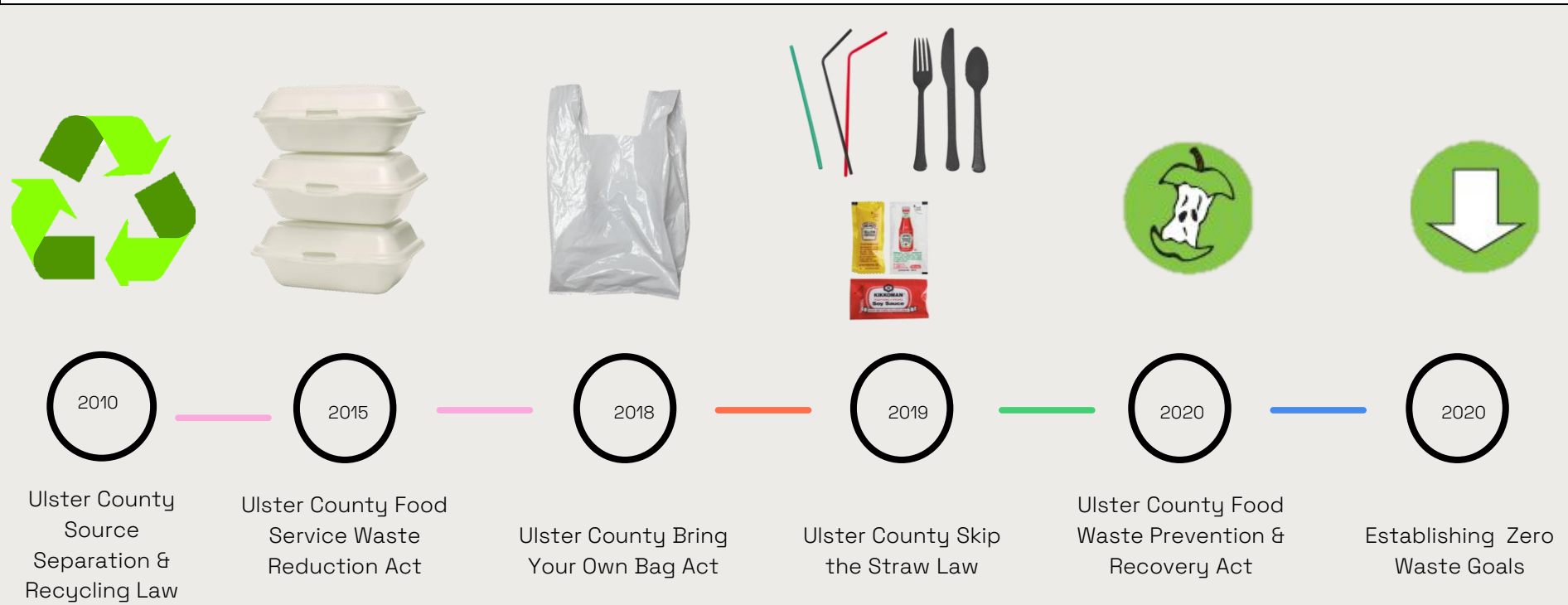
Microplastics come from a variety of sources, including the degradation of marine debris, microbeads from health and beauty products, and micro fibers from laundering synthetic textiles.



Microplastics have been documented in tap water, beer, commercial sea salt, arctic sea ice, sediment in lakes and rivers, and even the air we breathe. (PLOS, 2018)

Microplastics can hold onto harmful pollutants that bioaccumulate up the food chain.

Ulster County Materials Management Legislation



Ulster County Food Service Waste Reduction Act

Local Law Number 4 of 2015 prohibits all food service establishments from using expanded polystyrene foam (commonly referred to as Styrofoam) when preparing, selling or providing food and beverages in Ulster County.

Who does this law apply to?

- A. Chain Food Service Establishments
- B. Food Service Establishments
- C. County Permitted Events & County Sponsored Events

Contact environment@co.ulster.ny.us with any questions or concerns.

**New York State Expanded Polystyrene Foam Container and Loose Fill Packaging Ban became effective January 1st 2022.*



Examples of **unacceptable** products:



Ulster County Bring Your Own Bag Act



Local Law #5 of 2018 known as the "Bring Your Own Bag Act" prohibited covered stores from providing single-use plastic bags at the point of sale at most retail locations in Ulster County. The law also mandated a minimum five cent fee for providing recyclable paper bags, and no fee to bring a reusable shopping bag.

**The Ulster County law contains a reverse pre-emption provision and is considered no longer effective on March 1, 2020 when the New York State Bag Waste Reduction Law became effective.*



Contact plasticbags@dec.ny.gov with any questions or compliance concerns.

Ulster County Skip the Straw Law



Local Law Number 2 of 2019, provides that single use plastic straws be made available to patrons of restaurants and fast-food establishments only upon the customer's request.

The law was later amended by Local Law Number 7 of 2019 to include plastic stirrers, plastic cutlery, and condiment packets.

Who does this law apply to?

Any establishment providing prepared food for a customer, either to be eaten on site or for take-out/take away, is required to comply.

Contact environment@co.ulster.ny.us with any questions.

An informational graphic with a blue background. At the top left, it says "Here in Ulster County, we pride ourselves on beautiful natural areas. But plastic pollution is a threat to our environment. Plastic litters our waterways, finds its way into our soil or food and can even impact human health." Below this, it says "The Skip the Straw law empowers individuals to help reduce plastic pollution in our environment by only requesting these items if needed. Small steps add up!" At the bottom left, it says "SPREAD AWARENESS". In the center, there is a circular seal of the State of New York and a logo that says "SKIP THE STRAW LAW #2019-7 ULSTER COUNTY NY". At the bottom right, it says "USE LESS PLASTIC". On the right side, under the heading "FOR MORE INFORMATION", it lists: "please see FAQ website ulstercounty.ny.gov/SkipTheStraw or email environment@co.ulster.ny.us" and "UC Health Department (845) 340-3010" and "UC Department of Environment (845) 338-7287 ulstercounty.ny.gov". At the bottom right, there is a small asterisked note: "*Single use condiment packets will be made available upon request, and may also be displayed for customers to help themselves."

Ulster County Food Waste Prevention & Recovery Act

Local Law No. 1 of 2020 establishes a hierarchy for the reduction, reuse and recycling of food scraps and excess edible food by large generators in Ulster County.

Who does this law apply to?

'supermarkets, food service businesses, hotels, correctional facilities, entertainment venues, hospitals, nursing homes, schools and other food caterers or processors that generates (at a single location) an annual average of 1/2 ton per week or more '

The implementation of the law will incrementally target generators producing 2 tons per week (January 1, 2021) down to 0.5 tons per week (July 1, 2023).

Contact foodwastelaw@co.ulster.ny.us with any questions or concerns.

**New York State Food Donation & Food Scrap Recycling Law (effective January 1 2022) has similarities but differs significantly in definition and requirements for LFSG.*



Establishing Zero Waste Goals

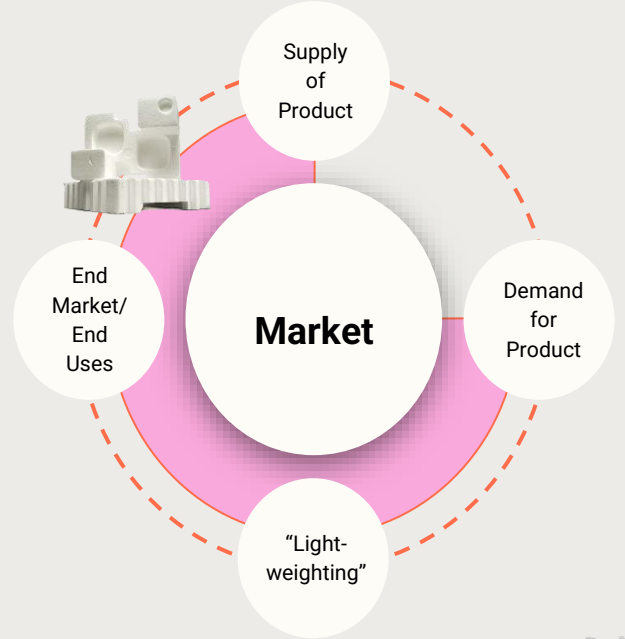
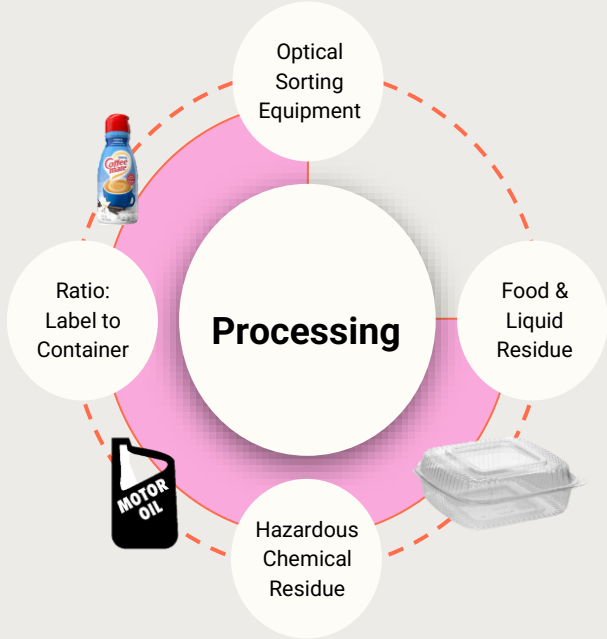
Ulster County
Resolution No. 451
(Nov. 2019)

UCRRA
Resolution No. 2515
(July 2020)



What makes something recyclable or not?

02.



02.



Are you "wish-cycling?"

“Wish-Cycling”

- Damages equipment
- Harms workers
- Wastes time & money
- Contributes to environmental justice concerns & issues
- Ruins the value of other recyclables!

When in doubt, contact your recycling service provider or the UCRRA Recycling Outreach Team!



02.



Curbside Pick-Up

Hire a company
Set out your recyclables
Single Stream Recycling (SSR)
Recyclables are processed by the company

<https://ucrra.org/waste-recycling/find-a-curbside-hauler/>



Municipal Drop-Off


Purchase a permit at your local MRDC
Drop-off your recyclables
Dual Stream Recycling (DSR)
Recyclables are processed by UCRRA

<https://ucrra.org/waste-recycling/town-transfer-stations/>

Dual Stream Recycling Guide

Ulster County Resource Recovery Agency
999 Flatbush Road, Kingston, NY
WWW.UCRRR.ORG • @UCRRA
845.336.0600

These guidelines pertain to Ulster County residents that utilize local Municipal Recycling Drop Off Centers, or any commercial business that utilizes the UCRRA Dual Stream Recycling Program. For more information about residential transfer stations, visit www.ucrra.org/waste-recycling/town-transfer-stations.



Plastic


Bottles, jugs, jars, tubs, & lids


Glass


Bottles & jars

Metal

Cans, lids, foil wrap & foil trays









Mixed Paper

News, office paper, junk mail, boxboard, etc.



Corrugated Cardboard

Corrugated boxes



Clean, Empty & Dry

Keep bottle caps on

No plastic bags

Keep items loose

Break Down Boxes

Learn more about recycling at www.ucrra.org/waste-recycling/dual-stream-recycling

This flyer is made possible with the support of funding by the New York State Department of Environmental Conservation, as administered by the New York State Environmental Decision Support.

Know Your Program. Avoid Wish-cycling!

For recycling to be environmentally and economically sustainable, it's important to understand local recycling Do's and Don'ts. Placing unacceptable items in the recycling bin is very harmful to the collection, sorting, processing, and marketability of recyclable items.

Wish-cycling:

- Damages recycling equipment
- Injures sanitation workers
- Ruins the value of other recyclables
- Is time-consuming and expensive to remove and handle properly

When in doubt, ask! Contact the UCRRA Recycling Outreach Team, or your recycling service provider.

 <p>no Clamshell Packaging</p> <p style="font-size: x-small;">Hinged salad or berry containers, take-out, to-go containers, or bakery domes</p>	 <p>no Tanglers</p> <p style="font-size: x-small;">Coat hangers, garden hoses, belts, clothing, chains, ropes, wires, etc.</p>	 <p>no Bags & Plastic Films</p> <p style="font-size: x-small;">Plastic shopping bags, plastic food bags, shrink wrap from products, etc.</p>	 <p>no Single Use Service Ware</p> <p style="font-size: x-small;">To-Go utensils, cups, straws, plates, napkins, etc.</p>
 <p>no Bulky Rigid Items</p> <p style="font-size: x-small;">Miscellaneous toys, baskets, furniture, tires, auto parts, scrap metal, etc.</p>	 <p>no Electronics</p> <p style="font-size: x-small;">Cell phones, batteries, CDs, wires, appliances, etc.</p>	 <p>no Foam</p> <p style="font-size: x-small;">Expanded polystyrene foam blocks, packing peanuts, cups, etc.</p>	 <p>no Hazardous/Medical</p> <p style="font-size: x-small;">SHARPS, medication bottles, chemicals, etc.</p>
 <p>no Pizza Boxes</p>	 <p>no Black Plastic</p> <p style="font-size: x-small;">Meat trays, black containers, flower pots, etc.</p>	 <p>no Non-Container Glass</p> <p style="font-size: x-small;">Ceramics, dishes, glassware, mirrors, windows, etc.</p>	 <p>no Paper Beverage Cartons</p> <p style="font-size: x-small;">Large or small milk/juice & beverage/snack pouches</p>



"How do I get rid of...."

Visit our A-to-Z Recyclingpedia for more alternative recycling options!

Reduce It! Refuse It! Regift It! Repair It! Upcycle It!

But please, do not wish-cycle it!

Ulster County Resource Recovery Agency | 999 Flatbush Road Kingston NY | 845.336.0600 | WWW.UCRRR.ORG | @UCRRA





Thank you for recycling!

Ulster County recycled 52 MILLION LBS. (26,366 tons) of recycling in 2019!

These guidelines pertain to Ulster County Residents that utilize local Municipal Drop Off Centers, or any commercial business that utilizes the UCRRA Dual Stream Recycling Program.

02.



The NYS Plastic Bag Reduction, Reuse and Recycling Law requires large retail stores to make film plastic collection bins available so consumers can recycle their clean and dry film plastics.

Smaller chain stores with 5 or more locations in NYS and 5,000 square feet of retail space are also subject to the law.

Film plastics require special recycling in order to be turned into composite building material for decking, park benches, picnic tables, and more.

Learn more:
www.plasticfilmrecycling.org/

02.

Don't JAM Us Up!

Film plastics should **NOT** go into household recycling bins. Recycle at designated retail stores.

Check your local recycling program rules



Department of
Environmental
Conservation



#RecycleRightNY

03.

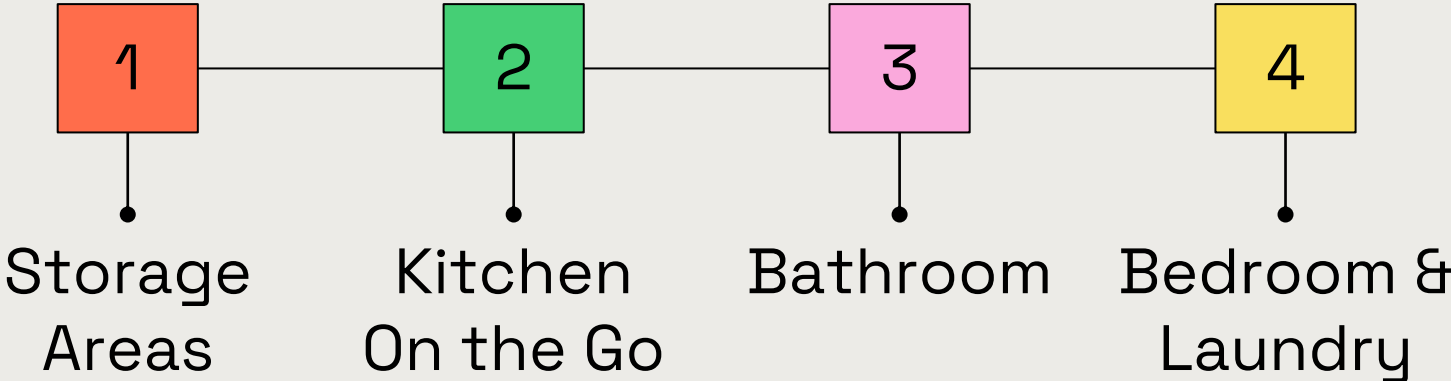
The Big Idea

We make choices every day that create waste.

Personal choice and behaviors can significantly reduce waste before it ever enters our home and lives! It will take a combination of advocacy, policy, innovation and practice to go beyond recycling and move towards a culture of "reuse."



Rethink Waste - One Room at a Time



03.

1. Do I need this? How will I use it?
2. How is it made? How long will it last?
3. Does it put my family's health in danger?
4. Is it reusable? Can it be recycled?
5. Can I find it secondhand?
6. Could another item I already have achieve the same task?



1. Is it recyclable?
2. Is it still usable? Can I donate it or give it away to someone?
3. Is it valuable or worth money as scrap?
4. Does it still work? Can it be repaired?
5. Can it be exchanged when I get a new one?
6. Does it require special disposal to safely discard it?

Ask yourself...

03.



1

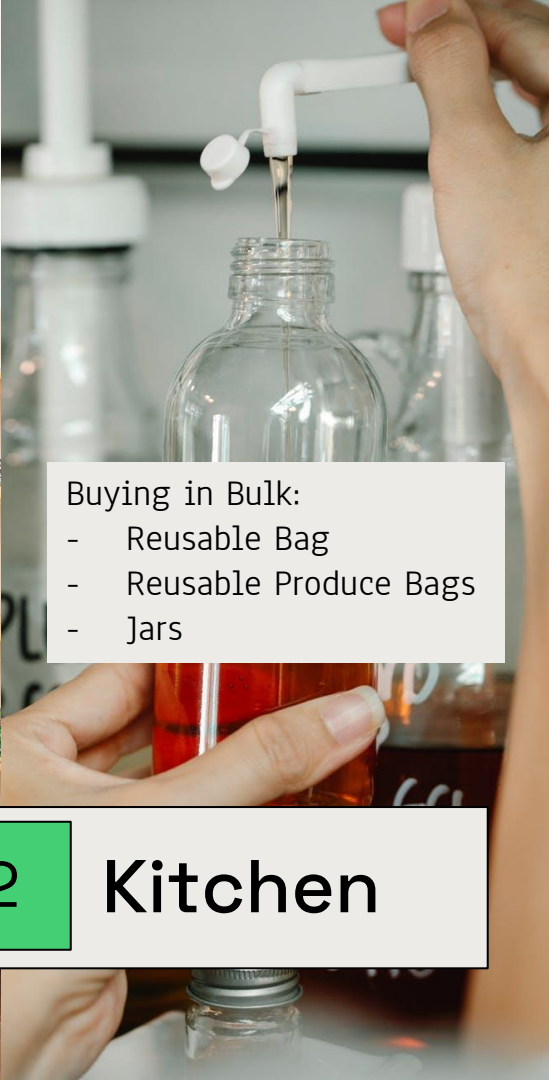
Storage Areas



03.

Sustainable Swaps:

- Cleaning Products
- Disposable Sponges
- Parchment Paper
- Ziplock Bags



Buying in Bulk:

- Reusable Bag
- Reusable Produce Bags
- Jars

2 Kitchen

Buying Seasonally:
Seasonally, produce can be bought without its plastic packaging. Ex. Strawberries



03.



New Paltz Climate Smart Taskforce & New Paltz Climate Action Coalition MAP

My Alternatives to Plastic

An interactive google map showcase of plastic-free, package-free, and/or responsible package shopping and takeout dining locations in the Hudson Valley.

MAP includes tiffin-friendly locations!



bit.ly/hudsonvalleymap



2 On the Go



03.

Sustainable Swaps:

- Shampoo/Conditioner
- Soap
- Deodorant
- Toothbrush/Toothpaste
- Razor
- Loofah

3 Bathroom



03.



4

1

SKIP PLASTICS!

Buy less but better.
Reflect on what you really need before you purchase. Check the label and avoid synthetic textiles such as polyester, acrylic and nylon. Be critical towards misleading advertisements. Also ask your local store and favorite brand for microfiber free alternatives. They need to know that you care.

2

STAY COOL!

Wash colder.
It is a dogma that is passed down from one generation to the next: Wash colors at 40°C/ 104°F and bed linen at 60°C/140°F. In the vast majority of cases 30°C/86°F is sufficient. Water in combination with heat weakens the yarn. The so-called hydrolysis results in much more plastic ending up in our oceans.

STOP!
MICRO
WASTE
for a plastic free nature

3

GOSH, DON'T WASH!

Wash less.
Air out your clothes and wash out stains by hand to avoid unnecessary laundering. Don't let convenience harm sea life and our health.

4

NO SPIN!

Reduce rotation speed.
A lot of friction happens during the spin cycle. Synthetic textiles dry fast. Skip the spin cycle or at least reduce rpm (rotation per minute) to protect your clothes and the environment.

5

NO SHOES!

Do not wash solid items with your laundry.
Fibers break due to the mechanical forces in the washing machine. Anything solid washed with your clothes leads to significantly more fibers breaking. Avoid items such as shoes and shin guards. Also using washing balls and soap nuts – even though used with good intentions – result in more plastic in the ocean.

6

SOFT TO SOFT!

Separate textiles with hard and soft surfaces.
Related to the previous rule and based on the same insight: Separate textiles with a hard surface from those with a soft surface. If you stop washing things like jeans and your fleece items in the same wash load, you will reduce your contribution to wash-related microplastic pollution.

7

BOYS DON'T DRY!

Don't tumble dry your clothes.
The heat and the mechanical forces inside a tumble dryer are also a culprit of microplastic pollution. Synthetic clothes dry super fast anyway. Air-dry your clothes. If you have to use a dryer, please make sure to filter the condensed water.

8

BE QUICK!

Wash shorter.
The longer you wash, the more fibers break. All washing machines have a short washing program. Use it.

9

GREENER CLEANER!

Use less and best detergent.
Washing powder often contains mineral abrasives. These abrasives tend to increase friction, and increased friction leads to more fibers breaking. Bleach and ph-value affect the fiber construction, too. Look for a detergent with a neutral ph-value and without bleach.

10

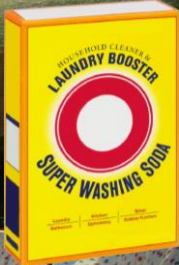
FILTER!

Use a filter and the Guppyfriend Washing Bag.
Filter your wastewater: Build a filter for the outlet of your washing machine. Use the Guppyfriend washing bag. It prevents microfibers from entering oceans. Its use results in fewer fibers breaking and thus extends the lifetime of your textiles. Those fibers that do break are reliably held back. The Guppyfriend is also a daily reminder to recall the TEN FOR THE OCEAN.

03.

Sustainable Swaps:

- Laundry Soap and Stain Removers
- Fabric Softeners
- Dryer Sheets



4 Sustainable Laundry Tips



03.

Reduce



Woodstock Bring Your Own Store
Woodstock NY
Photo credit: Best Self Magazine



The Ozone Store
Red Hook, NY
Photo credit: Amelia LeGare



Village Grocery & Refillery
Kingston, NY
Photo credit: Village Grocery & Refillery



Regift

Donate

unwanted items that are still in good condition.



Help

your neighbors in need!

Extend

the useful life of goods!



UCRRA

www.ucrra.org/waste-recycling/find-a-reuse-organization/



Facebook Marketplace

UCRRA A-to-Z Recycleopedia



GROWING ULSTER GREEN
UCRRA

ABOUT US ▾ WASTE & RECYCLING ▾ RESOURCES ▾ EVENTS & CLASSES ▾ BLOG CONTACT US ▾

RECYCLOPEA EN ES

COMPOST FOOD AT UCRRA

GROW ULSTER GREEN

& BUY FINISHED COMPOST

COMPOST FOR SALE

ULSTER COUNTY THROWS AWAY 40,000,000 LBS OF FOOD SCRAPS EACH YEAR





Plastic-Free July

More ways to make a difference!

Be in the habit of picking up litter - even when you're far from waterways. Organize a beach clean up day or donate to credible ocean conservancy initiatives that are working on cleaning up the ocean.

Learn how to fix broken but beloved items before throwing them away.
Visit a local Repair Cafe!

Support businesses that make sustainable choices. Ask business leaders to consider more eco-friendly packaging and practices.

Help co-workers and family to better understand the importance of recycling and what to recycle. Make sure workplaces and community centers have recycling programs in place.

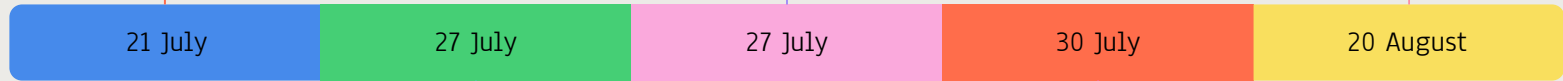
Upcoming Events

FREE Electronics Recycling - Saturdays ONLY (April - Nov)
8 AM - 2 PM
999 Flatbush Road, Kingston

Oceans of Possibilities: Upcycling event
for Children/Teens
Rosendale Library
3:00PM - 4:00PM

Oceans of Possibilities: Upcycling event
for Children/Teens
Ellenville Public Library and Museum
1:00PM - 2:30PM

Household Hazardous Waste Event
UCRRA New Paltz Facility
1 Clearwater Road
Appts. 8AM - 12PM



Eco-Friendly Home! DIY Cleaners & More
Ellenville Public Library & Museum
10:00AM - 11:30AM

Kingston Farmers Market
9:00AM - 2PM

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Director of
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Tanesia White
Recycling Educator
TWHI@UCRRA.ORG

Recycling Hotline:
845-336-3336



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Resource Recovery Agency**
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Kingston NY 12401
WWW.UCRRRA.ORG • @UCRRA
845-336-0600

