

Timothy B. Rose, P.E., BCEE, QEP, M.P.A.  
Executive Director

# Ulster County Resource Recovery Agency

Kingston, NY

SUNY Ulster  
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What is UCRRA?

## **The Agency's Mission Statement:**

- The mission of the Ulster County Resource Recovery Agency is to protect public health and the environment and to promote sustainable materials management practices in Ulster County by efficiently managing solid waste materials with a focus on resource conservation.

## **History:**

- In the mid-1980's, after new initiatives to close non-complying existing landfills were undertaken by the NYSDEC and strict requirements for the siting, construction, and operation of new disposal facilities were enacted, many communities found it beyond their financial and managerial capability to continue to dispose of waste in traditional ways.
- The Agency was created in 1986. It is a Public Benefit Corporation of the State of New York which is empowered by Chapter 13-G of the Public Authorities Law to manage solid waste and recyclables in the County of Ulster.
- In 2012 the Ulster County Flow Control Law was enacted. This ensures that all municipal solid waste created in Ulster County must be disposed of at the Agency.
- Flow Control allows all users to pay the same rate for disposal, and ends tax-payer

## **Facilities consist of:**

- **Ulster**

- Transfer Station
- Scale House
- Vehicle Maintenance Facility (VMF)
- Materials Recovery Facility (MRF)
- Compost Facility
- Administrative Office

- **New Paltz**

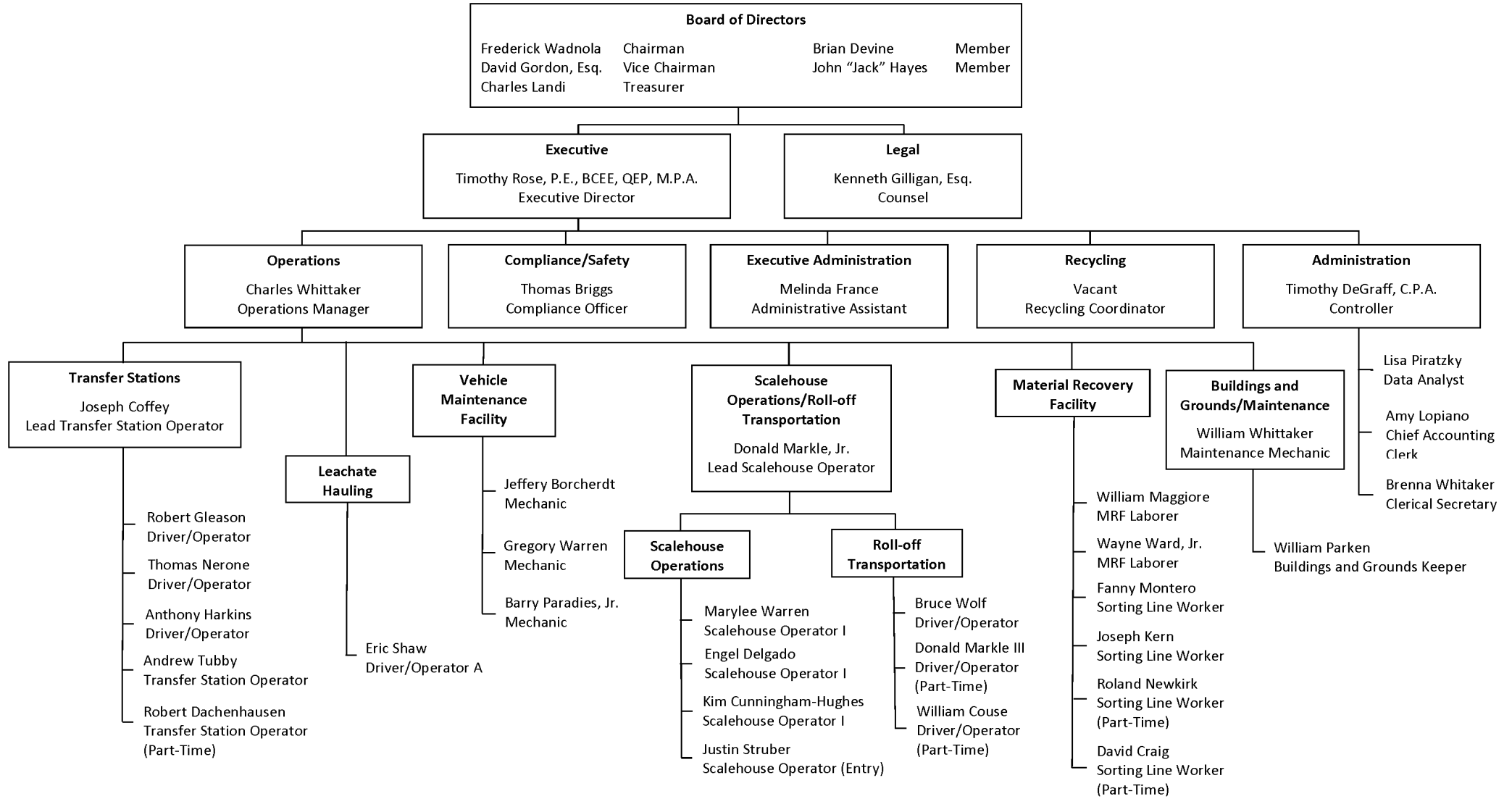
- Transfer Station
- Scale House

- **Two closed landfills**

- New Paltz

# Organizational Chart

## Ulster County Resource Recovery Agency Kingston, NY



# What Services Does UCRRA Offer?

- Trash disposal
- Dual-stream recycling (commercial only)
- Brush/yard waste disposal
- Commercial composting
- Bulk compost for sale
- Electronics recycling
- Household Hazardous Waste & Pharmaceutical Collection events
- Public education

# UCRRA's Recycling Operation

# What is a MRF?

- A **materials recovery facility** or MRF is a specialized plant that receives, separates, and prepares recyclable materials for marketing to end-user manufacturers.
- Some MRF's are built to process single-stream recycling, dual-stream recycling, or both.
- What is the difference between dual-stream and single-stream?
  - Dual-stream means items are separated into two categories:
    - Mixed paper and cardboard
    - Commingled (plastics, metal, and glass)
  - Single-stream means all items are mixed into one container.
- UCRRA's MRF is **dual-stream** only.
- The Agency currently accepts and transports single-stream recyclables. This will be discontinued as of January 1, 2019 due to rapidly rising costs and a lack of



# The Process



Single stream recycling



Mixed paper & cardboard



Commingled (plastics, metal, and glass)

- First, recyclables are unloaded onto the MRF floor.
- **Cardboard** is loaded directly into a baler (a machine that creates tightly compressed bundles that are ready to ship), while a worker pulls contamination before it moves up the belt to the machine.
- **Mixed paper** is loaded directly into trailers for transport.
- **Single-stream** is also loaded directly into trailers to be transported.
- **Commingled (plastics, metal, and glass)** are pushed from the floor onto a belt, then sorted by both machines and by hand. Sorted items are either baled, bagged, or put into a container for transport.
- Recyclables are then purchased by different markets, where they are cleaned and processed into different forms. Those companies then sell them to manufacturers who use them to create new products.



Cardboard being pushed onto a belt leading to the baler



Cardboard moving up the belt



Finished bales



Bales ready for transport



Trash being sorted out of the commingled recycling



Commingled recycling being sorted by hand

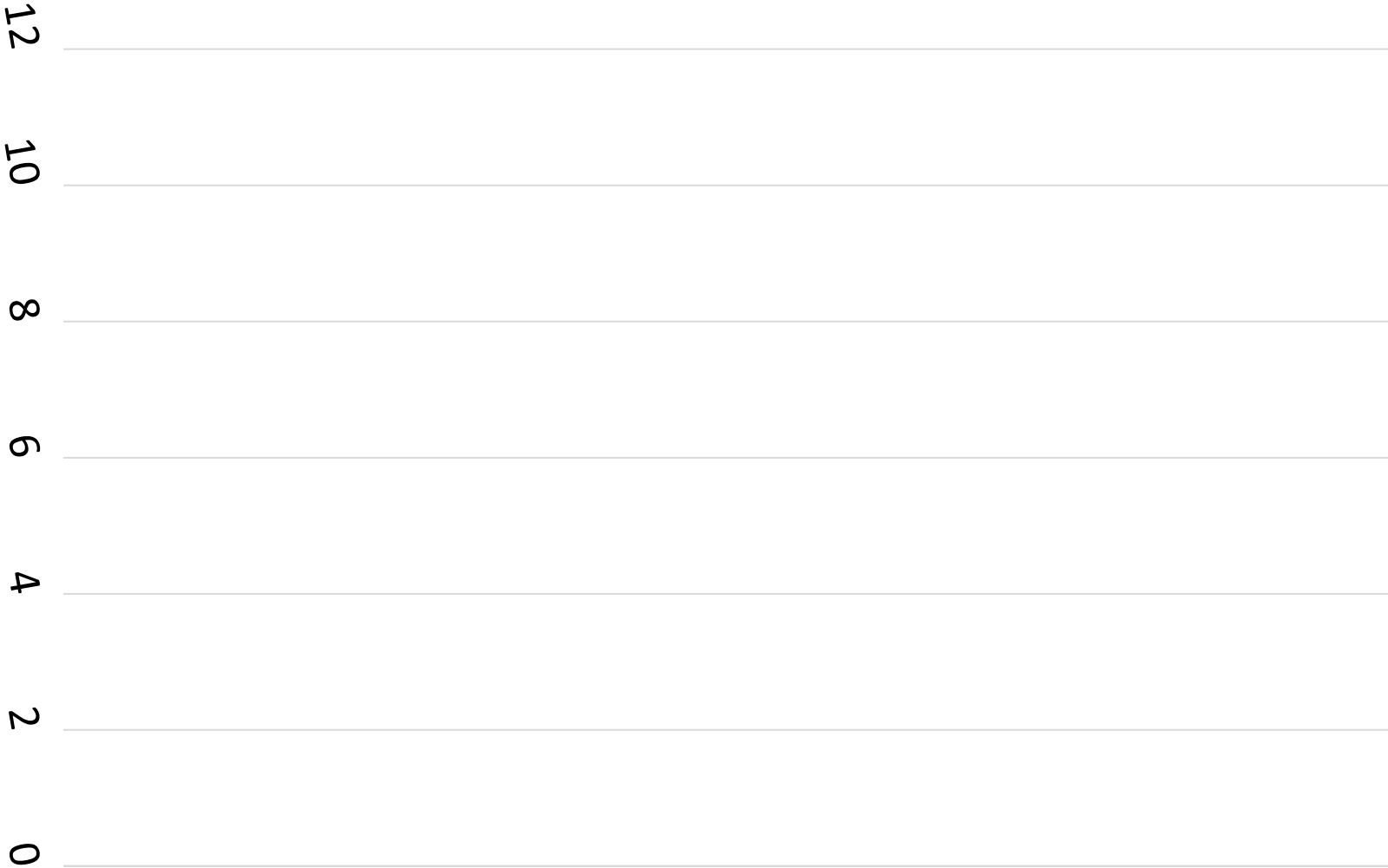


Workers sort plastics into separate containers to be baled



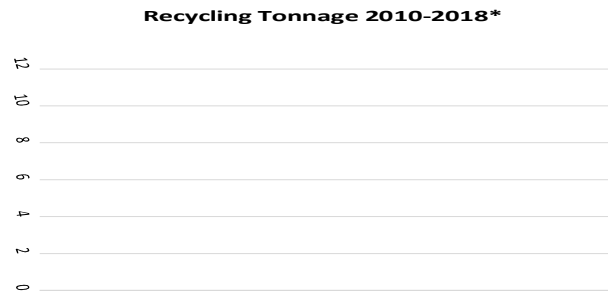
Finished bales ready for transport

# Total Sale of Recyclables 2007-2018\*



- Since the year 2007, the Agency’s revenue from the sale of recyclables has decreased by **88%**
- The decrease in revenue correlates directly with the haulers and municipalities that use the Agency switching from dual stream to single stream recycling.

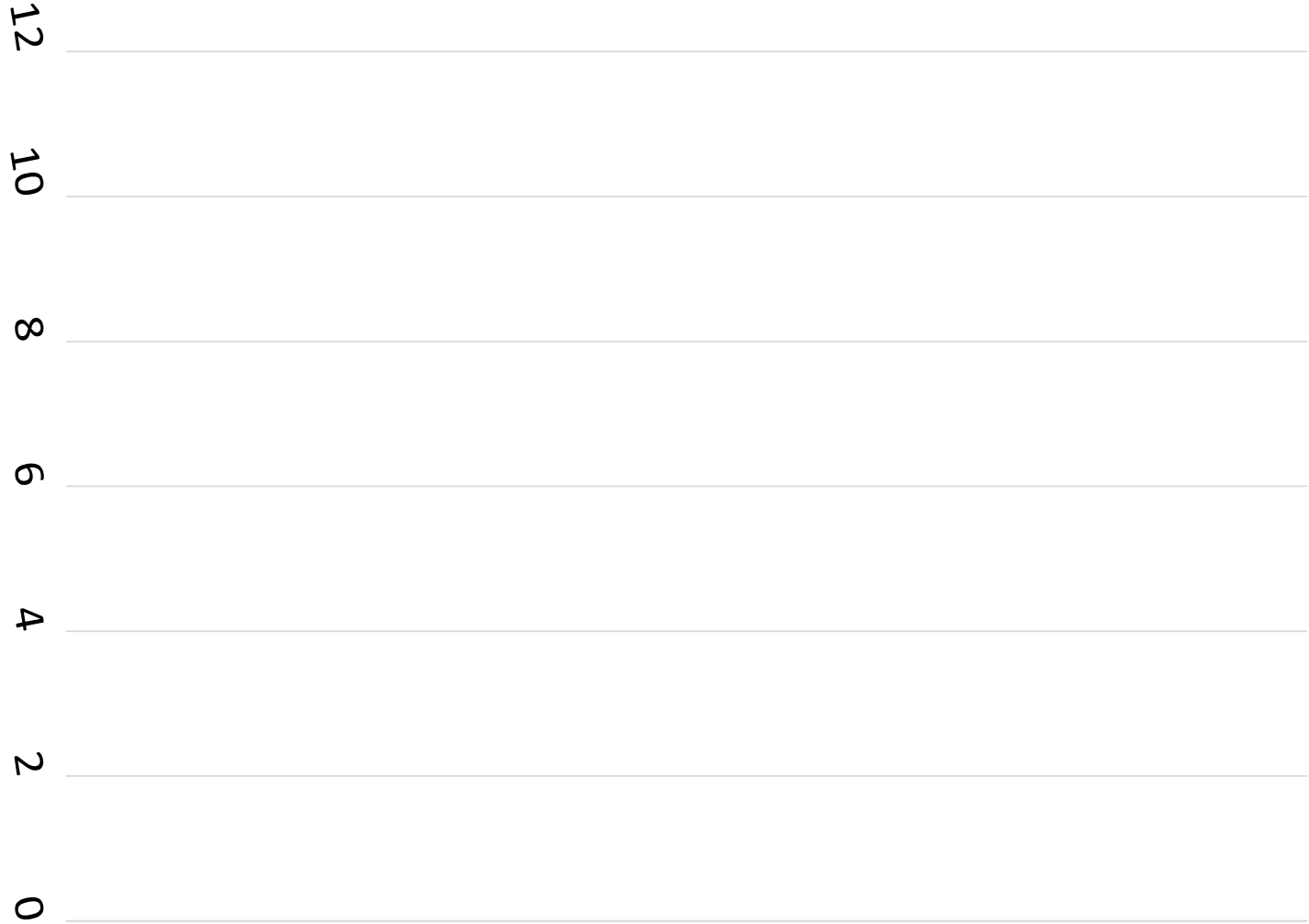
\*2018 totals are estimated for the months of Oct. through Dec.



- The Agency began accepting Single Stream Recycling (SSR) in 2010.
- UCRRA has no way of processing SSR, so it is loaded directly into trucks for transport to markets.
- Over the past 8 years, it has become increasingly difficult to find markets willing to purchase SSR (largely due to contamination), and the Agency began being charged for markets to take it.
- In 2017 the Agency began charging haulers for SSR to offset the cost to the Agency.
- The Agency will cease accepting SSR completely as of January 1, 2019.

\*2018 totals are estimated for the months of Oct. through Dec.

# Single Stream Avg. Market Price (Per Ton) 2013-2018\*



- The corresponding chart shows the steep decline in market value for SSR.
- A **332% decrease** from 2013-2018.

\*2018 totals are estimated for the months of Oct. through Dec.

# UCRRA's Transfer Stations

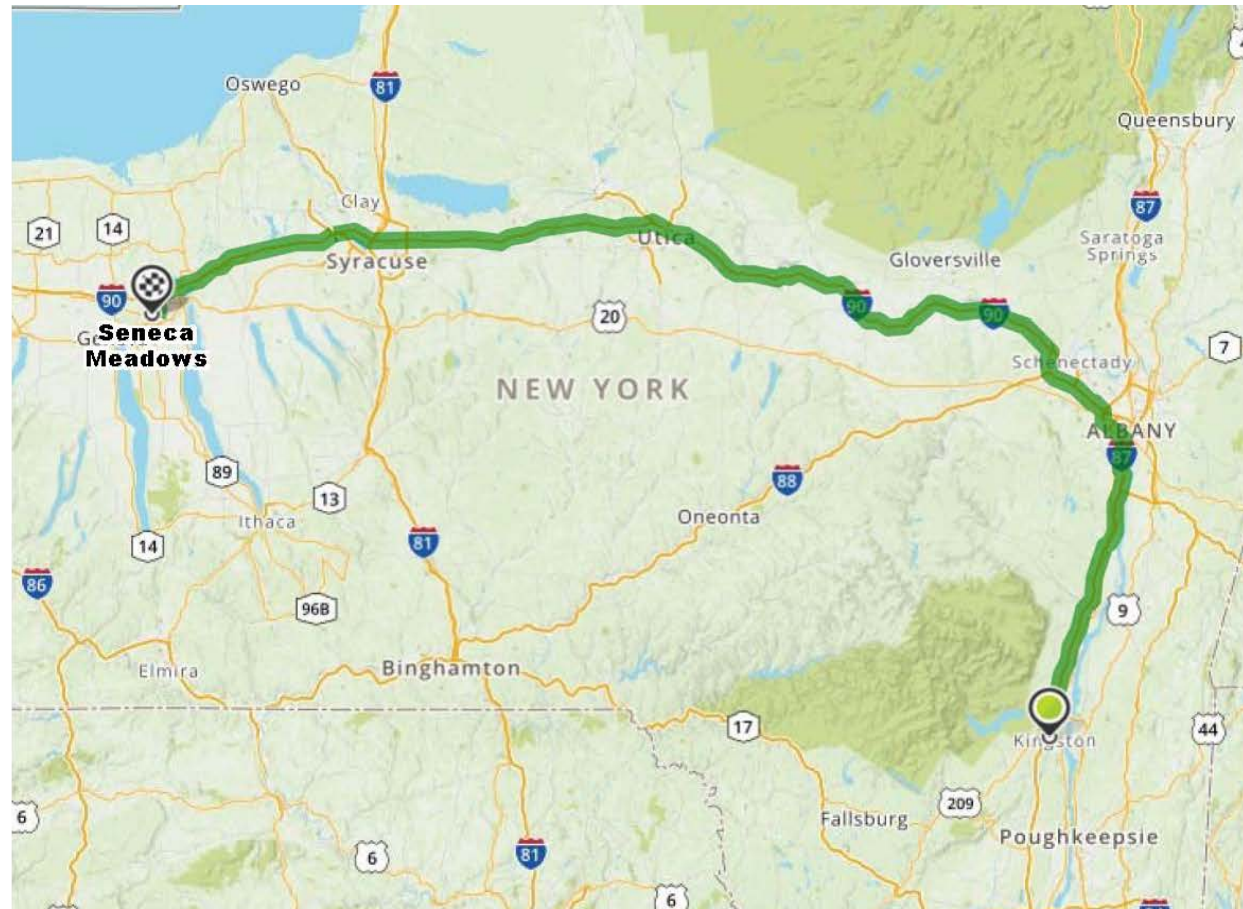


# What is a Transfer Station?

- A **Transfer Station** is a processing site for the temporary disposal of waste. Transfer stations are used as places where local waste collection vehicles will dispose of their waste cargo, where it is then loaded into larger vehicles. These larger vehicles will transport the waste to the end point of disposal in an incinerator or landfill.
- At UCRRA, commercial haulers, contractors, and residents with large vehicles bring municipal solid waste (MSW) and construction & demolition debris (C&D) to the Agency for disposal.



The end-point for all trash brought to UCRRA's Transfer Stations:



## **Seneca Meadows Landfill**

Near Syracuse, NY - 232 miles from Kingston.



# The Process

- Trash (MSW and C&D) is brought to the Transfer Stations in large vehicles such as trucks, vans, SUVs, or trailers. Each vehicle is weighed on the in-bound scale, then proceeds into the Transfer Station where trash is dumped onto the floor. The customer then gets weighed again on the out-bound scale and pays for their load by weight.
- The trash on the Transfer Station floor is pushed into a pile, where it is then grabbed by an excavator and dropped into an open truck waiting below. Once full, the truck is ready to be weighed and then transport the load to the landfill.
- The Agency sends approximately 10 to 15 of these trucks to the landfill six days per week.

- Waste volumes are increasing industry-wide. In Ulster County, the Agency has seen a **12% increase** in waste volume over the past six years.
- Seneca Meadows Landfill will reach capacity within the next 10 years, prompting the Agency and other municipalities that use the landfill to consider other options.

\*2018 totals are estimated for the months of Oct. through Dec.

- UCRRA has processed a total of **739,160 tons** of waste from 2013 to present. Of this total, 77% was comprised of MSW and 23% of C&D.
- **Municipal Solid Waste (MSW):** waste consisting of everyday items that are discarded by the public. MSW is covered under the Flow Control Law, meaning if it was generated in Ulster County, it must be disposed of at the Agency.
- **Construction & Demo Debris (C&D):** all non-hazardous solid waste resulting from construction and demolition activities. C&D is not covered under The Flow Control

Waste Volume 2013-2018\* (Tons)

\*2018 totals are estimated for the months of Oct. through Dec.

# UCRRA's Composting Operation



# Why Compost?

- The EPA estimates that more food reaches landfills and incinerators than any other single material in our everyday trash.
- Composting significantly reduces fuel use and greenhouse gas pollution when compared to landfilling these materials.
- In July 2018, the EPA published a fact sheet detailing the amount of waste generated across the US in 2015. Their report indicates the following for that year: 262 million tons of waste were generated in the US. Within that total, 40 million tons consisted of food waste and 35 million tons consisted of yard waste.(1)

Total U.S. Waste Volume (Tons) 20

# UCRRA's Composting Operation

- UCRRA operates one of only 2 municipally-operated Extended Aerated Static Pile (EASP) composting facilities in NY State.
- The Agency accepts organics, including food waste and compostable products from commercial entities (local schools, restaurants, grocery stores, etc.) at a cost **80.5%** lower than the cost to dispose of trash.
- The end product is a finished compost which the Agency sells in bulk as a valuable soil amendment.
- Our finished compost is tested quarterly by 2 labs and holds the US Composting Council's Seal of Testing Assurance
- Benefits of using compost in your garden:
  - Lessens the use of synthetic fertilizers.
  - Stabilizes soil pH.



# The Process



Food waste and wood chips



Mixture being screened



Finished compost ready for use

- Food waste and compostable products are brought into the Agency and mixed with woodchips.
- The mixture sits for 30 days on blowers that distribute air through the pile to speed up decomposition. The pile heats up to approximately 140-160 degrees, killing any pathogens or seeds.
- The pile is then moved off the blowers to sit for another 30 days.
- The pile is then loaded into a screener and sifted down to 3/8th of an inch.
- Finished compost is now ready for sale.



# Additional Services



# Electronics Recycling

- In NY State, it is against the law to throw computers and TVs into the trash.
- The Agency accepts those items, as well as many others such as printers, phones, microwaves, and more through our free e-waste recycling program.
- In 2018 alone, the Agency has collected approx. **2600 TVs** and **2000 computers**, and **200 tons** of e-waste total for recycling.
- Items are transported to Electronics Recyclers International (ERI) in Holliston, MA.
- ERI has the largest and most technically advanced electronic shredding system in North America. This process allows ERI to bring materials down to the separated commodity level such as plastic, metal, and glass, which are then sent to downstream processors, all of which are audited and pre-approved through ERI's rigorous Downstream Vendor Management Program.(2)



# Household Hazardous Waste & Pharmaceutical Collection Events

- Household Hazardous Waste (HHW) is the discarded, unused or leftover portion of household products containing toxic chemicals.
- UCRRA offers 3 HHW Collection Events per year as a safe, convenient, and free way for Ulster County households to dispose of hazardous materials such as: **fluorescent lightbulbs, rechargeable batteries, oil based paints and stains, cleaning chemicals, and much more.**
- HHW Collection Events are by appointment only, and open to residents of Ulster County. Businesses, schools, and other organizations are not accepted.
- These events are funded 50% through the Agency, and 50% through a NY State grant.
- In 2018, these events had a total of **998 participants**, diverting thousands of pounds/gallons of toxic products from our waste stream.

# Public Education/Outreach

- The Agency conducts tours of the facilities year-round for all types of groups including schools, boy and girl scout troops, clubs, and other organizations.
- UCCRA also visits Ulster County schools, giving presentations to kids on the importance of recycling and composting.
- On November 15th the Agency will be having our first Upcycle Craft Event, where children will have the chance to create something new from items that would otherwise be thrown away. This is a free event!

# Closed Landfills

- In 1997 the Agency took responsibility for the post-closure monitoring and maintenance of the former Ulster and New Paltz landfills, with an obligation of 30 years.
- In 2017, the 29 acre site of the former Ulster Landfill became home to a 6,120-panel solar energy array that has the capacity to provide 20 percent or more of Ulster County government's electrical needs.(3)
- The County will purchase electricity from the solar company, SolarCity, at a set rate that will be at or below what the county currently pays.(3)
- The solar array is anticipated to produce nearly 3 million kilowatt hours of electricity annually, avoiding the greenhouse gas emissions equivalent to burning 2.4 million pounds of coal or more than 5,000 barrels of oil each year.(3)



Tanks holding leachate (liquid that drains from landfills)



Tanker truck for pumping/hauling leachate



Solar panels at the former Ulster Landfill site

# Sources

- 1) EPA (2018). Advancing Sustainable Materials Management: 2015 Fact Sheet
- 2) Electronics Recycling, [www.eridirect.com/services/electronics-recycling-ewaste](http://www.eridirect.com/services/electronics-recycling-ewaste)
- 3) Doxsey, Patricia “New Solar Array at Former Town of Ulster Landfill Will Help Ulster County Cuts Its Power Costs.” The Daily Freeman, 21 Nov. 2017