RECYCLINGWORKS
MASSACHUSETTS

Gorton's Seafood Case Study

An Ocean-Friendly Approach to Waste Reduction

Gorton's Seafood is guided by a wholesome mission: "To spread the goodness of the sea by making quality seafood available to everyone." Originating in 1849 in Gloucester, MA, America's oldest fishing port, Gorton's has deep roots in the maritime tradition. Today, 175 years later, their primary manufacturing plant, known as the Seafood Center, produces a variety of frozen and ready-to-cook fish sticks, fillets, and more. The Seafood Center produces delicious seafood, which is distributed to grocery stores across the country.

Gorton's has always prioritized environmental stewardship, but it was in 2007 that they began to focus on sustainability as a core business objective. In 2008, Gorton's partnered with the New England Aquarium to ensure their business practices aligned with sustainable fisheries principles, working with leading experts who would eventually compose the Anderson Cabot Center for Ocean Life (the Aquarium's dedicated marine conservation research arm). Over the past 15+ years, this collaboration has been instrumental in shaping Gorton's sourcing policies, informing decisions, and driving positive change throughout the industry.

The original iteration of Gorton's sustainability program, called Trusted Catch, launched in 2011 and focused primarily on seafood sourcing. Over time, the program expanded to encompass all aspects of environmental sustainability, including energy, transportation, waste, and water management. In 2020, Gorton's enhanced their plan by incorporating social and economic sustainability through a data-driven process known as a "materiality assessment." This approach allows them to continuously reassess priorities to align with stakeholder interests. Today, Gorton's Trusted Catch plan centers around four main pillars: Ocean & Fishery Health, Carbon Footprint Reduction, Eco-Friendly Packaging, and Social Responsibility.

Waste prevention and recycling are critical components of the Carbon Footprint Reduction pillar of Trusted Catch, ensuring Gorton's takes intentional action on climate change. Through collaborating with RecyclingWorks in Massachusetts (RecyclingWorks), Gorton's built on their existing waste reduction initiatives and received personalized guidance from a waste reduction expert free of cost. In December 2023, Abbey Massaro, Senior Waste Reduction Consultant at RecyclingWorks, visited the Seafood Center to observe the facility's material management programs and offer suggestions. Since then, Abbey has collaborated with David Gazda, Seafood Center Operations & Corporate Environmental, Health, & Safety Manager, to further improve and expand waste reduction and recycling at Gorton's Seafood.

At-a-Glance

- ★ Gorton's has a streamlined recycling collection program in which they utilize wheeled tilt carts to collect materials like cardboard, block liners, and bagged trash. Special care is used when filling these carts to make it easy to properly unload and separate the materials into their dedicated compactors.
- ★ Gorton's doesn't let any fish go to waste. They recover fish that is unsuited to be sold to their primary customer base through upcycling and sending food scraps to an animal feed production facility.
- ★ Gorton's also recovers their spent cooking oil and wastewater for conversion into biofuel for heating and a sustainable energy source, respectively.
- ★ To further improve their material management, Gorton's is addressing logistical challenges that arise due to their compactor servicing schedule and exploring a film plastic recycling program.

Fish Stick Manufacturing: Inputs, Outputs, & Byproducts

When Gorton's produces frozen fish sticks, fillets, and other products at their Seafood Center, here are the inputs, outputs, and byproducts involved:

Inputs: Fish, breadcrumbs, batter, beer (for beer-battered products), oil, and packaging materials.

Outputs: Packaged, finished fish products ready for distribution.

Byproducts: Packaging, food scraps, spent frying oil, and wastewater (from cleaning machinery and the facility).

To learn how Gorton's is sustainably managing the byproducts, read on!

Collection & Sorting Logistics for Recyclables

Gorton's Seafood Center consists of seafood production areas, several shipping and receiving areas, a waste and recycling storage area, a machine shop, and office facilities. The Seafood Center's team receives incoming fish shipments, portions out the fish, coats the fish in batter and breadcrumbs, par-fries the fish, and then packages finished seafood products for distribution.

To manage the packaging and other materials generated during these processes, staff utilize wheeled tilt carts to gather the following materials together:

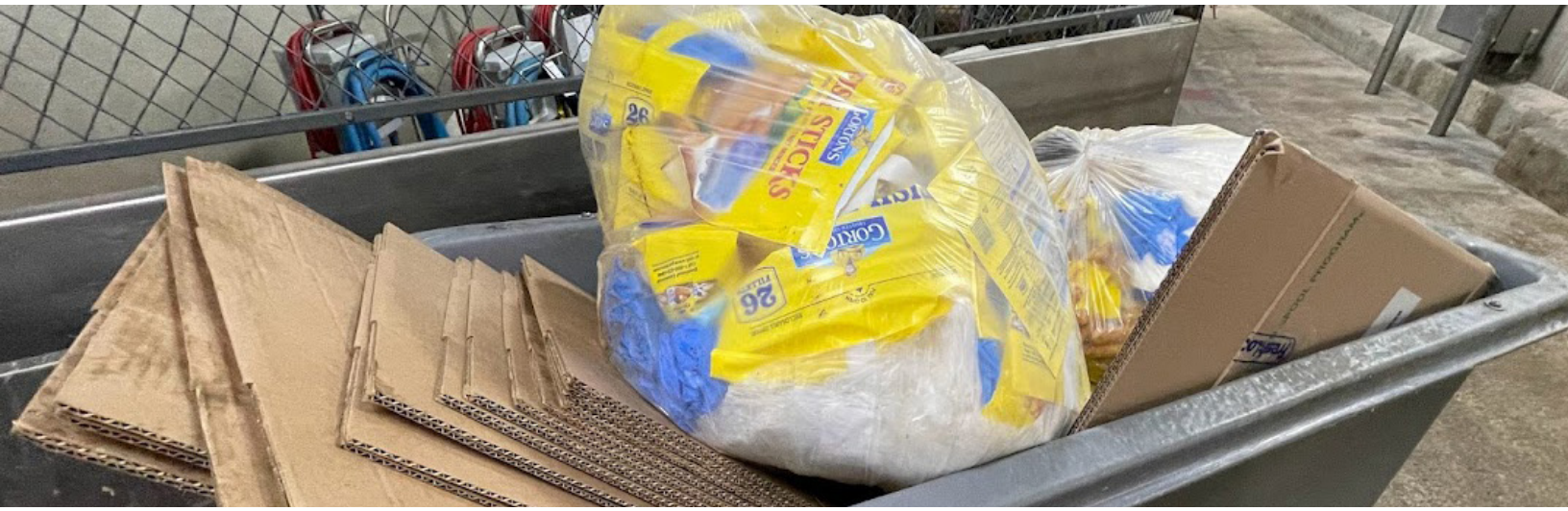
- Cardboard
- Block liners (AKA waxed cardboard*)
- Trash (always bundled in clear plastic bags so that the contents are visible)

**Waxed cardboard is cardboard that has been coated with a thin layer of wax to make it resistant to moisture. Waxed cardboard cannot be recycled with regular cardboard.*

Once the tilt carts are filled, staff bring them to a loading dock area and separate the different material streams. The loading dock has dedicated compactors for trash, cardboard, and block liners. Each compactor is clearly labeled for proper material sorting. While visiting the Seafood Center, RecyclingWorks did not observe any contamination in the compactors. This can be attributed to Gorton's robust employee training program on proper material sorting and clear signage.

Gorton's has an additional recycling area where bottles and cans (plastic/metal/glass), scrap metal, and universal waste are collected in labeled containers. Republic Services collects these recyclables from the Seafood Center, in addition to servicing the facility's cardboard compactors. With an aligned sustainability mission, Republic Services' Gretchen Carey actively works with Gorton's to support their waste reduction initiatives.

Gorton's Seafood readily explores opportunities to reuse materials wherever feasible. They prioritize the on-site reuse of pallets before returning them to Americold, their cold storage and warehouse business partner. Additionally, Gorton's is investigating reuse options for block liners.



Fish Scrap Recovery: Upcycling & Animal Feed

Gorton's strives to reduce all waste, but operational and engineering constraints make it impossible to generate zero waste. In response, the company has implemented extensive recovery and diversion programs for fish products, batter, breadcrumbs, and fish scraps that are deemed unsuitable for sale to their main retail customers. These materials, captured at various points on the production line, represent only a small fraction of the overall materials used to make a finished product.

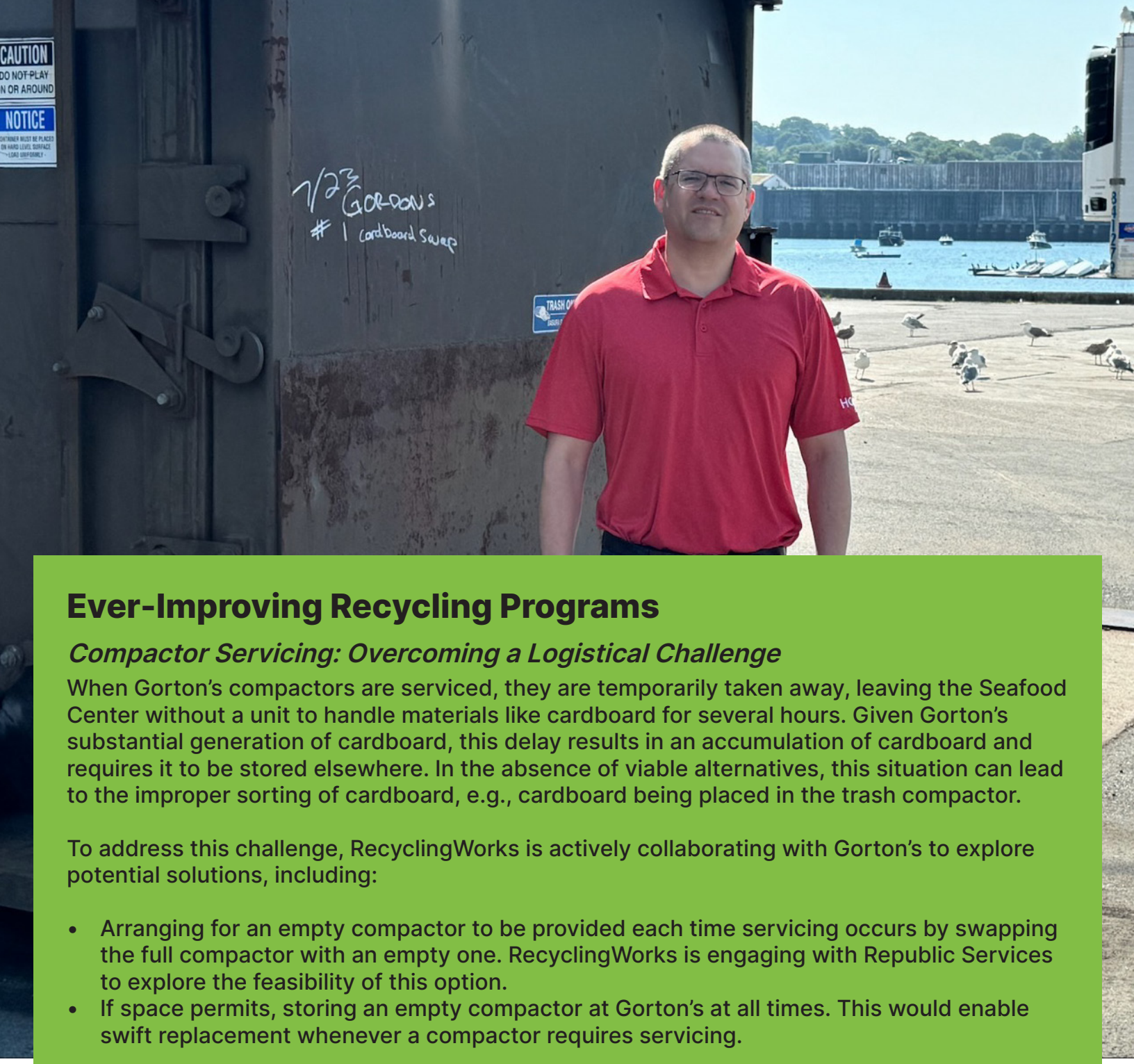
Additionally, slightly misshapen yet still high-quality fish is redirected to secondary markets, such as providing meals at local correctional facilities.

Fish scraps that cannot be re-worked back into production are collected separately and sent to an animal feed production facility called Feedback Earth. Feedback Earth converts food scraps into pelletized food for cattle and pigs. Through a combination of upcycling and food scrap diversion to feed animals, Gorton's does not waste any incoming fish, batter, or breading/coating materials.

Spent Oil & Wastewater Recovery

Gorton's Seafood has a system in place to recover the spent oil from the par-frying process. To manage this oil, the Seafood Center works with Lifecycle Renewables, which picks up the oil and converts it into biodiesel using a purely mechanical process. This resulting biodiesel can be used for heating purposes. The majority of Gorton's spent cooking oil is used to heat a local university.

After Gorton's cleans its manufacturing center and machinery, wastewater is generated. Before this wastewater is directed to the Gloucester Wastewater Treatment System, Gorton's undertakes a pre-treatment process to separate the solid from the liquid contents. The resulting solids, known as sludge, are made up of organic material that can be further utilized. Gorton's partners with Vanguard Renewables to process the sludge through anaerobic digestion (AD). In this process, Vanguard Renewables combines the sludge with cow manure, capturing the methane produced as these materials decompose. The resulting methane can be used for energy production.



Ever-Improving Recycling Programs

Compactor Servicing: Overcoming a Logistical Challenge

When Gorton's compactors are serviced, they are temporarily taken away, leaving the Seafood Center without a unit to handle materials like cardboard for several hours. Given Gorton's substantial generation of cardboard, this delay results in an accumulation of cardboard and requires it to be stored elsewhere. In the absence of viable alternatives, this situation can lead to the improper sorting of cardboard, e.g., cardboard being placed in the trash compactor.

To address this challenge, RecyclingWorks is actively collaborating with Gorton's to explore potential solutions, including:

- Arranging for an empty compactor to be provided each time servicing occurs by swapping the full compactor with an empty one. RecyclingWorks is engaging with Republic Services to explore the feasibility of this option.
- If space permits, storing an empty compactor at Gorton's at all times. This would enable swift replacement whenever a compactor requires servicing.

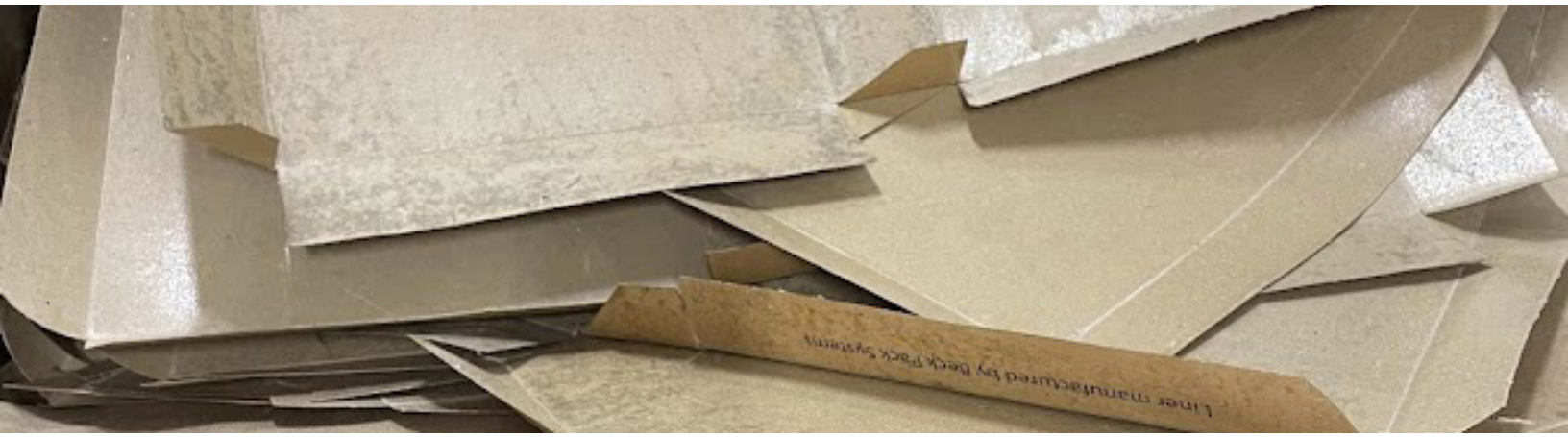
Either of the above options would serve to further streamline the recycling collection process and minimize time without a compactor on-site. RecyclingWorks also recommended that Gorton's request comprehensive historical data from Republic Services on their haul weights for each line of service (e.g., cardboard, bottles and cans, etc.). By analyzing this data, RecyclingWorks could identify seasonal fluctuations and trends over time. Noting trends in compactor weights throughout the year could assist Gorton's in optimizing their total haul weight, which could minimize costs and mitigate negative environmental impact.

One effective tool for this purpose is a Compactor Monitoring System, which monitors pressure gauges within each compactor. This system can automatically generate a service ticket when a compactor approaches full capacity, facilitating timely maintenance and efficient waste management practices.

Film Plastic Recycling

Film plastics, which include plastic bags, pallet wrap, and other stretchy plastic wraps, are not included in traditional recycling streams. Instead, they must be separated and sent to a specialized recycler. RecyclingWorks is helping Gorton's explore a film plastic recycling program, in which this material would be consolidated into bales and sent to a facility that recycles film plastic. Gorton's has limited space to add more dock doors for recycling streams, but feasibility studies are ongoing to explore ways to enhance their recycling capabilities.

To make this program a reality, Gorton's is considering purchasing a baler and installing a new loading dock door. These investments could lead to significant financial benefits and generate cost savings for Gorton's in the future.



Spreading Best Practices

Gorton's maximizes every opportunity to share its waste reduction and recycling initiatives with other food manufacturers. In January 2024, David Gazda presented at a webinar for food and beverage processors hosted by the UMass Amherst Energy Transition Institute. David showcased Gorton's Seafood's sustainability platform, providing an overview of their recycling and diversion programs and key partnerships.

During the presentation, David emphasized that establishing robust recycling and waste reduction programs is worth every ounce of required effort. When asked why other companies should follow suit, David gave the following reasons:

1. It's the right thing to do!
2. It shows your clients and customers that you're a business they can be proud to partner with.
3. Consumers care about sustainability and will choose brands based on a company's ethics and sustainability practices.
4. It can reduce costs and can ultimately make an operations manager's job easier.
5. It can build a positive work culture around sustainability concepts that resonate with employees.

If this reasoning resonates with the values of your business or institution, RecyclingWorks in MA is here to help you achieve your goals.
Contact us at 888-254-5525 or Info@RecyclingWorksMA.com to get started!