

**NYS Department of Agriculture and Markets
Climate Resilient Farming Round 5 - 2021**

#	Track	Organization	Project Description	State Amount Awarded	GHG Reduction Estimation (MTCO2 eq/yr.)
			Track 1: Manure Storage Cover and Capture Projects: reduce methane emissions from manure storages and increase resiliency to major precipitation events.		
1	1	Cayuga SWCD	\$448,260 awarded to Cayuga County Soil and Water Conservation District to work with a dairy farm to install a manure storage cover and flare system. This system will reduce emissions by capturing approximately 240,000 KGs of methane annually. The waste storage cover will exclude 3M gallons of clean rainwater, resulting in added capacity and significant water quality benefit.	\$ 448,260.00	20,160.0
2	1	Cayuga SWCD	\$213,220 awarded to Cayuga County Soil and Water Conservation District to work with a dairy farm to install a manure storage cover and flare system. This system will reduce GHG emissions by capturing approximately 279,000 KGs of methane annually. The manure storage cover will also keep clean rainwater from entering the storage, resulting in added manure storage capacity and a significant water quality benefit.	\$ 213,220.00	23,436.0
3	1	Cayuga SWCD	\$371,920 awarded to Cayuga County Soil and Water Conservation District to work with a dairy farm to install a manure storage cover and flare system. This system will allow the farm to reduce GHG emissions by capturing approximately 200,000 KGs of methane annually. The manure storage cover will also keep 2.5M gallons of clean rainwater from entering the storage, resulting in added manure storage capacity and a significant water quality benefit.	\$ 371,920.00	16,800.0
4	1	Genesee SWCD	\$218,466 awarded to Genesee County Soil and Water Conservation District to work with a dairy farm to install a manure storage cover and flare system. This system will reduce GHG emissions by capturing approximately 144,000 KG of methane annually, helping the farm to fully mitigate the methane emissions that are created in their manure handling system. The manure storage cover will also keep 1.2M gallons of clean rainwater from entering the storage, resulting in added manure storage capacity and providing a significant water quality benefit.	\$ 218,466.00	12,096.0
5	1	Jefferson SWCD	\$26,175 awarded to Jefferson County Soil and Water Conservation District to work with a dairy farm to improve their manure management system. This system will cover a manure storage on the farm and upgrade an existing flare that will assist the farm in maximizing the destruction of approximately 152,100 KG of methane annually. The manure storage cover will also keep clean rainwater from entering the storage, resulting in added manure storage capacity and a significant water quality benefit.	\$ 26,175.00	12,776.0



**Agriculture
and Markets**

**NYS Department of Agriculture and Markets
Climate Resilient Farming Round 5 - 2021**

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			<i>Track 2: Riparian, Floodplain, and Upland Water Management: improved water management increases resiliency to drought and flood conditions as a result of climate change.</i>		
6	2	Chenango SWCD	\$175,715 awarded to Chenango County Soil and Water Conservation District to reforest 36 acres of riparian corridor and upland pasture. The establishment of woody plants keeps flood waters from inundating streams, fields, roads, and other facilities downstream within the watershed. The proposed work on one farm creates a three-barrier approach to reduce the long-term impacts of extreme weather by planting trees on steep slopes and implementing a water and sediment control basin in addition to planting the riparian forest buffer.	\$ 175,715.00	565.0
7	2	Cortland SWCD	\$43,185 awarded to Cortland County Soil and Water Conservation District to work with a vegetable farm located in the Trout Brook Watershed on a NYS DEC-classified C(t) trout stream. The project has been identified as high priority in the Cortland County Multi-Jurisdictional All-Hazard Mitigation Plan (AHMP). The farm has experienced reoccurring flooding and streambank erosion and excessive gravel deposits have exacerbated this problem causing severe stream meanders, which are eroding the cropland banks. This project proposes to implement a stream corridor rehabilitation plan through the installation of .5 acres of riparian forest buffer, removal of 1,000 ft. of berm and 500 ft. of streambank and shoreline protection. Removal of the field berm will allow the stream to safely reconnect with its floodplain. Implementation of the forested buffer will provide carbon sequestration and reduce GHG emissions.	\$ 43,185.00	3.0

**NYS Department of Agriculture and Markets
Climate Resilient Farming Round 5 - 2021**

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8	2	Cortland SWCD	\$75,910 awarded to Cortland County Soil and Water Conservation District to work with a farm to restore a section of Trout Brook, which is classified by NYS DEC as a C(ts) stream, or trout spawning, and has a documented self-sustaining brook trout population. This project proposes to implement a stream corridor rehabilitation plan on the farm through the installation of 4.7 acres of riparian forest buffer, 3,500 ft of buffer livestock exclusion fencing, and 500 ft. of streambank and shoreline protection, including 9 stream barbs designed to protect eroding streambanks. Implementation of the 4.7-acre forested buffer will increase carbon sequestration and reduce GHG emissions. Rehabilitation of this section of stream will enhance the farms resiliency and susceptibility to frequent and intense storm events, by stabilizing eroding banks, improving floodplain connectivity and reducing CO2 emissions.	\$ 75,910.00	26.0
9	2	Cortland SWCD	\$136,395 awarded to Cortland County Soil and Water Conservation District to implement a 65-acre prescribed rotational grazing system. This system will include a 4-acre riparian forest buffer, fencing, access road improvement, water pipeline, and a stabilized stream crossing. Implementation of the 4-acre forested buffer will protect over 1,000 ft of stream and two ponds while acting as a carbon sink, providing long-term carbon sequestration. Implementation of the grazing system will enhance the farm's resiliency and susceptibility to climate change from drought and intense storm events, improve water quality and soil health, and reduce CO2 emissions.	\$ 136,395.00	23.0
10	2	Cortland SWCD	\$75,855 awarded to Cortland County Soil and Water Conservation District to work with a 46-acre NOFA- NY certified organic vegetable farm that is located in the Trout Brook Watershed, and a NYS DEC classified C(t) trout stream. This project will implement a stream corridor rehabilitation plan, including 2 acres of riparian forest buffer and 1,500 ft. of streambank and shoreline protection, including 22 stream barbs. Implementation of the 2-acre forested buffer will provide carbon sequestration and reduce GHG emissions.	\$ 75,855.00	12.0

**NYS Department of Agriculture and Markets
Climate Resilient Farming Round 5 - 2021**

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11	2	Erie SWCD	\$83,826 awarded to Erie County Soil and Water Conservation District to improve the storm resiliency of a 530-acre watershed that impacts two agricultural operations in the Eden Valley. This project proposes to replace and improve 700 ft of underground pipe, construct a minimum of five grade stabilization structures, reconnect the stream to its historic floodplain, and attenuate storm flows in the wooded area above crop fields. The necessary improvements will modify failing and under-sized infrastructure that cause subsequent road flooding and safety issues. As part of the proposed project, both farms will use micro-irrigation systems for the delivery of fertilizer and fungicides to the fields. This change will reduce the amount of nitrogen fertilizer required and improve the uptake potential for the targeted crop, making the nutrient management system much more efficient and improving local water quality.	\$ 83,826.00	11.3
12	2	Essex SWCD	\$38,100 awarded to Essex County Soil and Water Conservation District to work with a livestock operation to mitigate flooding and erosion issues arising from frequent intense rain events. The structural erosion control system will include a flood attenuation pond and dredging of a second existing pond to increase water holding capacity. Grassed waterways will be implemented to control the direction and flow of water with new culverts to direct flow under access roads. Repairs will be done to existing access roads due to erosion. The infrastructure is part of a larger farm management plan to mitigate and adapt to the effects of climate change, to improve efficiency and sustainability, maintain its pastures and production, and to minimize GHG emissions and nutrient runoff.	\$ 38,100.00	0.0
13	2	Jefferson SWCD	\$16,036 awarded to Jefferson County Soil and Water Conservation District to work with a beef farm to improve resiliency by managing runoff during storm events, keeping water from overwhelming culverts entering the barn and barnyard. By diverting clean water, the size of the remaining practices within the system becomes greatly reduced. The remainder of the system will capture and divert stormwater from 16 acres of watershed and will protect 5 acres of pastureland, 1 acre of storage and facilities, and acres of downstream drainage area.	\$ 16,036.00	0.0

**NYS Department of Agriculture and Markets
Climate Resilient Farming Round 5 - 2021**

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14	2	Madison SWCD	\$122,289 awarded to Madison County Soil and Water Conservation District to install multiple cropland best management practices in order to control erosion and flood waters effecting both the farm's cropland and a nearby community. This project proposes to install a diversion, lined waterways, Water and Sediment Control Basins with underground outlets, strip cropping, reduced tillage practices, and cover crops. These practices are designed to reduce erosion and runoff from the fields. The farm has recently adopted reduced tillage practices to reduce fuel consumption and cropland erosion.	\$ 122,289.00	126.0
15	2	Ontario SWCD	\$20,168 awarded to Ontario County Soil and Water Conservation District to work with an organic seed farm to construct an upland water retention basin to capture surface water flow and supply an irrigation system. The basin will allow for stormwater storage of 300,000 gallons from a 20-acre upland watershed. The controlled flow of water through the farm will also address flooding and drainage of production fields.	\$ 20,168.00	0.0
16	2	Orange SWCD	\$300,000 awarded to Orange County Soil and Water Conservation District to continue a phased flood mitigation system on the Wallkill River. The Wallkill River Floodplain Bench Project extends the floodplain further upstream to increase flood protection. In addition to the floodplain bench, riparian forest buffers will be implemented, providing additional GHG mitigation benefits to this important climate change adaptation project.	\$ 300,000.00	100.0
17	2	Otsego SWCD	\$35,001 awarded to Otsego County Soil and Water Conservation District to work with a 12-acre organic fruit and vegetable farm to implement a precision irrigation system. The system is a key component in the farm's Water Management Plan and will increase efficiencies in water usage while reducing energy consumption by installing a solar pump. Soil health practices, cover crops, and mulching will be implemented. Soil health and atmospheric data will be collected during the contract to gauge success.	\$ 35,001.00	0.0

**NYS Department of Agriculture and Markets
Climate Resilient Farming Round 5 - 2021**

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18	2	Schoharie SWCD	\$94,735 awarded to Schoharie County Soil and Water Conservation District to stabilize and reroute a tributary to the Mohawk River on a farm that recently converted from cropland to pasture. In addition to 320 ft of streambank stabilization, the project will restrict animals from the degraded reach with fencing and provide a stable stream crossing as well as an alternative water source. A half-acre vegetated buffer will also be implemented on either side of the newly stabilized stream.	\$ 94,735.00	2.0
19	2	Schuyler SWCD	\$147,000 awarded to Schuyler County Soil and Water Conservation District to provide a multiple barrier approach to climate resiliency by working with three farms to install retention ponds. The ponds will retain over 5M gallons of stormwater to help reduce peak downstream flows during high-intensity, short-duration storms. These ponds will also provide the farms with water holding capacity during drought conditions. Over 98 acres of highly erodible cropland will be converted to permanent pastures, significantly increasing water holding capacity and reducing GHG emissions. In addition, 32.8 acres of riparian forest buffers and 6 acres of herbaceous cover will be implemented, providing further GHG reduction and sequestration benefits.	\$ 147,000.00	187.0
20	2	Seneca SWCD	\$90,280 awarded to Seneca County Soil and Water Conservation District to work with a 1,400-acre cash crop farm in the Seneca Lake Watershed to implement a Water Management System, treating a 65-acre catchment for flood control. The system will include diversions, a basin, underground outlets, and a grassed waterway. The system will reduce flooding and erosion on the farm as well as protect downstream infrastructure and residents. The project will reduce erosion to Seneca Lake by 8 tons/acre/year; reduce fuel consumption and fertilizer use by 6.3 gallons/acre/year; and 750 pounds/acre/year respectively.	\$ 90,280.00	3.0
21	2	Washington SWCD	\$81,500 awarded to Washington County Soil and Water Conservation District to work with a vegetable farm and a dairy farm to mitigate water stress during times of drought. The project includes construction and upgrading of storage ponds to capture available water, which is then transferred to existing irrigation and animal maintenance systems. The watershed captured with both projects is approximately 60 acres, with 1+ acre of surface water stored. Having water storage at these critical times allows the farms to utilize water they otherwise would not have access to. Additionally, gravity flow piping and appropriately designed systems will minimize the need for fuel usage.	\$ 81,500.00	0.0

**NYS Department of Agriculture and Markets
Climate Resilient Farming Round 5 - 2021**

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22	2	Wayne SWCD	\$41,730 awarded to Wayne County Soil and Water Conservation District to work with a 2,200-acre cash crop farm to implement a Water Management System comprised of 3 control basins, subsurface drainage, and underground outlets. The system will mitigate runoff from 115 acres by directing, slowing, and diffusing concentrated water flows. These practices will eliminate sheet, rill, and gully erosion and reduce sediment, nutrient, and pathogen export. The system will mitigate the impacts of significant rain events and mitigate runoff from roadways and other failing drainage infrastructure.	\$ 41,730.00	0.0
			<i>Track 3: Healthy Soils NY: Soil Health practices sequester carbon and increase resiliency to the impacts of climate change.</i>		
23	3	Cayuga SWCD	\$62,338 awarded to the Cayuga County Soil and Water Conservation District to work with a farm to implement a prescribed rotational grazing system. This project will implement 88 acres of prescribed grazing, better manage periods of water stress during drought and storm events, reduce fertilizer use and fuel consumption for harvesting by 1,080 gallons of diesel annually.	\$ 62,338.00	91.0
24	3	Essex SWCD	\$21,030 awarded to Essex County Soil and Water Conservation District to work with a farm to implement a soil conservation system that will improve soil health, decrease soil erosion, and sequester carbon. This project will implement 17 acres of no-till seeding with perennial grasses and legumes for three years to improve pasture forage and soil health. An additional vegetable field will be mulched to improve water retention, build soil organic matter, and reduce runoff.	\$ 21,030.00	1.0
25	3	Fulton SWCD	\$45,720 awarded to Fulton County Soil and Water Conservation District to work with seven small-scale vegetable farms to improve soil health through cover cropping. This project will implement 42 acres per year of cover crops for three years. The District will purchase a small-scale, no-till drill and strip-till unit for use by the farms. By using this equipment, a cover crop can be established early in the growing season, improving soil health, reducing the impact of drought and flooding, and reducing soil loss from erosion. Soil health tests will be used to monitor soil organic matter levels, active carbon, compaction, and other biological indicators.	\$ 45,720.00	15.0
26	3	Genesee SWCD	\$59,823 awarded to the Genesee County Soil and Water Conservation District to work with a farm to implement cover crops. Cover crops are planted to improve soil quality, reduce erosion, and to increase soil organic matter. This project will plant 314 acres per year for three years of multiple species cover crops, decreasing erosion and compaction, and increasing water retention in the soil for resiliency.	\$ 59,823.00	37.0

**NYS Department of Agriculture and Markets
Climate Resilient Farming Round 5 - 2021**

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27	3	Genesee SWCD	\$35,445 awarded to Genesee County Soil and Water Conservation District to work with a farm on reduced tillage methods and cover cropping. This project will implement 35 acres per year of cover crops and 79 acres per year of strip-tillage for a three-year period. The implementation of these BMP's will sequester carbon, improve nitrogen management, increase water retention, while reductions will be made in fuel consumption, GHG emissions, soil loss, and compaction. Reducing tillage performed will reduce fuel usage over the three years by 1,403 gallons.	\$ 35,445.00	28.0
28	3	Genesee SWCD	\$75,341 awarded to Genesee County Soil and Water Conservation District to work with three farms on reduced tillage methods and cover cropping. This project will implement 396 acres per year of cover crops for three years. The implementation of these BMP's will sequester carbon, improve nitrogen management, increase water retention, while reductions will be made in fuel consumption, GHG emissions, soil loss, and compaction.	\$ 75,341.00	106.0
29	3	Genesee SWCD	\$72,749 awarded to Genesee County Soil and Water Conservation District to work with two farms on reduced tillage methods and cover cropping. This project will implement 284 acres of cover crops per year for three years and 357 acres of no-till. The implementation of these BMP's will sequester carbon, reduce fuel usage and GHG emissions as well as reduce soil loss and compaction.	\$ 72,749.00	177.0
30	3	Genesee SWCD	\$38,997 awarded to Genesee County Soil and Water Conservation District to work with a farm on improving soil health with cover cropping. This project will implement 196 acres of cover crops per year for three years. The implementation of cover crops will allow the farm to be more adaptable to drought and precipitation, mitigate GHG emissions, and improve the water quality in a sensitive watershed.	\$ 38,997.00	54.0
31	3	Jefferson SWCD	\$33,285 awarded to Jefferson County Soil and Water Conservation District to work with a farm on reduced tillage methods and cover cropping. This project will implement 50 acres per year of cover crops and 50 acres per year of reduced tillage for a three-year period. By implementing these BMP's, the farm will increase soil organic matter to improve water holding capacity and conserve soil moisture to make the farm more resilient to flood and drought conditions. Soil health testing will be done to measure a change in soil organic matter after implementation.	\$ 33,285.00	17.0

**NYS Department of Agriculture and Markets
Climate Resilient Farming Round 5 - 2021**

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32	3	Montgomery SWCD	\$41,220 awarded to Montgomery County Soil and Water Conservation District to work with a farm to improve soil health through cover cropping. This project will implement 53 acres per year of cover crops for three years. The farm will purchase a no-till corn seeder. By inter-seeding into a standing corn crop, a cover crop can be established early in the growing season, to improve soil health, reduce the impact of drought and flooding, and reduce soil loss from erosion. Soil health tests will be used to monitor organic matter levels, active carbon, compaction, and other biological indicators.	\$ 41,220.00	44.0
33	3	Onondaga SWCD	\$40,236 awarded to the Onondaga County Soil and Water Conservation District to work with a farm on reduced tillage and cover cropping. This project will plant 150 acres per year of cover crops and 150 acres per year of reduced tillage for a three-year period to help build soil organic matter, sequestering carbon emissions, and increase the farms resiliency to storm events.	\$ 40,236.00	38.0
34	3	Otsego SWCD	\$52,346 awarded to Otsego County Soil and Water Conservation District to work with a farm on Cultural Soil Conservation System to improve soil health, decrease soil erosion, and sequester carbon. This project will implement 3 acres per year for three-years of mulching, composting, and cover crop planting to improve water retention and build soil organic matter. Additionally, cover crops will be used to reduce applied fertilizer.	\$ 52,346.00	5.0
35	3	Rensselaer SWCD	\$72,037 awarded to Rensselaer County Soil and Water Conservation District to work with a farm to implement a silvopasturing system that will sequester carbon, and reduce emissions of carbon and nitrous oxide from the soil. This project will implement 20 acres of forage and biomass planting with native perennial grasses and hybrid chestnut trees to improve pasture forage and soil health.	\$ 72,037.00	50.0
36	3	Rensselaer SWCD	\$45,589 awarded to Rensselaer County Soil and Water Conservation District to convert 33 acres of cropland to perennial pasture. The prescribed rotational grazing system will include a watering system and fencing. Implementation of the grazing system will enhance the farms resiliency and susceptibility to climate change from drought, intense storm events, improve water quality, soil health, and reduce CO2 emissions.	\$ 45,589.00	38.0
37	3	Schoharie SWCD	\$18,506 awarded to Schoharie County Soil and Water Conservation District to work with a farm to convert from conventional tillage to a reduced tillage system. This project will implement 25 acres of reduced tillage per year for three years. The farm will purchase a no-till corn seeder. Changing to a no-till system will reduce the number of passes over the field, reducing fuel usage from 6 gal/acre to 2 gal/acre while keeping the soil covered year round to improve soil health.	\$ 18,506.00	8.0

**NYS Department of Agriculture and Markets
Climate Resilient Farming Round 5 - 2021**

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38	3	Washington SWCD	\$60,000 awarded to Washington County Soil and Water Conservation District to purchase an Interseeder and introduce this new cover cropping method to landowners. The 3-year pilot program will provide the equipment, seed, and instruction to three farms within the county. The project will demonstrate the effectiveness and benefits of cover cropping; soil loss reduction, increased organic matter, reduced fuel consumption, reduction in GHG emissions, and an improvement in soil health.	\$ 60,000.00	25.0
39	3	Wayne SWCD	\$103,822 awarded to the Wayne County Soil and Water Conservation District to work with five farms to implement cover crops. Cover crops are planted to improve soil quality, reduce erosion, and to increase soil organic matter. This project will plant 200 acres of cover crops per year for three years decreasing erosion and compaction, and increasing water retention in the soil for resiliency.	\$ 103,822.00	24.0
40	3	Wayne SWCD	\$27,555 awarded to Wayne County Soil and Water Conservation District to work with six fruit farms on Cultural Soil Conservation System to improve pollinator habitat and soil health, decrease soil erosion, and sequester carbon. This project will implement 3 acres of pollinator habitat and herbaceous buffer sites to improve water retention and build soil organic matter. Additionally, cover crops will be used to reduce applied fertilizer.	\$ 27,555.00	3.0
41	3	Wyoming SWCD	\$46,159 awarded to Wyoming County Soil and Water Conservation District to work with a farm on reduced tillage methods and cover cropping on highly erodible land. This project will implement 193 acres of cover crops per year for three years and 171 acres of zone tillage management for three years. The implementation of these BMP's will decrease soil erosion, reduce runoff, enhance soil health, increase organic matter, and reduce GHG emissions.	\$ 46,159.00	206.0
42	3	Wyoming SWCD	\$66,936 awarded to Wyoming County Soil and Water Conservation District to work with a farm on reduced tillage methods and cover cropping on highly erodible land. This project will implement 300 acres of cover crops and 300 acres of no-tillage management a year for three years. The implementation of these BMP's will decrease soil erosion, reduce runoff, enhance soil health, increase organic matter, and reduce GHG emissions.	\$ 66,936.00	117.0
43	3	Yates SWCD	\$40,080 awarded to the Yates County Soil and Water Conservation District to work with a vineyard on nutrient management using compost and biochar. This project will use compost and biochar as a soil amendment to improve soil quality, increase soil carbon content reduce erosion, and increase soil organic matter. Biochar will also improve the water-holding capacity of the soil to aid during drought as well as increase retention of soil nutrients providing potential to reduce inputs of fertilizer.	\$ 42,080.00	10.0

**NYS Department of Agriculture and Markets
Climate Resilient Farming Round 5 - 2021**

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44	3	Yates SWCD	\$83,020 awarded to Yates County Soil and Water Conservation District to work with farms to reduce soil erosion and increase carbon sequestration by increasing vegetative cover in vineyards in the Keuka and Seneca Lake Watersheds. This project will implement 270 acres of conservation cover underneath the vines where it is usually left bare. A specialized mower allowing farms to control the vegetation underneath the vineyard trellis will be purchased by the District for use by area farms.	\$ 83,020.00	140.0
TOTALS				\$ 4,000,000.00	87,560.3