



Greene County Highway and Solid Waste Department 2022 Annual Report

Scott R. Templeton, Superintendent

Table of Contents

1. MISSION STATEMENTS
2. ORGANIZATIONAL FLOW CHART
3. HIGHWAY DEPARTMENT STAFF
4. HIGHWAY DEPARTMENT BUILDINGS
5. HIGHWAYS IN GREENE COUNTY
6. ANNUAL ROAD MAINTENANCE FUNDS
7. 2022 ASPHALT PAVING LIST
8. PAVEMENT TREATMENT SUMMARY
9. EXPLANATION OF PCI (PAVEMENT CONDITION INDEX)
10. MILE YEARS ADDED/LOST
11. 2022 FEDERAL/STATE AID PROJECT SUMMARY
12. BRIDGE NY PROJECTS AND ADDITIONAL GRANTS
13. 2022 LOCALLY FUNDED PROJECTS
14. 2022 LOCALLY FUNDED PROJECTS (CONT.)
15. BRIDGE STRUCTURAL FLAGS
16. GREENE COUNTY SIGN PROGRAM
17. ROADSIDE VEGETATION MANAGEMENT PROGRAM
18. ANGELO CANNA TOWN PARK REHABILITATION
19. SLOPE STABILIZATION OF CR 02-PRATTSVILLE
20. CORNWALLVILLE BRIDGE REPLACEMENT
21. LIQUID DE-ICING PROGRAM
22. 2022 HIGHWAY DEPARTMENT VEHICLE LIST
23. 2022 HIGHWAY DEPARTMENT EQUIPMENT LIST
24. SOLID WASTE STAFF
25. SOLID WASTE SERVICES
26. SOLID WASTE LOCATIONS
27. SOLID WASTE CUSTOMERS BY LOCATION
28. SOLID WASTE VOLUME BY LOCATION
29. 2022 CAPITOL IMPROVEMENT PROJECT SUMMARY
30. NEW COXSACKIE TRANSFER STATION
31. NEW SINGLE SOURCE RECYCLING BUILDING
32. NEW SOLID WASTE EQUIPMENT
33. 2022 SOLID WASTE VEHICLE & EQUIPMENT LIST





Mission Statement

Highway and Solid Waste

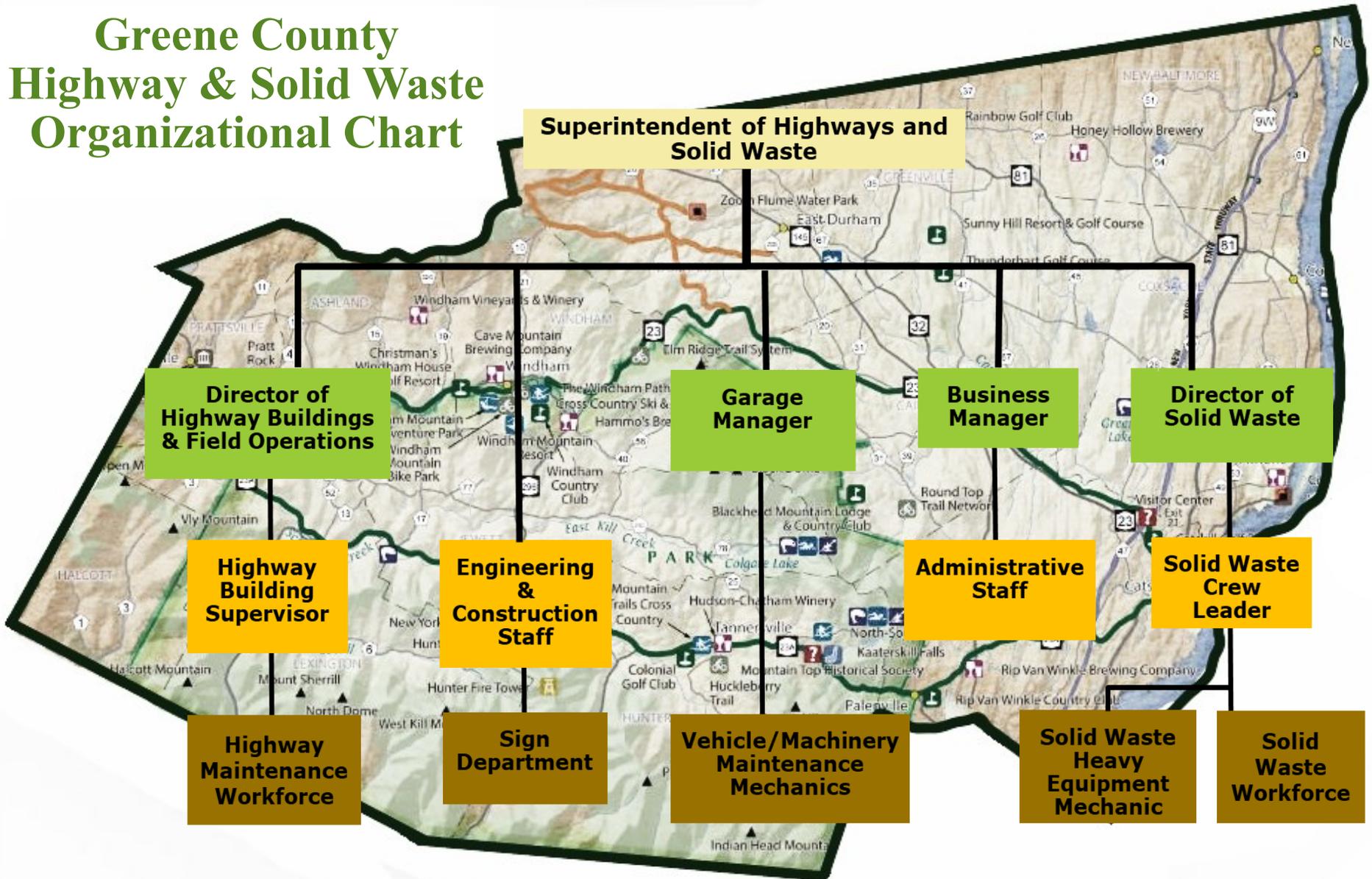


The Greene County Highway Department exists to effectively maintain and improve the Highway and Bridge Infrastructure of Greene County for the efficient and safe use of the traveling public.



The mission of the Greene County Solid Waste Department is to create a safe, efficient and effective waste management disposal and recycling program to serve the county's residents and businesses.

Greene County Highway & Solid Waste Organizational Chart



Greene County Highway Department Staff

5 - MANAGEMENT

- 1- Superintendent
- 1- Director of Highway Buildings & Field Operations
- 1- Business Manager
- 2- Project Managers

5 - ADMINISTRATION PERSONAL

- 1- Senior Engineering Tech.
- 1- Administration Assistant
- 2- Senior Account Clerks
- 1- Stenographer

33 - HIGHWAY EMPLOYEES

- 3- Highway Building Supervisors
- 1- Working Foreperson
- 17- Motor Equipment Operators
- 7- Heavy Equipment Operators B
- 1- Heavy Equipment Operator A
- 1- Sign Maintenance Worker
- 1- Sign Maintenance Assistant

4- FLEET MAINTENANCE PERSONAL

- 1- Garage Manager
- 1- Lead Automotive Mechanic
- 2- Service Mechanics

Greene County Highway Buildings

BUILDING # 1 - CATSKILL



BUILDING # 4 FREEHOLD



BUILDING # 2 - ATHENS



BUILDING # 5 - HUNTER



BUILDING # 3 ASHLAND



SHOP # 1 - ATHENS



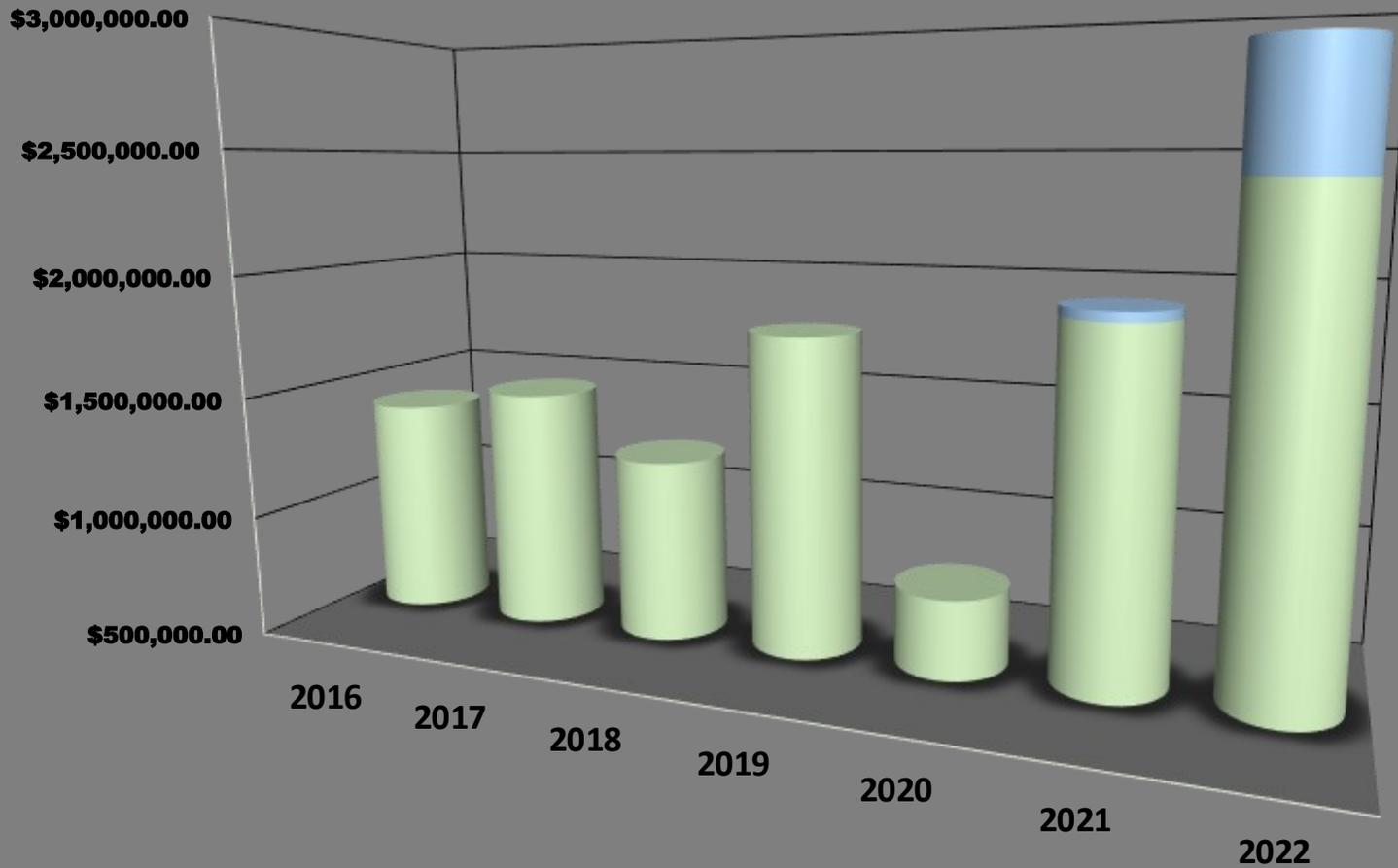
Highways in Greene County

Mileage of each class of highway in Greene County is as follows:

| | |
|--|--------------|
| Class 1 – State Highways..... | 220.88 miles |
| Class 2 – Controlled Access Highways | 9.77 miles |
| Class 3 – State Thruways | 23.83 miles |
| Class 4 – County Roads..... | 262.52 miles |
| County Roads within Villages..... | 3.70 miles |
| Class 5- Town Roads..... | 663.61 miles |

| | County Roads in Towns | County Roads in Villages | County Roads | Town Highway Total |
|---------------|--------------------------|-----------------------------|-----------------|-----------------------|
| Ashland | 16.59 | -- | 16.59 | 17.99 |
| Athens | 11.97 | 2.75 | 14.72 | 31.67 |
| Cairo | 30.21 | -- | 30.09 | 91.34 |
| Catskill | 18.68 | -- | 18.56 | 83.39 |
| Coxsackie | 17.73 | 0.56 | 18.29 | 49.42 |
| Durham | 22.67 | -- | 22.67 | 80.02 |
| Greenville | 23.59 | -- | 23.59 | 62.51 |
| Halcott | 7.16 | -- | 7.16 | 16.34 |
| Hunter | 14.01 | 0.39 | 14.40 | 38.97 |
| Jewett | 23.88 | -- | 23.88 | 39.07 |
| Lexington | 16.79 | -- | 16.79 | 34.97 |
| New Baltimore | 23.83 | -- | 23.83 | 63.18 |
| Prattsville | 12.62 | -- | 12.62 | 18.91 |
| Windham | 19.07 | -- | 19.07 | 35.83 |

Annual Road Maintenance Money



| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|------------------|----------------|----------------|----------------|----------------|--------------|----------------|----------------|
| ■ Preservation | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$38,541.00 | \$460,600.79 |
| ■ Reconstruction | \$1,395,582.13 | \$1,484,978.17 | \$1,248,130.46 | \$1,792,317.06 | \$821,806.59 | \$1,902,210.38 | \$2,399,948.23 |

In 2022 there was a concerted effort to implement more preservation techniques. Prices were roughly 30% higher in 2022 compared with 2021.

Greene County Highway Department

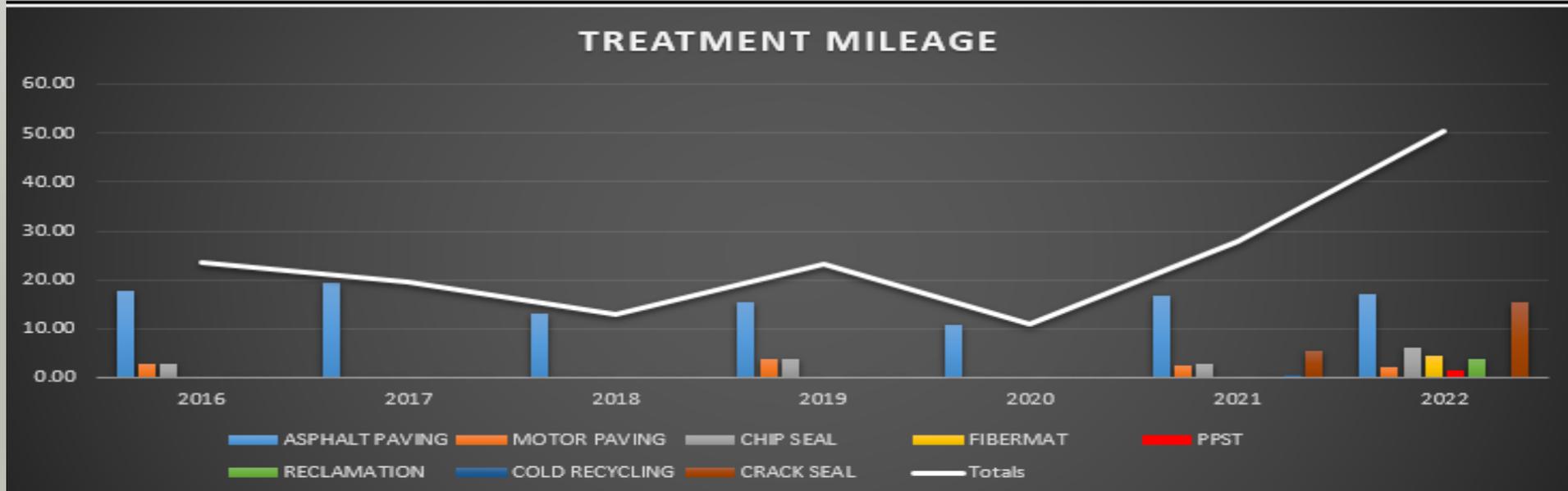
2022 Completed Paving List (Roads & Sections)

| Road Name | Town | From | To | Road Width (feet) | Length (miles) | Estimated US Tons | Actual US Tons |
|-----------|--------------------|---------------------|------------------|----------------------|-------------------|----------------------|-------------------|
| CR. 5 | Ashland | CR 10 | Brink Rd. | 18.0 | 1.21 | 1,756.92 | 1722.69 |
| CR. 10 | Durham/ Windham | CR 21 | CR 20 | 21.0 | 1.79 | 2,756.60 | 2744.41 |
| CR. 18 | Hunter | SR 23A | Scutt Ln | 21.0 | 2.22 | 3,418.80 | 3398.39 |
| CR. 21 | Windham | CR 10 | Siam Rd. (North) | 21.0 | 1.75 | 2,695.00 | 2690.35 |
| CR. 23B | Cairo | Shingle Kill Bridge | SR 23 | 22.0 | 0.85 | 1,371.33 | 1395.52 |
| CR. 23C | Jewett | SR 296 | CR 77 | 20.0 | 2.06 | 3,021.33 | 3253.16 |
| CR. 24 | Cairo | CR 39 | CR 31 | 21.0 | 1.48 | 2,279.20 | 2107.30 |
| CR. 26 | New Baltimore | Honey Hollow Rd. | Alcove Rd. | 21.0 | 1.72 | 2,648.80 | 1985.40 |
| CR. 47 | Catskill | SR 23A | CR 30 | 20.0 | 1.82 | 2,669.33 | 2717.57 |
| CR. 54 | New Baltimore | CR 26 | Jennings Rd. | 20.0 | 1.27 | 1,862.67 | 1880.48 |
| CR. 84 | Cairo | CR 23B | SR 23 | 21.0 | 0.54 | 831.60 | 1147.38 |
| CR. 85 | Cairo | CR 23B | SR 23 | 21.0 | 0.41 | 631.40 | 833.94 |

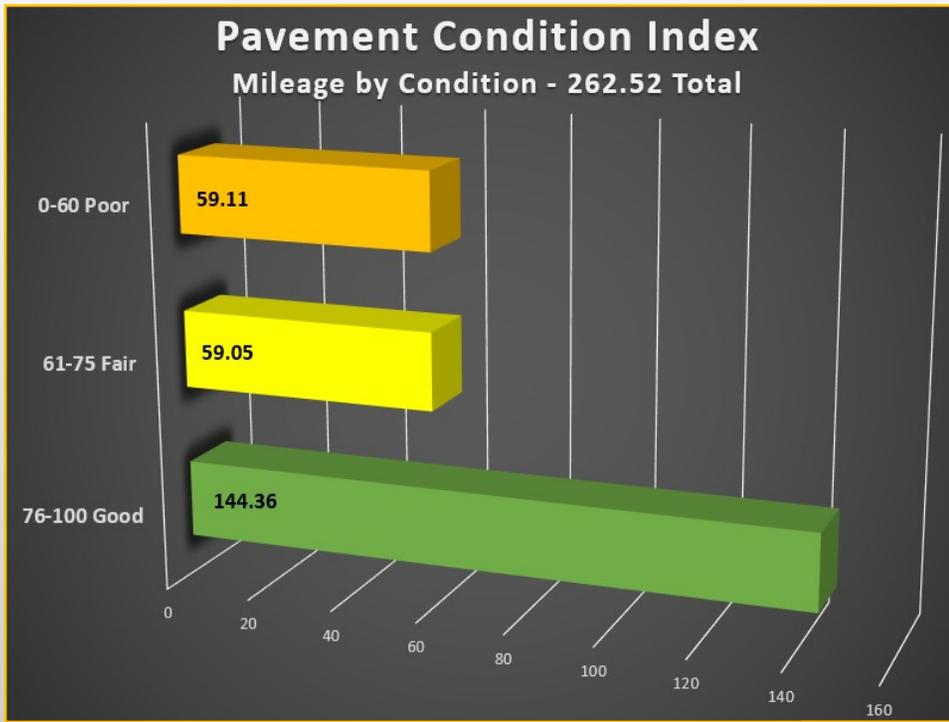
| | <u>Estimated</u> | <u>Actual</u> |
|--------------------|------------------|------------------|
| Grand Total | 17.12 | 25,942.99 |

Pavement Treatment Summary

| TREATMENT | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| ASPHALT PAVING | 17.77 | 19.50 | 12.95 | 15.50 | 10.85 | 16.65 | 17.12 |
| MOTOR PAVING | 2.84 | 0.00 | 0.00 | 3.89 | 0.00 | 2.41 | 2.20 |
| CHIP SEAL | 2.84 | 0.00 | 0.00 | 3.89 | 0.00 | 2.94 | 6.07 |
| FIBERMAT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.30 |
| PPST | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.38 |
| RECLAMATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.81 |
| COLD RECYCLING | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 |
| CRACK SEAL | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.34 | 15.50 |
| Totals | 23.45 | 19.50 | 12.95 | 23.28 | 10.85 | 27.94 | 50.38 |

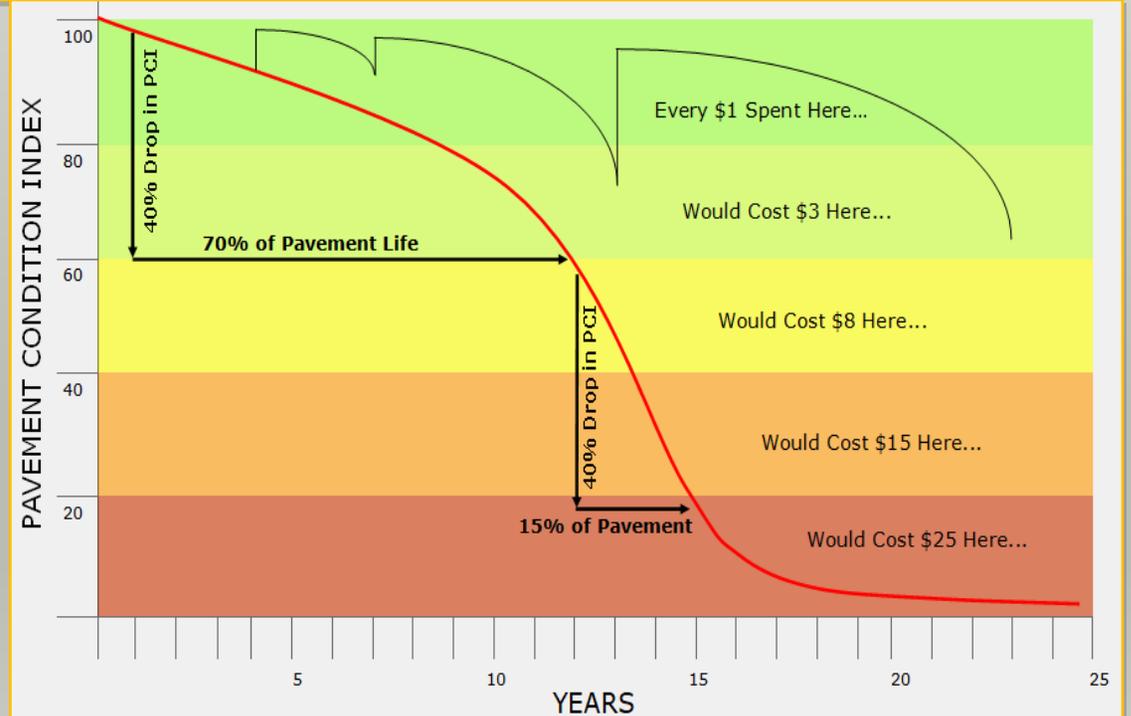


*Paving totals in 2022 were low due to Covid-19



The graph to the left shows the current condition of our roads, based on an October 2022 PCI survey. 78% of the network is in fair or better condition with 55% being in good condition. The principles behind pavement preservation encourage keeping the “good” roads in good condition while working to bring the “fair” roads into good condition. It does not suggest that “poor” roads be ignored, but they also should not be given priority, as their repair is not as economical or beneficial to the health of the road network as a whole. The ultimate goal being, allocating more resources to preserving good roads, while slowly rebuilding roads in the network that are already in poor condition.

The chart on the right illustrates a typical pavement deterioration curve. As pavement ages, it begins to rapidly deteriorate between years 10 and 15. Preservation techniques have been shown to drastically flatten this curve, at a fraction of the cost of waiting until the pavement has failed. By optimizing preservation strategies, it is possible to see cost savings upwards of 50% over a 40 year period, when compared to a 15 year overlay schedule.



A critical principle in pavement maintenance is concept know as a “Mile Year”. It states that every year, every mile of road loses one year of service life. Every treatment has an expected service life, be it 3 years for crack seal, 7 years for micro-surface, or 13 years for a two inch overlay. If three, one mile sections were treated with those examples, 23 years of service life would be added to the network. Greene County maintains 262.5 miles of road, meaning that if we don’t add 262.5 years of service life annually, the network is in decline. It would take approximately 20 miles of two in overlay to reach 262.5 mile years, at a cost of approximately \$2.4 million. Conversely, that same \$2.4 million could micro-surface 52 miles and add 364 mile years of service life. While not every road is a candidate for every treatment type, this principle demonstrates the benefits that lower cost preservation techniques can have on the network as a whole.

The graph below represent mile years added/lost, in relation to our network mileage, as well as total mileage treated. In 2022, our treatments totaled 398.5 mile years, less the 262.5 network mileage, yields 136 mile years added. In 2020, covid-19 played a major role in the lack of treatments being done, resulting in a 121 mile year loss for the network.

Mile Years Added/Lost



2022 FEDERAL & STATE AID PROJECT SUMMARY

| <u>BIN / PIN</u> | <u>PROJECT DESCRIPTION</u> | <u>FUND APPROPRIATION</u> | <u>CONTRACT COST</u> |
|---|--|---------------------------|---|
| PIN 1760.23 (Federal Aid) | CR 83 Culvert and Pedestrian Bridge Engineering - CDM Smith, Inc. ROW Incidentals - CDM Smith, Inc. ROW Acquisitions | Project 93 | (2017 & On Going) \$193,719.00 \$23,739.00 <u>\$2,000.00</u> \$219,458.00 |
| BIN 3303120 PIN 1760.89 (Federal Aid) | CR 22 Over the Catskill Creek Engineering - Clark, Patterson & Lee Construction Support - Clark, Patterson & Lee Construction Inspection - Creighton Manning Construction - ING Civil | Project 105 | (2019 & On Going) \$173,760.95 \$10,551.60 \$266,000.00 <u>\$1,768,756.98</u> \$2,219,069.53 |
| BIN 3302860 PIN 1761.92 (Federal Aid) | CR 40 Over the Batavia Kill Engineering - Barton & Loguidice ROW Incidentals - Barton & Loguidice | Project 124 | (2022 & On Going) \$316,137.00 <u>\$57,627.00</u> \$373,764.00 |
| BIN 3302910 PIN 1761.91 (Federal Aid) | CR 61 Over the Coxsackie Creek Engineering - Creighton Manning ROW Incidentals - Creighton Manning | Project 125 | (2022 & On Going) \$312,000.00 <u>\$23,000.00</u> \$335,000.00 |

Background - Deck pour of CR 22 Bridge over the Catskill Creek

2022 BRIDGE OF NEW YORK PROJECT SUMMARY

| <u>BIN / PIN</u> | <u>PROJECT DESCRIPTION</u> | <u>FUND APPROPRIATION</u> | <u>CONTRACT COST</u> |
|--------------------|--|---------------------------|----------------------|
| BIN 3201240 | Timber Lake Road Over the Broad Street Hollow | Project 106 | (2020 & On-Going) |
| PIN 1761.21 | Engineering - Creighton Manning Engineering, LLP | | \$268,424.00 |
| (Federal Aid) | ROW Incidentals - Creighton Manning Engineering, LLP | | \$37,534.00 |
| | ROW Acquisitions | | \$16,900.00 |
| | | | \$316,858.00 |
| BIN 3200960 | Bloomer Road over Gooseberry Creek | Project 107 | (2020 & On-Going) |
| PIN 1760.21 | Engineering - Clark Patterson Lee | | \$275,656.20 |
| (Federal Aid) | ROW Incidentals - Clark Patterson Lee | | \$30,430.00 |
| | ROW Acquisitions | | \$2,400.00 |
| | | | \$308,486.20 |

2022 SWSMP GRANT WITH SOIL & WATER PROJECT SUMMARY

| <u>SWSMP #</u> | <u>PROJECT DESCRIPTION</u> | <u>FUND APPROPRIATION</u> | <u>CONTRACT COST</u> |
|-------------------------------|---|---------------------------|----------------------|
| SWSMP | CR17 Embankment and East Kill Stabilization | Project 117 | (Completed) |
| 2021-23-004, & 006 | Construction - Evergreen Mountain Contractors | | \$1,399,832.88 |
| SWSMP | CR 02 Culvert over Unnamed Tributary of Schoharie Creek | | (2021 & On Going) |
| 2021-23-002 | Construction - Advanced Enterprise (Construction has not begun) | | \$227,477.00 |

2022 CATSKILL WATERSHED CORPORATION GRANT SUMMARY

| <u>CIN</u> | <u>PROJECT DESCRIPTION</u> | <u>FUND APPROPRIATION</u> | <u>CONTRACT COST</u> |
|--------------------------|--|---------------------------|----------------------|
| CIN 01-00-474 HAL | CR 01 Culvert over Brownell/West Settlement Creek | D5112.2160 | (2022 & On Going) |
| | Engineering - Creighton Manning | | \$58,500.00 |

Background - CR 02 Culvert over Unnamed Tributary of Schoharie Creek (Current Condition)

2022 LOCAL FUNDED PROJECT SUMMARY

| <u>LOCATION/ BIN / CIN</u> | <u>PROJECT DESCRIPTION</u> | <u>FUND APPROPRIATION</u> | <u>CONTRACT COST</u> |
|--------------------------------|--|-------------------------------|--|
| BIN 3201020 Hunter | Platte Cove Rd. over Plattenkill Creek Rehabilitation Study - CDM Smith, Inc. | D5112.2160 | (2022 & On Going) <u>\$18,222.27</u> \$18,222.27 |
| BIN 3303140 Durham | CR 20 Bridge Replacement over Cornwallville Creek Engineering - CDM Smith, Inc. Construction - HVB Construction | D5112.2160 | (Completed) \$33,800.00 <u>\$314,000.00</u> \$347,800.00 |
| Lexington | CR 02 Slope Stabilization System and Road Reconstruction Design and Construction - GeoStabilization International Excavation - Evergreen Mountain Contracting | D5112.2140 | (Completed) \$941,556.15 <u>\$94,520.00</u> \$1,036,076.15 |
| Halcott | CR 01 & 03 Tree Removal Project, Town of Halcott Construction - K. Hughes Expert Tree Service | D5112.2140 | (Completed) \$55,169.00 |
| BIN 3302830 Windham | CR 12 over Batavia Kill Approach Slab and Joint Repair Construction - Town and County Bridge and Rail | D5112.2160 | (Completed) \$78,552.64 |

Background - New approach slab and joint repair of CR 12 Bridge over Batavia Kill

2022 LOCAL FUNDED PROJECT SUMMARY

(continued)

| <u>LOCATION/ BIN / CIN</u> | <u>PROJECT DESCRIPTION</u> | <u>FUND APPROPRIATION</u> | <u>CONTRACT COST</u> |
|--|--|-------------------------------|--|
| Jewett | CR 23C 60-inch Crossover Pipe Repair Construction - Town and County Bridge and Rail | D5110.4056 | (Completed) \$23,180.00 |
| Durham | CR 20 over Unnamed Tributary of Catskill Creek Structure Repair Construction - Town and County Bridge and Rail | D5110.4056 | (Completed) \$32,696.00 |
| Cairo, Prattsville, Catskill CR 23B, 41, 02 | Guide Rail Repair/Replacement Program Material - Chemung Supply Construction - Litchko Construction | D5110.4056 | (Completed) \$45,490.94 \$6,000.00 \$51,490.94 |
| All County Roads | Roadside Vegetation Management Program (Guide Rail Spraying) Construction - Chase Enterprise | D5112.2140 | (Completed) \$15,984.44 |
| Athens, Cairo, Catskill, Coxsackie, Greenville | Silane Sealer Treatment of Concrete Bridge Decks (5 Year Cycle) Construction - Town and County Bridge and Rail | D5112.2160 | (Completed) \$32,559.42 |

Background - Shotcrete repair of 60" crossover pipe, CR 23C

Bridge Structural Flags

New York State Department of Transportation administers an annual or bi-annual inspection of all publicly owned bridges located in Greene County. The Engineering Division receives from New York State Department of Transportation the inspection reports and any “Flag” information resulting from those bridge inspections. Red Structural Flags require immediate response in the form of a site inspection, by the County’s General Consultant Engineer, and subsequent repair plan formulated and submitted to New York State Department of Transportation within 24 hours or 6 weeks from the initial notification, depending on the designated urgency of the flagged condition.

Yellow Structural Flags are reviewed and a proposed plan to effect repairs is formulated before the flagged condition worsens, resulting in a red flag.

The Engineering Division monitors all structural and safety flags received from New York State Department of Transportation and then updates the files in our Bridge Management database. In 2022, there were a total of 6 Structural Flags, all Yellow.

The table below indicates the number of Red and Yellow Flags received over the past five years:

| YEAR | RED | YELLOW |
|-------------|------------|---------------|
| 2022 | 0 | 6 |
| 2021 | 3 | 8 |
| 2020 | 1 | 4 |
| 2019 | 2 | 9 |
| 2018 | 5 | 10 |

12/14/2021

2022 Sign Program

The Greene County Highway Sign Department is responsible for over 15,000 road signs. These signs include Speed Limit, Pedestrian Crossings, Hidden Driveways, School Bus Ahead, Signal Arrows and Chevrons.

The Sign Department is often called upon to design and implement complete highway closure detours for construction projects. These include bridges, paving, culvert replacements and road stabilization projects. The department is also responsible for contacting New York Dig Safe for all pipe and sign replacements, along with saw cutting of pavement for said pipe replacement projects. The sign department also delivers voting machines to various locations for the November General Election as well as School Budget Votes, Primary Elections and Special Elections.

In 2022, the Sign Department completed the following:

- * 130 New high-intensity prismatic facings installed
- * 36 No Parking Signs on CR 18
- * 2 New Handicapped Parking spot on Main St. Cairo
- * 2 New No Parking Signs on Main St. Cairo
- * 8 Full Detours - CR2, 12, 20, 22, 25, 30, 41, 57, 74
- * Share The Road Signs on CR 56
- * New 4-Way Stop - CR 67, Sandy Plains, and Ira Vail Rd.
- * New Street Signs in the Industrial Park
- * 50 underground utility call-ins
- * 62 pavement cuts for pipe excavation
- * 228.8 miles of centerline marking
- * 215.6 miles of edge line marking
- * 16 crosswalks re-striped
- * Tunis Edwin Rappleyea Jr. Memorial Drive sign CR 6

2022 Roadside Vegetation Maintenance Program



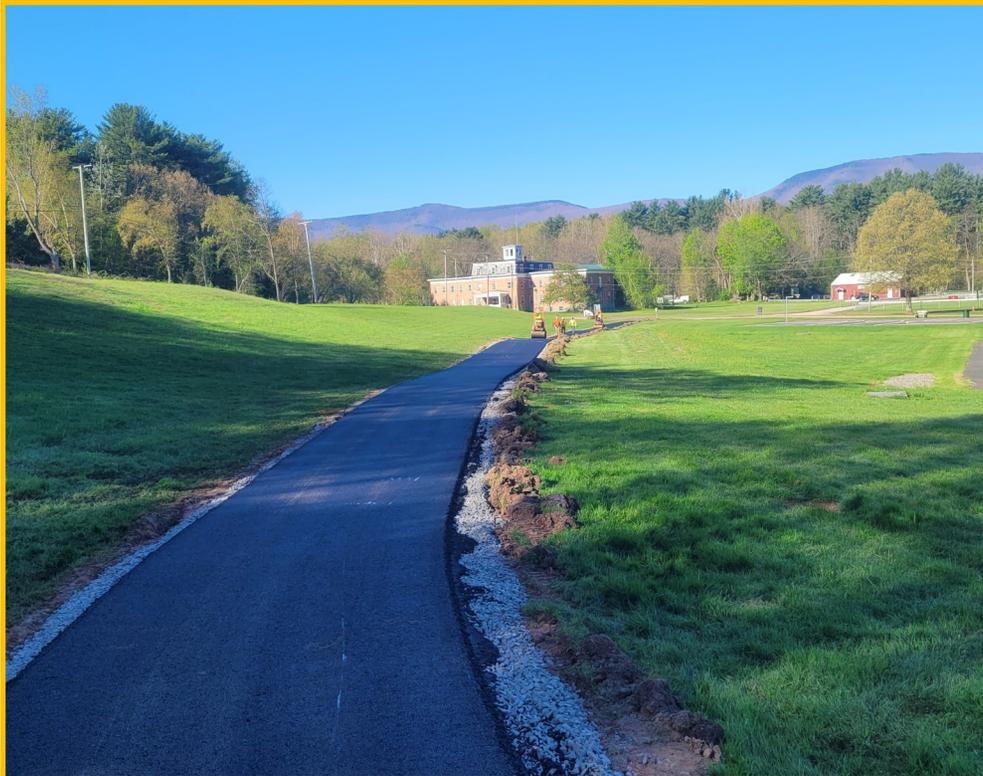
Beginning in 2021, Greene County has been treating roadside vegetation with a chemical herbicide to prevent weed growth along guide rail on county roads. In 2022 there was a spring application to eliminate established vegetation, and a fall application to prevent growth of new vegetation for 2023. The application was done by Chase Enterprises of Syracuse. All chemicals used are approved for use by NYSDOT and NYSDEC.

Angelo Canna Town Park



In May of 2022, Greene County, along with the Town of Cairo, completed paving in Angelo Canna Town Park. While an attempt was made to recycle the existing material, core samples revealed that recycling wasn't an option due to inconsistencies in the existing pavement types and thickness. It was determined that removal of the existing asphalt and a full pavement reconstruction would be the most structurally sound way to proceed. The old asphalt was milled out to a depth to accommodate a new stone base, 3 inches of binder and 1.5 inches of top coat.

Angelo Canna Town Park



The walking path received 2.5 inches of binder and 1.5 inches of top. The paving portion of the project was completed over a 2 week period and included milling, nearly 4100 tons of stone base, and over 4900 tons of asphalt.

Callanan Industries was contracted to complete the project by way of honoring their In-place paving contract with The Greene County Highway Department for much of the park. Project costs, as well as labor and equipment were shared between The Town of Cairo and Greene County.



Slope Stabilization of County Route 02, Town of Prattsville



Following the spring thaw of 2022 excessive movement of an existing slope failure along a section of County Route 02 in Prattsville was observed, the pavement had settled up to 5 inches (top left). The Highway Department engaged GeoStabilization International to provide a cost effective, engineered solution. The process began with the installation of threaded soil nails of varying lengths, up to 50 feet into bank. These nails have a sacrificial drill bit with holes to allow the injection of grout while drilling. The grout surrounds the nail, locking it in place (top center). Next, drain boards are installed and wire mesh is placed over the nail and secured with a metal plate and nut (top right). The slope face is then coated with 8 inches of shotcrete to tie everything together (bottom left). Approximately 4000 cubic yards of material needed to be removed to complete this project, which began September 15th and finished November 30th.

Cornwallville Road Bridge (CR 20) over the Cornwallville Creek

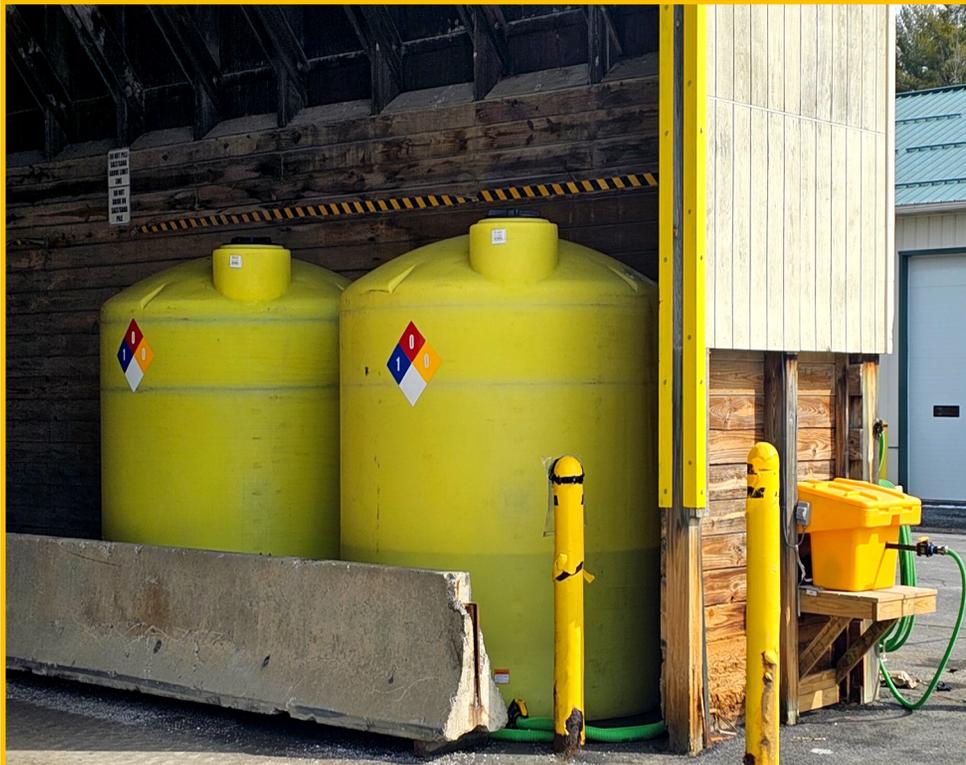


The original bridge (top left) carrying County Route 20 over the Cornwallville creek was replaced in 2022 with a new structure designed by CDM Smith. This design left part of the abutments from the old bridge in place to provide scour protection for the new one. This project was a locally funded project administered by the Greene County Highway Department. The contractor was HVB, one of our prequalified miscellaneous bridge contractors. The total cost of the bridge replacement was \$639,297.58



Liquid Deicers

It has been a long standing belief that abrasives were not only necessary for traction, but a cost effective alternative to the use of chlorides. Neither is necessarily true. While abrasives do provide temporary traction, their effects are short lived. They are either pushed out of the wheel path by traffic, or can become imbedded in the snow, diminishing their effectiveness. Hard pack can be a problem with abrasive use due to their limited ability to melt, resulting in snow and ice bonding to the surface. Cost analysis reveals that the two treatments are, based on costs and application rates of the respective materials, are nearly identical at \$5.88/lane mile for sand and \$5.91/lane mile for salt.



However, the associated costs of using abrasive make them far more costly. While salt prices include delivery, abrasive are picked up by county forces. To stock the buildings with the 8500 tons of abrasives required involves 570 loads, nearly 850 man hours, 28,500 miles traveled and approximately 5,700 gallons of fuel. Furthermore, abrasives need to be swept up in the spring which involves sweeper rentals and weeks of labor. Ditches ultimately get filled and pipes clogged, resulting in more damage to the infrastructure. 2022 saw the introduction of liquid de-icing products to assist in our winter road maintenance. Pre-wetting salt on board or in a stockpile, can reduce application rates by $\pm 30\%$. This reduction in application rate translates to a cost of \$5.67/lane mile, which includes the liquid additive. Furthermore, liquid deicers will accelerate the melting process, increase efficiency at lower temperatures, and continue working longer than solid chemical deicers.

Greene County Highway Department Vehicle List

| ID. Num. | VEHICLE DESCRIPTION | ID. Num. | VEHICLE DESCRIPTION | ID. Num. | VEHICLE DESCRIPTION |
|----------|-----------------------------------|----------|--------------------------------------|----------|--|
| 19-01 | 19 Dodge Durango | 15-33 | 15 Ford F350 Crew Cab 1 Ton Pickup | 02-67 | 02 Int'l Tandem Axle w/Plow |
| 02 | | 13-34 | 13 Ford F350 Crew Cab 1 Ton Pickup | 68 | |
| 19-03 | 19 Ford F250 3/4 Ton 4x4 Pickup | 01-35 | 01 Ford F 450 XL 1 Ton Utility Truck | 02-69 | 02 Ford F450 1 Ton w/Stake Body |
| 13-04 | 13 Ford F250 3/4 Ton 4x4 Pickup | 36 | | 06-70 | 06 Int'l Single Axle w/Plow |
| 19-05 | 19 Ford F250 3/4 Ton 4x4 Pickup | 89-37 | 89 Oshkosh Tandem Axle w/plow | 23-71 | Int'l HX520 SFA 6x4 Tandem w/Plow |
| 06 | | 16-38 | 16 Ford F350 1 Ton Crew Cab Pickup | 23-72 | Int'l HX520 SFA 6x4 Tandem w/Plow |
| 16-07 | 16 Ford F250 3/4 Ton 4x4 Pickup | 16-39 | 16 Ford F350 1 Ton Crew Cab Pickup | 23-73 | Int'l HX520 SFA 6x4 Tandem w/Plow |
| 16-08 | 16 Ford F250 3/4 Ton 4x4 Pickup | 88-40 | 88 Int'l S1600 Sign/Rack Truck | 23-74 | Int'l HX520 SFA 6x4 Tandem w/Plow |
| 15-09 | 15 Ford F250 3/4 Ton 4x4 Pickup | 41 | | 22-75 | Int'l HV507 Single Axle 4wd w/Plow |
| 06-10 | 06 Ford Expedition | 42 | | 22-76 | Int'l HV507 Single Axle 4wd w/Plow |
| 15-11 | 15 Ford F250 3/4 Ton 4x4 Pickup | 02-43 | 02 Int'l 4700 Sign/Rack Truck | 22-77 | Int'l HV507 Single Axle 4wd w/Plow |
| 20-12 | 20 Ford F350 Service Truck | 83-44 | 83 Oshkosh Single Axle w/Plow | 22-78 | Int'l HV507 Single Axle 4wd w/Plow |
| 04-13 | 04 Dodge 2500 3/4 ton 4x4 Pickup | 07-45 | 07 Int'l 7500 Single Axle w/Plow | 05-79 | 05 Johnson Sweeper – Freightliner |
| 14 | | 46 | | 07-80 | 07 Freightliner 55-ft. Bucket Truck |
| 17-15 | 17 Ford Escape | 03-47 | 02 Int'l Tandem Axle w/plow | 01-81 | 01 Int'l Altec + F11 65-ft. Bucket Truck |
| 14-16 | 14 Dodge Durango | 13-48 | 13 Ford F250 3/4 Ton 4x4 Pickup | 82 | |
| 08-17 | 08 Ford F250 3/4 Ton 4x4 Pickup | 95-49 | 95 Int'l 4800 Single Axle w/plow | 18-83 | 18 Freightliner Tymco Broom |
| 04-18 | 04 Dodge 2500 3/4 ton 4x4 Pickup | 50 | | 88-84 | 88 Oshkosh Tandem Axle w/plow |
| 19 | | 97-51 | 97 Oshkosh Single Axle w/Plow | 00-85 | 00 Int'l Eagle Paystar Tri-Axle Dump Truck |
| 86-20 | 86 Oshkosh Single Axle w/Plow | 95-52 | 95 Oshkosh Single Axle w/Plow | 01-86 | 01 Int'l Eagle Paystar Tri-Axle Dump Truck |
| 18-21 | 18 Dodge Ram 5500 Dump w/plow | 04-53 | 04 Mack Single Axle w/Plow | 00-87 | 00 Int'l 6x4 Day Cab Tractor |
| 92-22 | 92 Int'l Single Axle Dump Truck | 54 | | 19-88 | 19 Int'l HX520 SFA 6x4 Day Cab Tractor |
| 18-23 | 18 Dodge Ram 5500 Dump w/plow | 90-55 | 90 Ford/Oshkosh Single Axle w/Plow | 00-89 | 00 Oshkosh Single Axle w/Plow & sander |
| 17-24 | 17 Dodge Ram 5500 Dump w/plow | 56 | | 88-90 | 88 Oshkosh Single Axle w/Plow & sander |
| 17-25 | 17 Dodge Ram 5500 Dump w/plow | 57 | | 91 | |
| 26 | | 17-58 | 17 Western Star Tandem w/plow | 92 | |
| 91-27 | 91 Int'l 4600 Crew Cab Dump Truck | 58-59 | 58 Oshkosh Snow Blower (Durham) | 91-93 | 91 Int'l Dump Crew Cab (Water Truck) |
| 28 | | 60 | | 05-94 | 05 Int'l Paystar 4x4 Truck w/plow |
| 29 | | 61 | | 95 | |
| 30 | | 16-62 | Freightliner Tandem Axle w/plow | 96 | |
| 87-31 | 87 Oshkosh Single Axle w/Plow | 63 | | 97 | |
| 07-32 | 07 Int'l 7500 Dump Truck w/plow | 14-64 | Freightliner Tandem Axle w/plow | 98 | |
| | | 65 | | 99 | |
| | | 01-66 | 01 Int'l Paystar 4x4 w/Plow | 100 | |

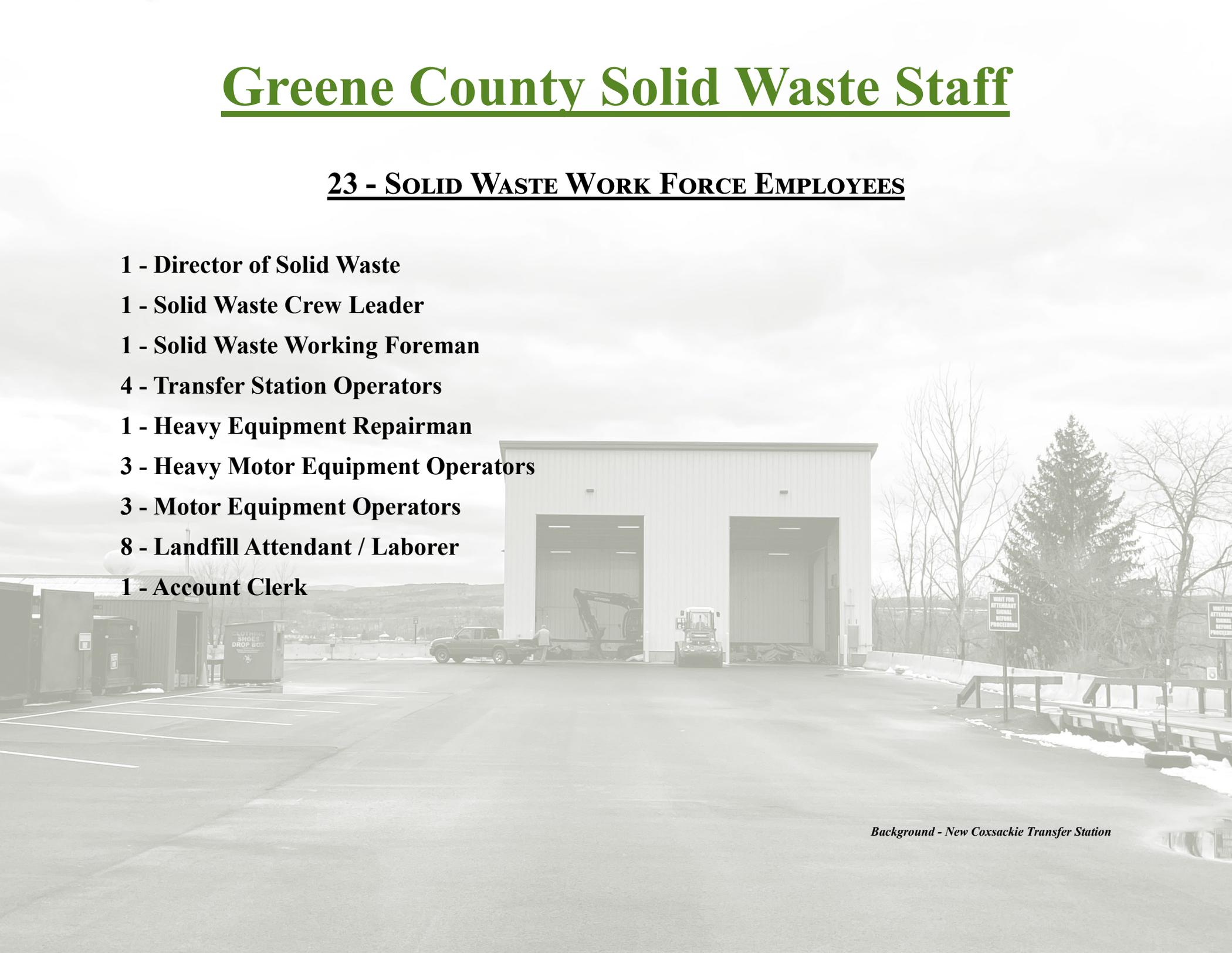
Greene County Highway Department Equipment List

| | | | |
|--------|---|-----------|--|
| 81-E02 | 81 Power Pack 605 Road Widener 3 cy. / 18 hp. | 94-E74(A) | 94 Gradall XL-4100 8 cy. / 145 hp. (Upper Structure) |
| 99-E06 | 99 Case 650G Dozer, 80 hp. 2.2cy. | 20-E81 | MORBARK Eager Beaver 1215 Chipper |
| 19-E12 | 19 John Deere 544K Loader | 00-E85 | 00 Case 590 Super L Backhoe |
| 87-E16 | 87 Mastercraft Forklift | 01-E86 | 01 John Deere 4x4 624 Loader / 2.5 cy. |
| 17-E17 | John Deere 544K Loader | 01-E87 | 01 Ingersoll-Rand DD110 Double Drum Roller / 120 hp. |
| 21-E21 | John Deere 6110M Tractor w/Rotary & Flail Mower | 00-E87T | 00 Talbert 35 Ton Trailer |
| 18-E22 | John Deere 6110M Tractor w/Rotary Boom Mower | 98-E88 | 98 Miller Welder |
| 20-E23 | BOMAG BW 120 SL -5 Vibratory Roller | 98-E90 | 98 Vermeer 1230A Chipper 4 cy. / 86 hp. |
| 20-E24 | BOMAG BW 120 SL -5 Vibratory Roller | 98-E91 | 98 Vermeer 1230A Chipper 4 cy. / 86 hp. |
| 01-E26 | 01 Stone Wolfpac 2500 Vibratory Roller / 18 hp. | 00-E92 | 00 Salsco Chipper / 4.21 cy. Diesel |
| 04-E27 | 04 Stone Wolfpac 3100 Vibratory Roller / 18 hp. | 20-E93 | MORBARK Eager Beaver 1215 Chipper |
| 17-E28 | 17 John Deere 544K Loader | 02-E96 | 02 Case 590 Backhoe 4cyl. / 99 hp. |
| 05-E29 | 05 Brim Trailer w/winch | 80-E108 | 80 Hauck Steam Culvert Thawer |
| 03-E35 | 03 Broce Broom RJ350 Street Sweeper 80 hp. | 83-E111 | 83 Sullair Air Comp. 68 hp., 185 cfm. |
| 15-E40 | 15 John Deere 5085M Tractor w/ Side Flail Mower | 88-E112 | 88 Sullair Air Comp. 78 hp., 185 cfm. |
| 17-E41 | John Deere 5085M Tractor w/ Side & Rear Flail Mower | 07-E115 | 07 Caterpillar 314C Excavator Track |
| 00-E46 | 00 John Deere 5310 Tractor w/Mower (No Cab) 55 hp. | 89-E120 | 89 Caterpillar Grader 120 hp. |
| 01-E48 | 01 John Deere 5320 Diesel Tractor w/Mower | | |
| 99-E53 | 99 Gradall G3WD / 8cy. / 190 hp. | | <u>TRAILERS</u> |
| 97-E54 | 97 Gradall Excavator (parts) | 99-T07 | Trail King 20-Ton Tag Trailer |
| 95-E55 | 95 Gradall Excavator (needs repair) | 20-T25 | Big Tex Single Axle Trailer |
| 19-E68 | 19 John Deere 544K Loader | 20-T56 | Big Tex 6-Ton Trailer |
| 21-E70 | T66 Bobcat Compact Track Loader | 20-T57 | Big Tex 6-Ton Trailer |
| 97-E72 | 97 99 Gradall G3WD / 8cy. / 190 hp. | 20-T87 | Talbert 35-Ton Lowboy |
| 07-E73 | Gradall XL-3100 | 22-T88 | Felling 35-Ton Lowboy |
| 94-E74 | 94 Gradall XL-4100 8 cy. / 145 hp. | 02-T89 | Dump Trailer |

Greene County Solid Waste Staff

23 - SOLID WASTE WORK FORCE EMPLOYEES

- 1 - Director of Solid Waste**
- 1 - Solid Waste Crew Leader**
- 1 - Solid Waste Working Foreman**
- 4 - Transfer Station Operators**
- 1 - Heavy Equipment Repairman**
- 3 - Heavy Motor Equipment Operators**
- 3 - Motor Equipment Operators**
- 8 - Landfill Attendant / Laborer**
- 1 - Account Clerk**



Background - New Cossackie Transfer Station

Solid Waste Services

Greene County Transfer Stations

CATSKILL

COXSACKIE

HUNTER

WINDAHM

County operated Transfer Stations accept Municipal Solid Waste, C&D, and the following Recyclables:

Glass, Cans, Cardboard, Metal, Plastic, Paper, Electronics, Appliances, 20lb. Propane Tanks, Tires, Batteries (Lithium and Car) and Nickel Deposits

Services Provided by Greene County Solid Waste

Town Recycling Centers

Town of New Baltimore Recycling - Glass, Cans, Cardboard, Metal, Plastic, and Paper

Town of Durham Recycling - Glass, Cans, Cardboard, Metal, Plastic, and Paper

Town of Greenville Waste & Recycling - MSW, Glass, Cans, Cardboard, Metal, Plastic, Paper, TVs, and Tires

Town of Halcott Waste & Recycling - MSW, Glass, Cans, Cardboard, Plastic, Paper, and TVs

(9) Needle Kiosk

Locations in: Catskill (2), Cairo (2), Windham, Greenville, Durham, Hunter and Coxsackie

(2) Paper Boxes

South Cairo Post Office and Earlton Fire Department

(3) Senior Center Recycling Pick-up

Athens, Catskill and Coxsackie

Town Cleanup Days

County Provides Containers and Transportation

Household Hazardous Waste Day

Solid Waste Facility Locations



★ - Greene County Transfer Stations

Catskill - 181 NY-385, Catskill

Coxsackie - 88 Plank Rd, Coxsackie

Hunter - Hylan Rd, Hunter

Windham - CR 21, Windham

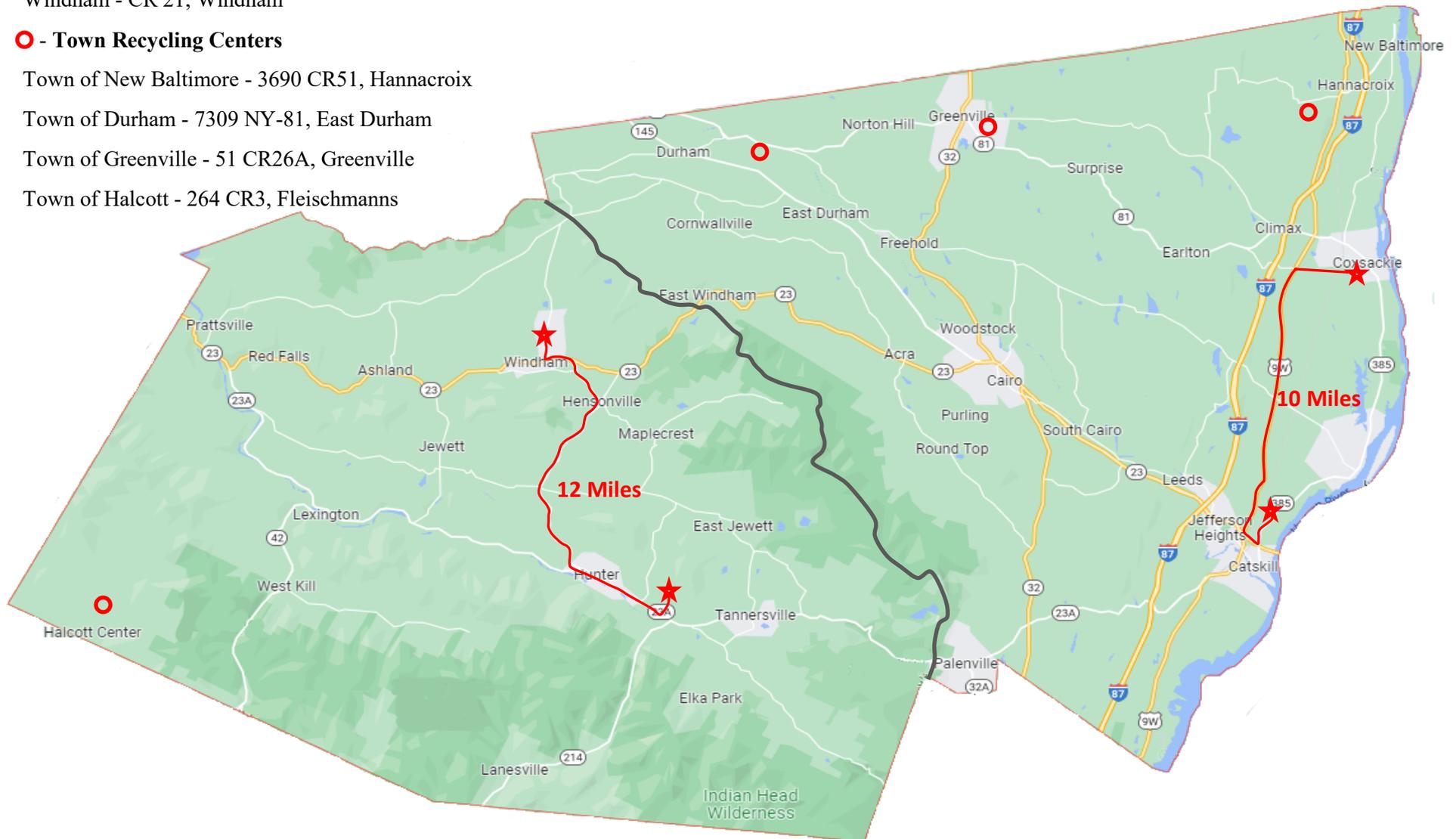
○ - Town Recycling Centers

Town of New Baltimore - 3690 CR51, Hannacroix

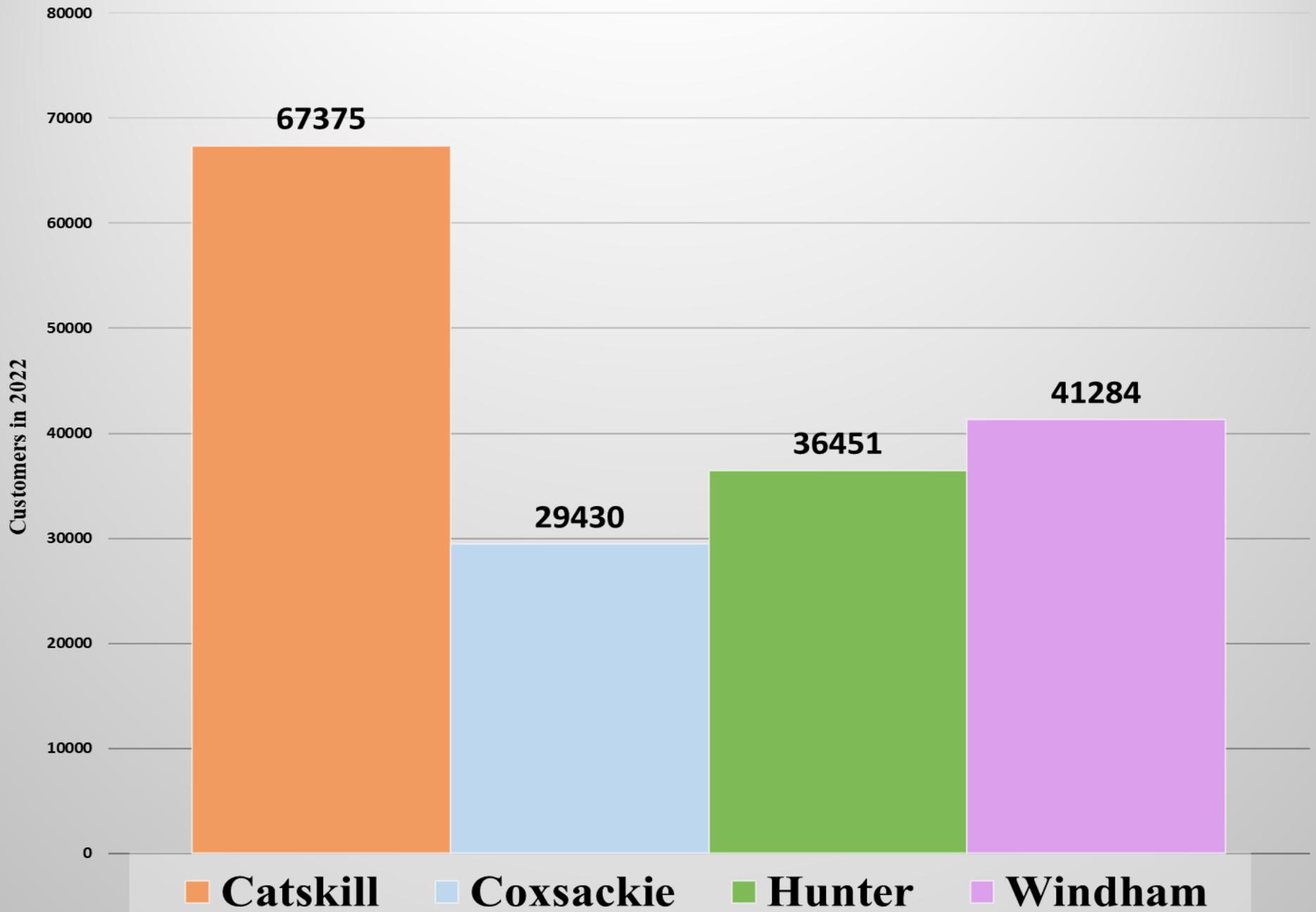
Town of Durham - 7309 NY-81, East Durham

Town of Greenville - 51 CR26A, Greenville

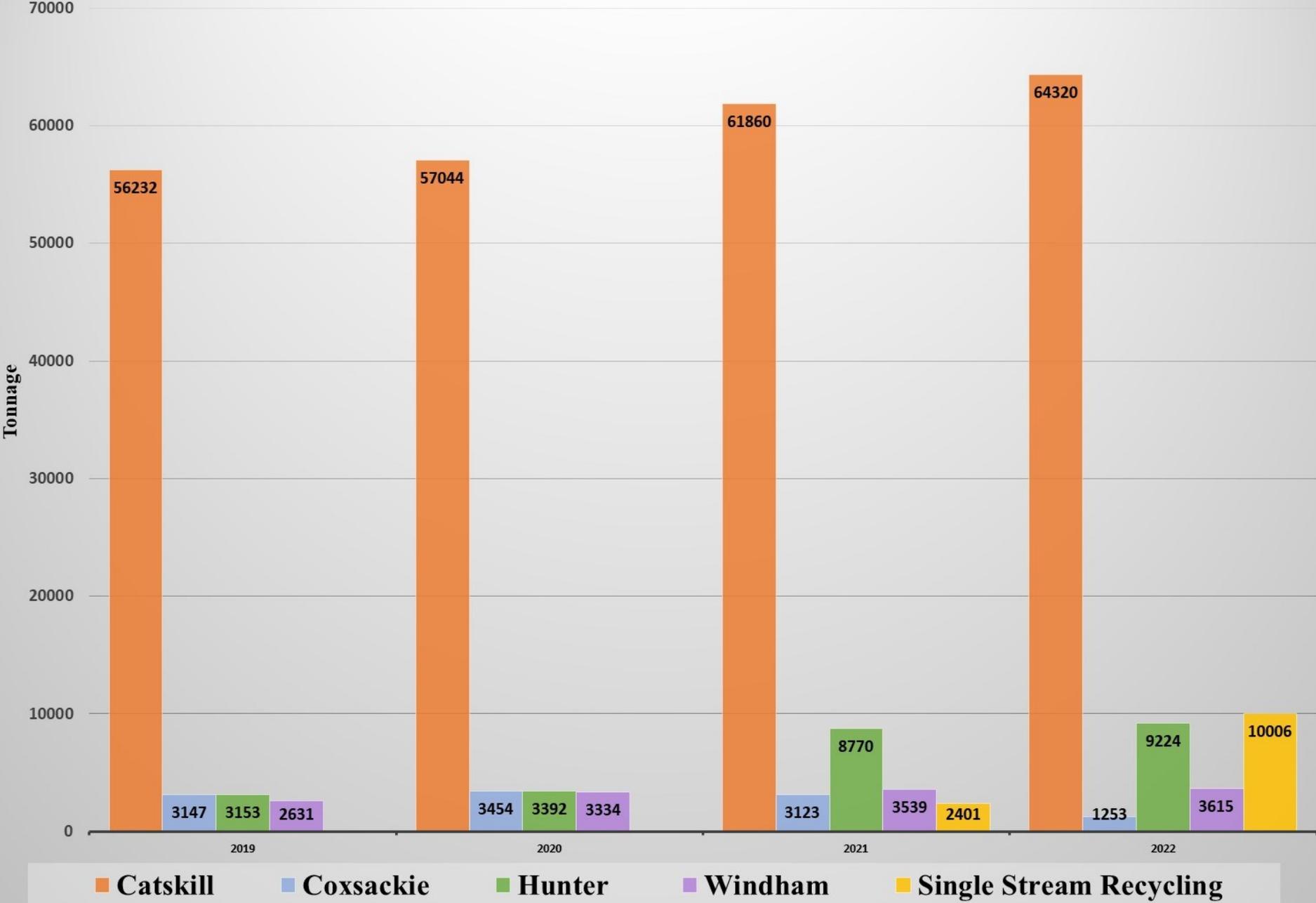
Town of Halcott - 264 CR3, Fleischmanns



Solid Waste Customers by Location



Solid Waste Volume by Location



2022 Solid Waste Capital Improvement Project Summary

Improvements of Solid Waste Transfer Stations Located in Cossackie and Hunter (2018 & On Going)

Contract Cost

Engineering & Construction Inspection - Barton & Loguidice, D.P.C.
(A8160.2600 Capital Improvement)

\$386,300.00

Hunter Transfer Station (Project 112)

Construction - Tweedie Construction Services, Inc.
Electrical - CDE Electrical Inc.

\$1,066,562.55

\$103,011.35

\$1,169,573.90

Cossackie Transfer Station (Project 113)

Construction - Jersen Construction Group
Electrical - CDE Electrical, Inc.

\$2,231,233.31

\$159,313.46

\$2,390,546.77

Catskill Transfer Station Single Stream Recycling Building (Project 126)

Engineering - Barton & Loguidice, D.P.C.
Construction - Jersen Construction Group
Electrical - DLC Electric

\$136,570.00

\$1,450,308.33

\$231,000.00

\$1,817,878.33

Current Grant Applications - Prepared on behalf of Greene County Solid Waste Management by Barton & Loguidice, D.P.C.

| <u>Grant Title</u> | <u>Status</u> | <u>Amount Requested</u> | <u>Item</u> |
|--|---------------|-------------------------|--|
| Municipal Waste Reduction and Recycling Program (NYSDEC) | Submitted | \$97,029.74 | Recycling Truck |
| Municipal Waste Reduction and Recycling Program (NYSDEC) | Submitted | \$87,826.84 | Recycling Truck and Roll off Loader |
| Municipal Waste Reduction and Recycling Program (NYSDEC) | Submitted | \$36,419.30 | ER-1000 Composter and Residential Bins |
| Municipal Food Scraps Recycling (NYSDEC) | Awarded | \$123,750.00 | R-2000 Composter (Program Expansion) |
| Climate Smart Communities (NYSDEC) | Rejected | \$82,500.00 | R-2000 Composter (Program Expansion) |

Coxsackie Transfer Station



The new Cossackie Transfer Station (Capital Improvement Project 113) required the use of light weight fill and Geofoam blocks due to the poor soil conditions on site. The old station remained open during the first phase of construction but had to be removed prior to completion. The new station is now open to serve both residents and commercial haulers.



Catskill Transfer Station Single Stream Recycling Building



Constructed across the parking lot from the current building, the new Single Stream Recycling Building at the Catskill Transfer Station (Capital Improvement Project 126) is designed to process mixed recyclables from commercial haulers. In 2022 the Greene County Solid Waste Department handled over 10,000 tons of Single Stream Recyclables. The new building will make processing this material cleaner and more efficient, and is expected to be open in March of 2023.



New Solid Waste Equipment



During 2022 the Greene County Solid Waste Department purchased:

- 1- 2022 Volvo Tri-Axle Roll off
- 1- Takeuchi Loader
- 2- Hyundai Excavators
- 1- Bobcat Skid Steer



2022 Solid Waste Vehicle and Equipment List

VEHICLES

| ID. Num. | Description |
|----------|---|
| SW-01 | 2014 DODGE DURANGO |
| SW-02 | 2018 DODGE 1500 TRADESMAN QUADCAB |
| SW-03 | 2007 CHEVROLET EXPRESS 2500 VAN |
| SW-04 | 2020 CHEVROLET 1500 SERVICE TRUCK |
| SW-05 | 2020 VOLVO TRI-AXLE ROLL OFF TRUCK VHD84F |
| SW-06 | 2000 GMC 3500 BUCKET TRUCK |
| SW-07 | 2003 FORD 350 PICKUP W/PLOW & SANDER |
| SW-08 | 2010 FORD F350 DUMP W/SANDER |
| SW-09 | 2022 VOLVO ROLL OFF TRUCK |
| SW-12 | 2004 INTERNATIONAL BOX TRUCK |
| SW-13 | 2004 INTERNATIONAL ROLL OFF TRUCK |
| SW-14 | 2021 VOLVO TRI-AXLE ROLL OFF TRUCK |
| SW-17 | 2001 OTTAWA YARD TRACTOR |
| SW-18 | 1986 OTTAWA YARD TRACTOR |
| SW-19 | 2008 KALMAR YARD TRACTOR |
| SW-20 | 2001 OTTAWA YARD TRACTOR |
| SW-21 | 2002 OTTAWA YARD TRACTOR |

EQUIPMENT

| | |
|------------|-------------------------------|
| SW-T66 | 2022 BOBCAT SKID STEER LOADER |
| SW-310G | 2006 JOHN DEERE BACKHOE |
| SW-416E-1 | 2008 CATERPILLAR BACKHOE |
| SW-HX130 | 2022 HYUNDAI EXCAVATOR |
| SW-HX130-1 | 2022 HYUNDAI EXCAVATOR |
| SW-311FL | 2020 CATERPILLAR EXCAVATOR |
| SW-TW80 | 2020 TAKEUCHI LOADER |
| SW-TW80-1 | 2022 TAKEUCHI LOADER |
| SW-444 K | 2019 JOHN DEERE LOADER |
| SW-92 | 2002 YALE FORK TRUCK |