





NEW YORK STATE | Office of General Services | Department of Environmental Conservation | NYSERDA | NY Power Authority

Greening New York State

NINTH PROGRESS REPORT ON STATE GREEN PROCUREMENT AND AGENCY SUSTAINABILITY

FISCAL YEAR 2019–2020

Andrew M. Cuomo, Governor | RoAnn M. Destito, Commissioner OGS | Basil Seggos, Commissioner DEC
Doreen M. Harris, President and CEO NYSERDA | Gil Quiñones, President and CEO NYPA



Message From the Chairs

Under Governor Andrew M. Cuomo's leadership, New York State government has become a national leader in protecting our environment. The State's commitment to environmental stewardship is borne out not only in its policies, but in its operations as well. Through the GreenNY program, State agencies have taken a holistic approach to lowering their environmental footprint across a wide range of areas documented in this report, including waste reduction, reducing greenhouse gas emissions, protecting habitat and sensitive ecosystems, green procurement, and reducing the use of hazardous substances.

The GreenNY program is carried out by the interagency GreenNY Council, co-chaired by the Department of Environmental Conservation, the Office of General Services, the New York Energy Research and Development Authority, and the New York Power Authority. The GreenNY Council oversees implementation of the State's "lead by example" operational directives, including those found in the Climate Leadership and Community Protection Act (CLCPA), Executive Orders 4, 18, 88, 166, the "New Efficiency: New York" whitepaper, the Renewable Heating and Cooling Framework, and the Zero Emission Vehicle Memorandum of Understanding (ZEV MOU).

Greening New York State: Ninth Progress Report on State Green Procurement and Agency Sustainability documents that State government is continuing its already impressive progress on reducing its environmental footprint. Accomplishments include a record amount of State agencies having active internal sustainability teams/infrastructure, a record $211 million spent on green products, and finalizing four new green purchasing specifications (bringing the total up to 61).

In addition, the FY 19–20 Report includes a new section on refrigerant management, which outlines increased efforts to track and mitigate this category of potential emissions sources.

Great progress has been made through our collective efforts, and we continue to establish new initiatives to further advance the improvements necessary to achieve our priorities. The BuildSmart 2025 program was launched during 2020, which supports efforts across State facilities to save 11 trillion Btu of energy from facilities 5,000 sq. ft and larger by 2025. This ambitious goal shows what has been made possible through the close interagency collaboration fostered through the GreenNY Council.

We are proud of the work that State government is undertaking to decrease the environmental footprint of its operations and look forward to continued success in the future.



RoAnn M. Destito, Commissioner, Office of General Services



Basil Seggos, Commissioner, Department of Environmental Conservation



Doreen M. Harris, Acting President and CEO, NYS Energy Research and Development Authority



Gil Quiñones, President and CEO, NY Power Authority

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Guide to State Agency Abbreviations

Aging . . . . . Office for the Aging

AGM . . . . . Agriculture and Markets

APA . . . . . Adirondack Park Agency

Arts . . . . . Council on the Arts

BFSA . . . . . Buffalo Fiscal Stability Authority

BOE . . . . . Board of Elections

BPCA . . . . . Battery Park City Authority

CDTA . . . . . Capital District Transportation Authority

CENTRO . . . Central New York Regional Transportation Authority

CS . . . . . Department of Civil Service

CPB . . . . . Central Pine Barrens Joint Planning & Policy Commission

CUNY . . . . . City University of New York

DANC . . . . . Development Authority of the North Country

DASNY . . . . . Dormitory Authority of the State of New York

DCJS . . . . . Division of Criminal Justice Services

DEC . . . . . Department of Environmental Conservation

DFS . . . . . Department of Financial Services

DHR . . . . . Division of Human Rights

DHSES . . . . . Department of Homeland Security and Emergency Services

DMNA . . . . . Division of Military and Naval Affairs

DMV . . . . . Department of Motor Vehicles

DOB . . . . . Division of Budget

DOCCS . . . . Department of Corrections and Community Supervision

DOH . . . . . Department of Health

DOL . . . . . Department of Labor

DOS . . . . . Department of State

DOT . . . . . Department of Transportation

DPS . . . . . Department of Public Service

DVS . . . . . Division of Veterans Services

ECFSA . . . . . Erie County Fiscal Stability Authority

ECMC . . . . . Erie County Medical Center

EFC . . . . . Environmental Facilities Corporation

ESD . . . . . Empire State Development

FCB . . . . . Financial Control Board

Gaming . . . . Gaming Commission

GOER . . . . . Governor's Office of Employee Relations

HCR . . . . . Homes and Community Renewal

HESC . . . . . Higher Education Services Corporation

HRBRRD . . . Hudson River-Black River Regulating District

HRVG . . . . . Hudson River Valley Greenway

IG . . . . . Office of the Inspector General

ITS . . . . . Information Technology Services

JC . . . . . Justice Center

JCOPE . . . . . Joint Commission on Public Ethics

LIPA . . . . . Long Island Power Authority

MTA . . . . . Metropolitan Transportation Authority

NFTA . . . . . Niagara Frontier Transportation Authority

NIFA . . . . . Nassau Interim Finance Authority

Javits . . . . . New York Convention Center Operating Corporation

NYPA . . . . . New York Power Authority

NYSBA . . . . . New York State Bridge Authority

NYSCC . . . . . New York State Canal Corporation

NYSERDA . . New York State Energy Research and Development Authority

NYSIF . . . . . New York State Insurance Fund

OASAS . . . . . Office of Addiction Services and Supports



NYPA

▲ When COVID-19 hit in March 2020, NYPA staff was sequestered at multiple critical energy facilities to ensure that they could remain up and running without disruption. NYPA was able to power the trailers they brought on site to house staff by using their recently installed EV charging stations, demonstrating a resiliency benefit of EV infrastructure.

OCFS . . . . . Office of Children and Family Services

OBPA . . . . . Ogdensburg Bridge and Port Authority

OGS . . . . . Office of General Services

OMH. . . . . Office of Mental Health

State Parks . Office of Parks, Recreation and Historic Preservation

OPWDD . . . . Office for People with Developmental Disabilities

ORDA. . . . . Olympic Regional Development Authority

OTDA . . . . . Office of Temporary Disability Assistance

PERB . . . . . Public Employees Relations Board

POA . . . . . Port of Oswego Authority

RIOC. . . . . Roosevelt Island Operating Corporation

RGRTA . . . . . Rochester-Genesee Regional Transportation Authority

SLA. . . . . State Liquor Authority

SUNY . . . . . State University of New York

Tax . . . . . Department of Tax and Finance

Thruway . . . Thruway Authority

NYSP . . . . . New York State Police

UNDC. . . . . United Nations Development Corporation

WCB . . . . . Workers' Compensation Board

WCHC . . . . . Westchester County Health Corporation

Executive Summary

State agencies continued to make progress in decreasing their environmental footprints in FY 19–20 through sustainable operations and green purchasing programs. The holistic nature of the GreenNY program that underlies their actions has led to impressive results across multiple areas, including:

- Waste Reduction, Recycling, and Composting – an overall state agency recycling rate of 90%, a 24% increase from FY 18–19 due to improved construction and demolition data reporting. State agencies also composted a total of 15,083 tons, including 6,928 tons of food scraps;
- 73% of State agencies now implement integrated pest management practices, which reduce or eliminate the use of hazardous chemicals, at all or most of their facilities. In addition, 80% utilize green cleaning practices at all or most of their facilities;
- Energy Efficiency – State agencies exceeded their BuildSmart 2020 goal of 20% energy use intensity reduction from larger facilities, and progress continued, with 16 agencies reporting capital upgrades to install LED lighting;
- Renewables – **State Parks**, **SUNY**, **OBPA**, and **NYSBA** combined generate nearly 6 million kilowatt hours of solar electricity annually;
- Refrigerant Management – the **University at Albany's (SUNY)** renovations of the old Albany High School building will include installation of a cooling system that uses a refrigerant with a global warming potential that is 52% less than traditional refrigerants;
- Sustainable Transportation – State agencies' zero emission vehicle fleets drove 4,433,019 miles, the equivalent of traveling the length of the Erie Canal more than 12,212 times;
- Water Conservation – State agencies are ahead of upcoming requirements with 79% of state employees working at agencies that have low-flow fixtures at all or most of their facilities;
- Green Infrastructure – expanded, with the completion of projects such as **State Parks**' newly created intertidal pool at Roberto Clemente State Park;
- Species and Habitat Protection – improved, with the completion of projects such as **NYPA**'s restoration of inland wetland habitats and **DOT's** testing of a topsoil alternative that helps native species;
- Buying Green – agencies spent $212,508,000 on green products in FY 19–20;
- Green Specifications – four new green purchasing specifications were approved in 2020 for the categories of adhesives, computers and displays, floor coverings, and lubricants, bringing the total to 61 green purchasing specifications;
- Purchasing Recycled Paper – 63% of dollars spent on copy paper in FY 19–20 went toward 100% post-consumer recycled content, processed chlorine-free paper;
- Reducing the Purchase of Bottled Water – $92,759 was saved through new initiatives across State agencies; and

Combined, the results contained in this progress report demonstrate the commitment New York State agencies have to leading by example for others to follow.

BY THE NUMBERS

11 BILLION BTUs OF ENERGY will be saved by **2025** at state facilities through the **BUILDSMART 2025 PROGRAM**

That's enough to **POWER 106,800 NEW YORK STATE HOMES**

40,000 POUNDS OF FOOD will be grown on the **JAVITS CENTER'S NEW ROOFTOP FARM** per year

$212+ MILLION spent by State agencies **ON GREEN PRODUCTS** in FY 19–20

New York State's **ZEV FLEET** traveled **4.4 MILLION MILES**

That's equivalent to traveling the **ERIE CANAL 12,000+ TIMES**

61 GREEN PURCHASING SPECIFICATIONS APPROVED for use by State agencies

90% overall state agency **RECYCLING RATE**

24% increase from FY 18–19

State agencies **RECYCLED 1,020,627 TONS OF MATERIALS**

4,536 TIMES the weight of the **STATUE OF LIBERTY**

NEW YORK STATE

Achieving the Promise of Sustainability

Increasing sustainability in State government is a win-win for both the environment and the economy. It significantly reduces pollution and waste while saving taxpayer dollars. Key benefits include:

- Saving money;
- Reducing energy use and greenhouse gas emissions;
- Reducing materials use;
- Reducing hazardous chemical use; and
- Conserving water and other natural resources.

That's why New York has consistently set an example of environmental stewardship for the rest of the nation. A series of laws, executive orders (EOs), and policies have created a strong framework to support agencies as they strive to reduce their greenhouse gas emissions and adopt sustainable practices. They include the **Climate Leadership and Community Protection Act (CLCPA)**, **Executive Order No. 4** (EO 4), **EO 166**, **EO 88**, **EO 18**, and the **"New Efficiency: New York" whitepaper**.



Brian Calderon

- The CLCPA is the strongest climate law in the nation and will decrease New York State's greenhouse gas emissions 40% by 2030 and 85% by 2050. It also includes a sections directing State agencies, authorities, offices and divisions to lower greenhouse gas emissions from operations, ensure their decisions are not inconsistent with the attainment of the statewide greenhouse gas emissions limits, and to prioritize reductions of greenhouse gas emissions and co-pollutants in disadvantaged communities.
- EO 4 directs the 74 State agencies and authorities covered by the Order to incorporate sustainability into all aspects of their operations. To accomplish this, agencies are required to implement a Sustainability and Environmental Stewardship Program and assign an employee to serve as Sustainability and Green Procurement Coordinator ("Sustainability Coordinator"). EO 4 also created an Interagency Committee on Sustainability and Green Procurement ("Interagency Committee") co-chaired by the Commissioners of OGS and DEC.
- EO 166 calls on all affected State entities to take action to meet the State's greenhouse gas reduction goals by reducing emissions from all operations, buildings, and vehicle fleets.
- EO 88 required the same entities to reduce Source Energy Use Intensity (EUI) in State-owned and -managed buildings 25,000 square feet or greater by at least 20% by 2020 from a baseline of FY 10–11. Ultimately, affected entities exceeded this goal and lowered EUI by 22% in covered buildings. Energy efficiency continues to be a feature of agency activities and is now implemented through BuildSmart 2025, which is a program that helps agencies meet the policy goal of reducing site energy use at building 5,000 sq/ft or greater by 11 trillion Btu by 2025 (from the baseline year of 2015).
- EO 18 directs executive agencies to "eliminate the expenditure of State funds for the purchase of bottled water."

◂ Students from the CUNY Hunter College sustainability committee educate fellow students and employees at various booths during "Green Week."

DEC worked with the Adirondack Park Invasive Plant Program and other local partners to quickly delineate a hemlock woolly adelgid infestation along the shore of Lake George, which encompassed more than 250 acres. ▶

Formally announced by Governor Cuomo in August 2020, the **GreenNY Council** is a multiagency, silo-busting working group charged with helping agencies implement all the State's lead-by-example directives. The Council is co-chaired by **DEC**, **OGS**, **NYSERDA**, and **NYPA.** Together, Council members have worked to leverage resources, create guidance, streamline sustainability reporting, and make it easier for agencies to achieve Governor Cuomo's climate and sustainability goals. Agency reporting under EO 4, EO 166, EO 88, and EO 18 has been consolidated into one joint, annual **"GreenNY" reporting** form since FY 18–19.

For FY 19–20, a record total of 70 agencies reported under all the State's climate and sustainability directives. This summary compiles those reports. FY 18–19 and prior progress reports for EO 4 and EO 18 can be found on the **GreenNY website**, which includes more detailed information and case studies on sustainable operations and purchasing. Prior reports for EO 88 can be found **here**.

CURRENTLY, NEW YORK STATE GOVERNMENT:

Operates
16,000+
FACILITIES
totaling
200+
MILLION SQUARE FEET
with an estimated annual
$400–500
MILLION
UTILITY BILL

In addition to the directives listed here, there are many **State initiatives** related to climate or energy efficiency and the environment that both inform and are supported by agency sustainability.

Generates approximately
400,000
TONS of
SOLID WASTE
per year

Operates
25,000+
VEHICLES

Spends approximately
$8 BILLION
per year on the purchase of
COMMODITIES, SERVICES, AND TECHNOLOGY



DEC

Operating Green

Engaging the Green Team

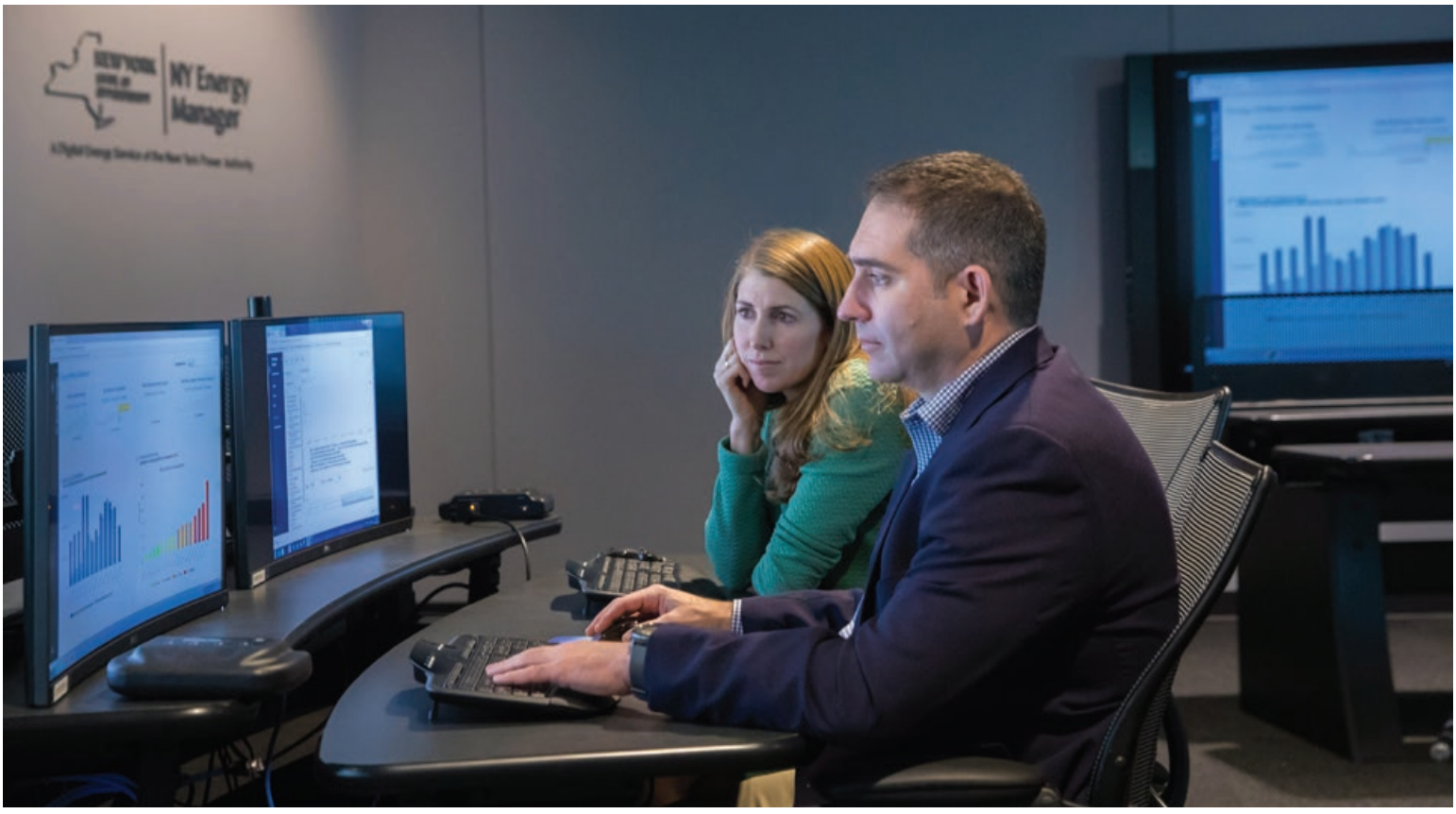
Agency climate and sustainability programs are made strong by the teams that develop and implement them. The GreenNY Council has found that the strongest teams have dedicated sustainability staff and participation by staff members across the organization, including facilities, finance, and fleet management, an executive sponsor, and a designated tenant representative, if applicable. Regular meetings of this team foster inter-departmental conversation and collaboration to spread sustainability to all corners of an agency. With the assistance of the GreenNY Council, sustainability coordinators and their teams can reach all staff through regular engagement and training in the form of lunchtime learning webinars, informational signage placed around facilities, email newsletters, and more. In addition, the Council once again held its annual GreenNY Forum, this time virtually, which brought together over 140 sustainability coordinators and State agency staff to network, share best practices, and learn about new technologies and policies.

11 agencies have fully developed sustainability plans to green operations statewide, while another 5 agencies report having plans in development.

In FY 19–20, 54 State agencies (76% of the total) reported having a part-time sustainability coordinator, with an additional nine agencies having a full-time staff. Those nine State agencies are **CUNY**, **DFS**, **DHR**, **DMNA**, **MTA**, **Javits**, **NYPA**, **State Parks**, and **ORDA**, which is up from the seven agencies that reported having a full-time staff in FY 18–19. A full list of sustainability coordinators can be found **on the GreenNY Website.** In FY 19–20, 32 agencies reported having a robust sustainability team, an increase from 30 in FY 18–19.

SUNY Brockport's full-time energy manager gaining additional training from the New York Energy Manager team. ▼

NYPA





Javits Center

▲ Employees at Javits come together to harvest honey from hives located on the top of the convention center to be made into lip balm.

Both large and small agencies have unique and robust methods of engaging employees in sustainability initiatives, some examples include:

- **DANC** developed a sustainability training that all new hires receive in orientation and all employees take every 3 years;
- **BPCA** has an email address set up for employees to submit ideas for sustainability projects and ways the authority can reduce its environmental impact;
- **CUNY** campuses have a sustainability council that includes representation from multiple departments and students; and
- **NYSERDA** includes sustainability announcements in its monthly e-newsletters and its sustainability coordinator holds trainings for all new hires and interns.

Many agencies found success in FY 19–20 for their sustainability staffing, planning, training, and funding:

- **AGM** started meeting with employees who wanted to start smaller sustainability projects and educate co-workers on how they could also improve their efforts;
- **DFS** is working with its communications team to build an internal sustainability intranet page that shares tips on promoting sustainability in its NYC and Albany locations;
- **Javits** employees produced more than 1,000 containers of lip balm created with honey supplied by hives on the roof of the convention center. This gave hands-on experience and exposure to the sustainability program; and
- **SUNY Brockport** tapped into NYSERDA funding to hire a full-time energy manager.

	Percentage of Agencies	
	FY18–19	FY19–20
Hold meetings at least twice a year with sustainability team and the head of agency	12%	20%
Hold regular meetings with sustainability team and agency's deputies for facility management and finance	24%	24%
Use resources on the GreenNY SharePoint site or the GreenNY public website	69%	75%
Participate in webinars and activities offered by the GreenNY team	68%	80%
Participate in the annual GreenNY Forum	46%	48%
Provide outward-facing sustainability education and communications (e.g., website and newsletter content)	29%	32%
Convene their sustainability team to discuss the reporting process on an annual basis	37%	38%

Waste Reduction and Reuse

New York State agencies are leading by example in reducing waste and incorporating reuse and repair into everyday operations. The GreenNY program has played a significant role in how State agencies generate and handle waste through the training and support it offers agencies seeking to implement more ambitious waste reduction initiatives. Agencies reported generating 1,128,738 tons of waste in FY 19–20, 80% of which was clean construction and demolition (C&D) debris that was recycled (see "Recycling, Composting, and Special Wastes"). This increase in waste generation is attributed to improved waste tracking and reporting by State agencies.

State agencies took action to reduce waste in numerous ways in FY 19–20, including:

- Having procurement policies designed to prevent waste, such as ordering items with less plastic or polystyrene packaging;
- Employing practices to reduce wasted food at facilities; and
- Performing waste audits to identify areas for improvement.

State agencies are leveraging a variety of waste prevention programs, including the **OGS State Surplus Property Program** and developing their own agency- and facility-specific programs to reduce waste and reuse materials wherever possible. Agencies with facilities that generate significant amounts of wasted food and food scraps have taken additional steps to plan smart to prevent waste and divert edible food where possible, including the **SUNY Cortland**, **Farmingdale**, **New Paltz**, and the **Poly** campuses in Utica and Albany.

A few examples of successful waste prevention initiatives in FY 19–20 include:

- **RGRTA** offered employees reusable tote bags, water bottles, and travel mugs to encourage employees to use reusable items instead of single-use, disposable items;
- **Javits Center** provided event managers with a Sustainability Report Card that includes waste data for events broken down into waste streams and amounts, and calculates a diversion rate for each event;
- **OBPA** reused all wood and metal components that came from vessel operations to repackage wind turbine components for return shipment overseas; and
- **MTA's** cafeteria services vendor now prepares production reports and inventory control procedures to reduce waste and keep all parties informed about waste generation. The vendor also works with Island Harvest, the Long Island food bank, to handle donations of excess food.

In addition to reducing waste, agencies have established creative reuse projects that both save money and prevent waste, including establishing reuse programs in their offices and facilities. 49% of agencies report having an office supply reuse program in place at all (35%) or a majority (14%) of their facilities. Those with more specialized waste streams or unique materials have demonstrated creativity in finding ways to reuse special items. For example, **State Parks**' Finger Lakes region is disassembling rotting picnic tables and using them to construct holding bins for cardboard recycling. In addition, **Medgar Evers College (CUNY)** removed and pulverized the Crown Street perimeter sidewalk, consisting of two city blocks, to produce underlayment materials and fill for an on-site capital construction project. This project resulted in costs savings from the reduction of transportation and carting fees, and the need to purchase fill for the new project.

Agencies reported generating 1,128,738 tons of waste in FY 19-20, 80% of which was clean construction and demolition (C&D) debris that was recycled.

OF REPORTING STATE AGENCIES:

94%

REDUCING PAPER WASTE

by providing the public with **DOCUMENTS AND INFORMATION ELECTRONICALLY**

▼ ALL —*or*— A MAJORITY ▼

28% | **66%**

of the time

87%

set **DEFAULT PRINTER SETTINGS** to **DOUBLE-SIDED PRINTING** (duplex printing)

▼ ALL —*or*— A MAJORITY ▼

52% | **25%**

of the time

44%

practice behavioral change techniques such as **IMPLEMENTING INITIATIVES TO** shift individual attitudes to **REDUCE WASTE**

▼ AT ALL —*or*— A MAJORITY ▼

31% | **13%**

of their facilities

The NYSERDA Sustainability Team conducts a waste audit at their headquarters building. Results from the audit were used to identify ways to reduce the amount of waste generated by the facility and to increase its recycling rate. ▼



Heather Saunders – NYSERDA Sustainability Coordinator

Recycling, Composting, and Special Waste

Reporting for FY 19–20 continues to document a robust and encouraging trend of high recycling rates by State agencies. In the last five reporting years, 66% or more of the solid waste generated by agencies was recycled or composted, compared to a 50% rate of recycling in FY 08–09. FY 19–20 saw an overall State agency recycling rate of 90%, a 24% increase from FY 18–19. Across all reporting agencies, 1,020,627 tons of waste were recycled or composted in FY 19–20, including 902,810 tons of clean construction and demolition debris (C&D). This large increase in C&D debris is due to updated and improved reporting by **DOT**.

State agencies recycled or composted 90% of all waste generated in FY 19-20

State agencies, including **NYPA** and **Gaming**, have found that updated and consistent signage has led to more employee buy-in, increased awareness of the issue of waste among employees, and support for agency-wide recycling programs. Others report that staff training has been key to improving both recycling rates and reducing contamination of recycling streams. To address contamination challenges experienced in previous years, **Hunter College (CUNY)** offered a refresher training to staff to address the co-mingling of recycling streams.

Diverting organic waste and food scraps that cannot be donated to recycling or anaerobic digestion reduces methane generation in landfills and sequesters significant amounts of elemental carbon, all while producing a beneficial amendment that improves soil health and reduces the need for energy-intensive fertilizers and hazardous pesticides. State agencies composted a total of 15,083 tons, including 6,928 tons of food scraps, in FY 19–20. Many agencies that compost on-site report using the finished product in landscaping projects leading to cost savings. **University at Buffalo (SUNY)** composts on-site and offers the nutrient-rich compost available at no cost to the campus and the greater Western New York community.

A few examples of successful recycling and composting initiatives in FY 19–20 include:

- **NYSERDA** recycled almost 17,000 pounds of electronic waste this year and **earned Gold-level recognition for their participation in the State Electronics Challenge** for purchasing, operating efficiently, and end-of-life handling of electronics;
- **SUNY Maritime** saw an increase in recycling of metal, glass, and plastic materials after installing new recycling stations in dormitories;
- **Hunter College (CUNY)** recycled over 2,000 hard-cover library books; and
- **DEC** has entered a $5.75-million partnership with **SUNY ESF** to help **establish the New York State Center for Sustainable Materials Management at ESF**. This partnership between DEC and SUNY will help develop a comprehensive plan to improve recycling in NYS and address recycling market challenges.



BPCA

In FY 19–20, DOT reported

406

LANE MILES,

equivalent to

781,440

TONS,

of cold-in-place

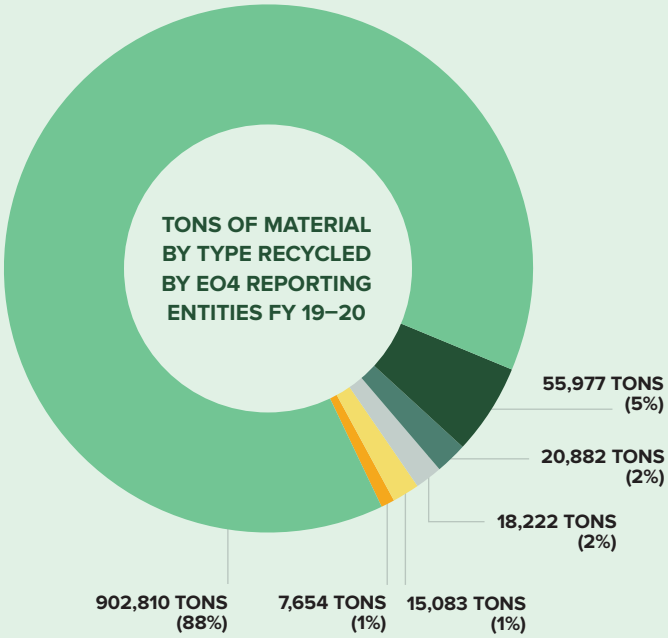
ASPHALT RECYCLING

◂ **BPCA** has a longstanding composting program that is growing steadily. When COVID-19 shut down composting, BPCA accommodated the downtown community with compost collection sites, enabling hard-won behavioral changes for food waste management to continue to build throughout the community. ▾

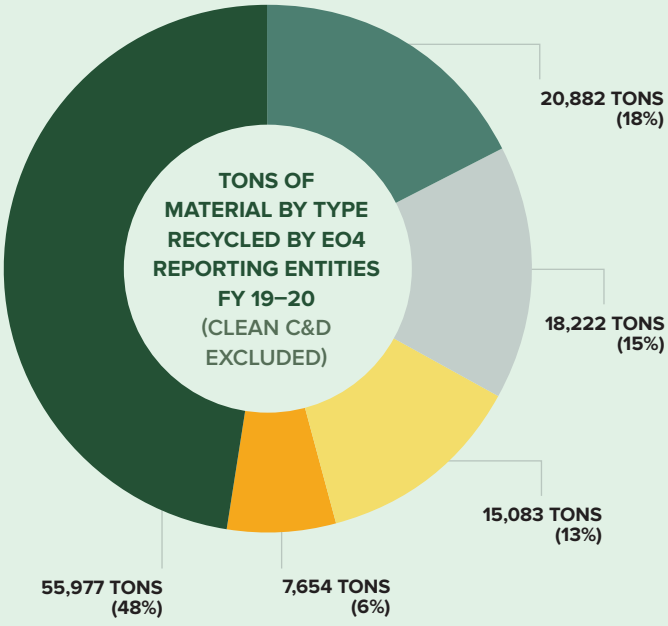


BPCA

Breakdowns of the total quantity of materials recycled by agencies, on average, in FY 19–20. Because waste types are split out by weight, "office recyclables" (paper, bottles, and cans) amount to significantly less than non-office recyclables, which weigh more. C&D material includes concrete, asphalt, brick, and clean wood that come from building construction, renovation, and demolition, as well as highway construction and maintenance. ▾







Reducing Hazardous Chemical Use

PEST MANAGEMENT

Integrated Pest Management (IPM) practices focus on monitoring, good sanitation, and structural controls, along with the least-hazardous pesticide use. Most agencies continue to use IPM to prevent indoor pests. Integrated Vegetation Management (IVM) practices reduce the need for pesticides, promote healthy ecosystems, and provide measurable results, such as greater natural species diversity along rights-of-way and better control of invasive species. Most agencies now solely use non-chemical means to control pests on their lawns and grounds. About half of all agencies also practice IVM or IPM at exempt outdoor facilities, such as golf courses and rights-of-way.

A few examples of agencies following IPM and IVM in FY 19–20 include:

- **Javits** required the use of sustainable farming methods, including not using hazardous chemicals, as part of its new one-acre rooftop farm, and
- **NYPA**'s headquarters in White Plains successfully used dry ice to treat for a rat infestation in a garden area, and the vegetation maintenance department is implementing alternatives to glyphosate-based herbicides at its facilities and rights-of-way.

Most agencies now solely use non-chemical means to control pests on lawns and grounds.

Javits rooftop farm will exist atop its historic expansion project, opening mid-2021. The one-acre farm will yield about 40,000 pounds of produce each year and will provide a roof-to-table experience unlike any other. ▼



Javits Center

GREEN CLEANING

Green cleaning is an important tool that allows State agencies to ensure their facilities meet a high level of cleanliness, without compromising indoor air quality or potentially exposing staff and visitors to hazardous substances. Green cleaning can involve using less-hazardous chemicals, reducing a facility's inventory of cleaning products, using automated dispensers that accurately measure quantities to avoid unnecessary use of higher volumes, and implementing methods that don't require chemicals.

"By limiting the use of chemicals in our work spaces, the DPS is hopefully providing an increased comfort level for its employees and reducing reactions to allergens."
— DPS

A few examples of State agencies implementing green cleaning in FY 19–20 include:

- **College of Staten Island (CUNY)** has switched to a hydrogen peroxide-based cleaner that uses plant-derived natural orange oil and biodegradable hydrogen peroxide at 3% as an alternative to chlorine-based and quaternary ammonium compounds,
- **RIOC's** department heads make sure they prioritize the OGS-approved green cleaning products lists when buying cleaning and sanitizing products, and
- **SUNY Purchase's** Custodial Department explored various options and now exclusively purchases green cleaning products. In addition, staff are trained in mixing solutions via chemical stations, using microfiber and other green practices.

In FY 19–20, agencies leveraged the **Green Cleaning Program website** and the **Tip Sheet** on the OGS website for resources on implementing green cleaning practices and purchasing approved green cleaning products. While disinfectants are not included on the list of Green Cleaning products, there are numerous disinfectants on the market that meet the **GreenNY Specification for Disinfectants and Sanitizers**, which were successfully employed by agencies during the reporting period.

In addition, the GreenNY Council began asking agencies about laboratory chemical management for the first time this reporting cycle to learn more about what actions can be taken to decrease potential exposure to hazardous substances. The Council found that work is already under way in this area with **Borough of Manhattan Community College (CUNY)** having already reviewed and revised some of its chemistry labs to use less-hazardous chemicals.

BMCC



▲ Borough of Manhattan Community College (CUNY) has reviewed and revised chemistry labs in some of its courses to use less-hazardous chemicals.

One of State Parks' IPM success stories is at Nissequogue River State Park on Long Island. Staff at the greenhouse there propagate plants for around the Long Island State Park Region, and a few years ago they cut pesticide use and began using praying mantises as biological pest control. The mantises have stayed around from year to year, and no pesticides or insects have been purchased since. ▼

Brian Schweizer



OF REPORTING STATE AGENCIES:

73%

NOW IMPLEMENT IPM

at all or most of their

INDOOR FACILITIES

~50%

USE NON-CHEMICAL

means of

PEST MANAGEMENT

for turf and ornamental plantings at all or most of their facilities

80%

utilize green cleaning practices that

MINIMIZE THE AMOUNT OF CHEMICAL CLEANING PRODUCTS USED

at all or a majority of their facilities

These practices include the

USE OF WALK-OFF MATS, MICROFIBER MOPS AND CONTROLLED DILUTION SYSTEMS

for concentrated products

79%

reported using general purpose

GREEN CLEANERS

at all or a majority of their facilities

45%

AVOID PURCHASING

nursery stock that is

TREATED WITH INSECTICIDES

at all or most of their facilities

Renewable Energy

State agencies continue to expand their renewable energy initiatives, with 20% of agencies reporting using some form of renewable energy. However, with the addition of large solar installations, availability of power purchase agreements, addition of community solar projects, and the Governor's announcement of upcoming offshore wind projects, we expect significant increases in renewable energy use by State agencies in the near future.

Most renewable energy usage reported is generated from solar arrays located both on and off site. **State Parks**, **SUNY**, **OBPA**, and **NYSBA** combined generate nearly 6 million kilowatt hours of on-site solar electricity annually. This offsets 4,200 metric tons of carbon emissions, the equivalent to the electricity use of more than 700 homes for a year. In addition, **ORDA** and **SUNY** reported generating more than 11.5 million kilowatt hours of offsite solar in the form of power purchase agreements.

State Parks, SUNY, OBPA, and NYSBA combined generate nearly 6 million kilowatt hours of on-site solar electricity annually

Examples of projects entered into, or implemented, in FY 19–20 include:

- **State Parks** completed 5 new photovoltaic (PV) arrays, which are projected to produce around 136,000 kilowatt hours, and save the agency over $18,000 each year. These new arrays raises the total number of PV arrays at NYS Parks facilities to 31;
- **DOT**'s new Ithaca Residency includes a hybrid geothermal HVAC system using both ground and air source heat pumps, and also has solar panels on the roof;
- **OGS** intends to enter into a power purchase agreement that will provide half of the electricity for the Empire State Plaza. The size of the array is expected to be between 30 to 40 megawatts. The agency expects the project to be complete in 2022;
- **SUNY ESF** is participating in the NYSERDA/NYPA geothermal program and hopes to have geothermal heat pumps installed in the next year;
- **DMNA** secured federal funding for a rooftop solar system at its Farmingdale Armory; and
- **Javits** is continuing work with **NYPA** on the largest solar installation in Manhattan to date, a 3.29 megawatt installation with 2 megawatt of battery storage.

A new 15 kW solar array was installed in FY 19–20 on the roof of the Visitors Center at the Walkway Over the Hudson State Park. ▼



NYS Parks

DOT's new Ithaca residency facility features solar panels to generate renewable electricity and both ground and air source heat pumps for renewable heating and cooling. Pictured are the propylene glycol storage containers, which hold the fluid that moves heat throughout the system. ▼

DOT





NYS Parks

▲ An Excelsior Conservation Corps team works with **State Parks** maintenance staff to install a 38 kW array behind the maintenance barn at Darien Lake State Park in Western New York.



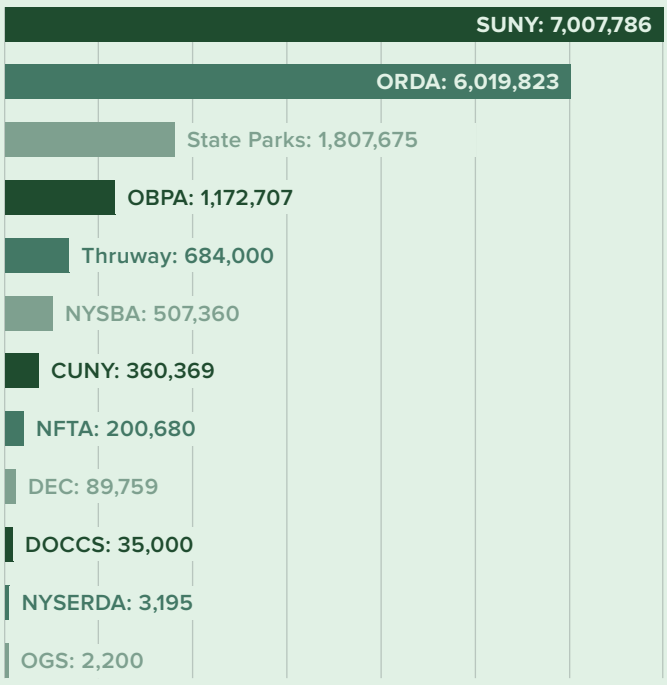
NYS Parks

▲ **State Parks** staff in East River State Park in New York City retrofit 23 solar light poles with new panels and batteries.

RENEWABLE ENERGY CREDITS

While some agencies have land on which to build on-site renewable energy projects and some have large enough electricity usage to justify an on- or off-site power purchase agreement, other agencies purchase renewable energy credits (RECS) to help meet their goals. Power generators create RECs when a renewable energy source generates one megawatt hour of electricity and delivers it to the grid; power generators can then sell these credits to other entities, such as State agencies. This allows agencies to support renewable energy production and take credit for the associated environmental benefits even though the specific projects are not associated with their facilities. Some agencies such as OGS are required to purchase RECS. RECs are sold by the MWh. State agencies that purchase RECs include **DASNY** (2), **DOL** (50), **NYSBA** (122), **OGS** (5,168), and **SUNY** (21,526).

STATE AGENCY SOLAR ENERGY GENERATION (in kWhs) ▼



Sustainable Transportation

New York State is a national leader in lowering greenhouse gas emissions from the transportation sector through policies and programs, such as record investments in our public transportation infrastructure, and NYSERDA's **Drive Clean** and **ChargeNY** programs. However, even with the aggressive action that the State has taken, transportation is still the largest source of greenhouse gas emissions in New York. That's why State agencies are continuing to take action to lower these emissions, including:

- Decreasing vehicle miles traveled (VMT), with 57% of the agencies that reported VMT over the past two years reporting a decrease in VMT;
- Using webinars and teleconferencing to reduce meeting travel; and
- Using carpooling and fleet management practices to make sure the most efficient vehicle is used for the task.

TOTAL VMT REPORTED IN FY 19–20*

204.5
MILLION MILES

3%
decrease from FY 18–19



*by 60 agencies

This year, all New Yorkers were encouraged to join New York State in taking action on climate change by taking the Car-Free for Climate pledge stating that they would not drive their car for at least one day during Climate Week NYC in September. ▼



DEC

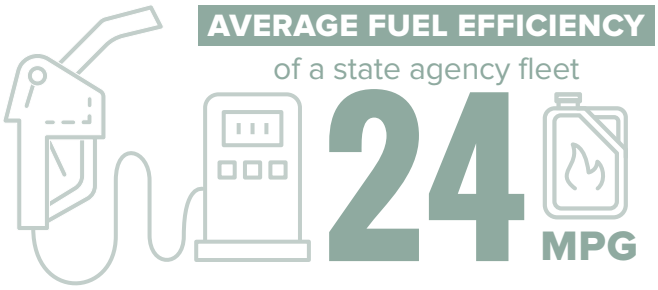
A few examples of successful sustainable transportation projects during FY 19–20 include:

- **EFC** reduced VMT by 25% over the previous year, bringing their five-year reduction up to 45%;
- **BFSA** offers employees reimbursement for public transportation fare up to the value of the employee parking benefit;
- **Queens College (CUNY)** implemented shuttle buses from subways stations to the campus;
- **University at Albany (SUNY)** provided universal access to the CDPHP bike share system to all students and staff; and
- **CDTA** added 4 new electric buses to its fleet.

In addition to lowering emissions from business-related travel, agencies are working to lower emissions from employee commuting as well. In fact, New York State employees commute using public transportation at 4 times the national average and policies such as the increased use of telework, increased promotion of the 511NY Rideshare carpool matching system, and the New York State Rides program, which allows employees to pay for transit fares with pre-tax dollars, are continuing to lower emissions from employee commutes.

New York State employees commute using public transportation at 4 times the national average.

More electric vehicle charging stations were also installed during the reporting period, including installations by **ORDA** (at Gore Mountain), **LIPA**, **State Parks**, and the **OMH**. Installations such as these are aiding in the adoption of electric vehicles by state employees, with 1.5% of employees commuting using a plug-in vehicle. In addition, state employees, as well as all New Yorkers, were invited to participate in this year's Car-Free for Climate event, which took place in September and encouraged participants to not drive a car at least one day out of this year's Climate Week NYC.





HRVG

◂ **HRVG** partnered with **AGM** to complete a section of the Empire State Trail through the New York State Fairgrounds. The trail section is open year-round except during the Fair, addressed a prior 14 mile gap in the Empire State Trail, and allows people to bike from downtown Syracuse to the Fairgrounds.

New York State's **ZEV FLEET** traveled **4.4 MILLION MILES**

That's equivalent to traveling the **ERIE CANAL** **12,000+ TIMES**

4% **ZERO EMISSION VEHICLES** (ZEVs)

Make up of the state's current light duty fleet

25% BY 2025

Percentage of light-duty, non-emergency vehicle purchases that will be **ZEVs**

RGRTA now has the highest percentage of electric buses in its fleet of any transit agency in the state. The Authority expects their current electric buses to lower greenhouse gas emissions by 905 metric tons annually with a total cost of ownership savings of $187,000 per bus compared to traditional diesel buses. ▼



RGRTA

A **DOT**-led installation of 9 EV charging stations for fleet use by DOT and DEC at their Long Island City offices. These chargers have been integrated into DOT's fleet management program, and the data from the charging station allows DOT to track metrics like energy usage and mileage for preventative maintenance purposes. ▼



DEC Region 2 Sustainability Team

Energy Efficiency

In accordance with the Climate Leadership and Community Protection Act (CLCPA) and through continued activities under the BuildSmart 2025 initiative, State agencies are continuing to become more energy efficient. Over the past 10 years, tremendous progress has been made to lower the energy use intensity from buildings over 20,000 square feet. Agencies not only met the 20% reduction goal by 2020, but exceeded it. To continue this progress, BuildSmart 2025 was launched.

State agencies are working to meet the BuildSmart 2025 goal of 11 trillion Btu of site energy savings by 2025 by creating efficiency plans and executing energy efficiency projects. The effort covers all buildings over 5,000 square feet. These projects will also contribute to carbon reduction targets under the CLCPA.

BuildSmart 2025 lays out three recommended focus areas for State agencies to act in: operations and maintenance (O&M), energy audits, and capital improvements. State agencies have already begun to take action in all three of these areas, including:

In FY 19–20, more than 25% of State agencies achieved cost savings resulting from energy use reduction efforts they pursued.

O&M

- **OMH** operates its facilities using a preventive maintenance approach, rather than a run until failure approach. This allows them to plan and budget for equipment replacement before the equipment fails. It also provides an opportunity for a thorough review of the replacement technology, including consideration of higher efficiency equipment.
- **OMH**'s Capital District Psychiatric Center worked with DASNY to develop and design an advanced building management system (BMS), replacing an outdated system that was requiring regular repair and hard-to-find parts. This computer-based control system facilitates O&M by controlling the building's mechanical and electrical equipment and continuously checking to ensure equipment is performing as intended when it was designed.

ENERGY AUDITS

- **CUNY**, **NYSERDA**, and **OCFS** all plan to conduct, are conducting, or completed energy audits. CUNY's study identified 27 energy conservation measures, such as piping insulation, retro commissioning, and operational and behavioral measures.

CAPITAL PROJECT IMPLEMENTATION

- **DOL** is including a requirement that all lighting be LED for new leases.
- **HCR** completed LED lighting design at one of its new spaces, which provides a 47% reduction from the energy code mandated minimum efficiency requirements. The agency also has occupancy sensor-based lighting controls throughout the entire space, which helps reduce unnecessary electricity usage.
- **OBPA** completed a re-lamping of its bridge facility with LED lighting, and recovered energy savings of nearly 32%.
- **OMH** has undertaken one of the largest energy efficiency projects in New York State, which includes the conversion of several thousand fluorescent lamps to more energy efficient LED lamps, saving over 3.7 MWh in usage and reducing overall demand by over 820 kW.
- **SUNY Oneonta** is saving roughly $20,000/year by converting site lights to LED.

OBPA replaced 30 street and parking lot light fixtures that used sodium vapor to LED at its Bridge facility and Border Station ▼



OBPA



NYSERDA

▲ NYSERDA Flex Tech (energy study) consultant taking airflow measurements to determine HVAC system performance related to outdoor air intake.

Refrigerant Management

Almost all refrigerants in use today are powerful greenhouse gases. Leaked refrigerants are estimated to make up roughly 5% of New York State's greenhouse gas emissions, a percentage that may increase over time as other sources of emissions decrease. Refrigerants are found mainly in three types of equipment used by State agencies: custom-installed equipment (chillers, heat pumps, rooftop units, etc.), smaller sealed equipment (refrigerators, coolers, etc.), and in vehicle air conditioning units.

Refrigerants make up roughly 5% of New York State's greenhouse gas emissions.

While working to reduce, and ultimately eliminate, leaked refrigerant emissions is the first step toward eliminating their impact on the climate, there are also new, non-ozone depleting and low Global Warming Potential (GWP) refrigerants available on the market. The GWP meassures how much heat they trap compared to CO_2. Examples of low GWP refrigerants include, R-32A (GWP of 672), R-290 (GWP of 3), and R-744 (GWP of 1). These technological advances will give agencies the opportunity to procure low GWP refrigerants that, even if leaked, will have a significantly lower impact on the climate.

The Council has begun work to reduce leakage and ultimately eliminate the use of high GWP refrigerants in State government operations. This year, for the first time, information was collected from agencies as part of GreenNY reporting on relevant equipment, the refrigerants present in their equipment, and current refrigerant management plans. The data collected will inform future actions, such as education and outreach and potential new internal refrigerant management policies. In addition, the Council added **a refrigerant management page to the GNY website,** created an interagency refrigerant management working group, and provided a training session to agency staff on refrigerant management at this year's GreenNY Forum.

As part of the renovations of the old Albany High School building to become the planned home of the College of Engineering and Applied Sciences, the University at Albany (SUNY) designed the cooling system to use a low-GWP refrigerant that has a 52% lower impact on the climate if leaked than the traditional refrigerant (R513a – GWP of 631 vs. R134a – GWP 1,300). Read this tip sheet to learn more about the project. ▼



University at Albany (SUNY)

Sustainable Landscaping

More than ever, we are celebrating open space for its restorative effect and recognizing our dependence on the health of our natural systems. Sustainable landscapes are places around or near the built environment which incorporate native plantings, use little to no pesticides, preserve and conserve water, and create habitat for wildlife. The benefits of sustainable landscapes include maintenance cost savings while also enhancing the beauty of the landscape and supporting wildlife. Sustainable landscaping also increases New York's resilience in the face of climate change.

80% of State agencies use sustainable landscaping practices that preserve, protect, and promote the use of native or non-invasive vegetation to support wildlife and pollinators.

The Native Plant Center at Westchester Community College has been dedicated to promoting the use of native plants in residential, commercial, and municipal landscapes throughout the region since 1998 through partnerships, conferences, and classes. The Center designed and maintains three native plant demonstration gardens with over 250 species native to New York and the Northeast. Education is central to the Center's mission. Science students and professors study how pollinators interact with native species and their cultivars in the Native Plant Center's trial research bed. ▼



The Native Plant Center

In February of 2020, **AGM**, **DEC**, and **State Parks** announced the 2020 Pollinator Protection Plan Update. The update outlines actions taken since the creation of the first Pollinator Protection Plan in June of 2016, and provides several recommendations to further the State's goals to protect its pollinator populations. The Pollinator Protection Plan has advanced many of the State's goals to protect its pollinator populations, including developing voluntary best management practices for all pollinator stakeholders and developing habitat enhancement efforts to protect and revive populations of native and managed pollinators. State agencies, such as **DEC**, **State Parks**, **DOT**, **Thruway**, and **OGS**, have contributed to enhancing habitats and implementing best management practices for pollinators. Agencies have conducted pollinator surveys; reduced or altered mowing practices to avoid disruptions to pollinator life cycles, provide late-season forage and aid in wildflower seed dispersal; planted pollinator friendly trees and flowers in landscaping; installed bee boxes in viable areas; implemented 11 critical projects that enhanced native pollinator habitat; and educated the public on the diversity and importance of native pollinators.

State agencies continued their leadership in sustainable landscaping in FY 19–20 by implementing new projects, including:

- **Brooklyn College's (CUNY)** Leonard and Claire Tow Center for the Performing Arts Center features landscaping that includes xeriscaping, native and pollinator species, and a section was designed as a rain swale;
- **State Parks** opened a newly created intertidal pool at Roberto Clemente State Park which diverts storm-water from the combined sewer system and into a natural storm water management system;
- **SUNY Morrisville** incorporated only native plantings and bioswales as the landscaping for a new $12 million buried electrical system; and
- **SUNY Empire** eradicated the invasive burning bush plant at one of their facilities and then incorporated new native plantings.

69%
USE SUSTAINABLE LANDSCAPING SOIL management practices

60%
OF AGENCIES CONSIDER WATER CONSERVATION in irrigation management plans



2020 University of Buffalo/Meredith Forrest Kulwicki

10 AGENCIES
USE FINISHED COMPOST
from food scraps or plant material
IN THEIR LANDSCAPES

NYPA continues to manage a robust integrated vegetation management program along its rights of way that supports a rich pollinator habitat. **NYPA** is taking further steps to support biodiversity by planting pollinator gardens and meadows at its facilities. A new pollinator garden at the Niagara Power Vista visitors center will serve as an a living classroom for school groups and other visitors, promoting the importance of biodiversity and sustainable landscapes. ▼▶



NYPA

▲ **University at Buffalo (SUNY)**, the **UB Bees** project has a mission to educate the UB and local community about honey bees and beekeeping thorough lectures, workshops, and hands-on experience. It also brings the community to nature and its restorative qualities while reducing the fear of bees and increasing knowledge of the importance of bees in our food system.



NYPA

Species and Habitat Protection

INVASIVE SPECIES

Invasive species are non-native organisms that can cause harm to the environment, the economy, and/or human health. Advantages such as a lack of predators, the ability to adapt to various habitat conditions, and faster reproductive rates allow certain non-natives to expand their populations quickly. Invasive species can outcompete natives for resources, disrupt food webs, spread disease among humans and livestock, damage crops, and negatively impact recreation and associated income. They can be introduced intentionally (e.g., when invasive plants are used for landscaping) or unintentionally (e.g., when wood borers hitch a ride in firewood). As a hub for international trade and travel, New York has one of the highest rates of non-native introductions in the country, but State agencies play a significant role in preventing the spread of invasive species by actively surveying their land, identifying infestations early, and restoring native ecosystems.

State agencies play a significant role in preventing the spread of invasive species by actively surveying their land, catching infestations early, and restoring native ecosystems.

Twelve agencies engaged in invasive species survey and removal activities during FY 19–20. A few examples of their accomplishments include:

- **DOT** implemented several projects to remove or prevent the growth of invasive species and restore native ecosystems, including a partner project with **NYS Parks** that involved the removal of invasive plants, planting hundreds of native trees, and the establishment of a pollinator area;
- Ten **SUNY** schools—**Morrisville**, **Purchase**, **Binghamton**, **Brockport**, **Oneonta**, **Oswego**, **Fredonia**, **Geneseo**, **Farmingdale**, and **Potsdam**—have incorporated some form of invasive species management into their curriculums and into the care of their facilities. Faculty and students alike have been involved in survey and planning activities, as well as implementing management plans and conducting research; and
- **DANC** began treating wild parsnip infestations at two of its facilities in 2016, using only seed head removal after determining that mowing, hand-pulling, and pesticide use could increase the spread potential or harm surrounding plants, pollinators, and employees. By 2020, the infestations had been reduced from several hundred to just a few plants. DANC will continue to manage the areas until all the remaining seed bank has been exhausted.

DOT tested the use of a topsoil alternative—a soil medium that improves depleted soils with organic matter—to aid in the growth of native vegetation that would otherwise be outcompeted by invasive plants due to the poor growing conditions. Staff will be evaluating the success of the alternative for use in future projects. ▼

DOT





DEC

▲ **DEC** worked with the Adirondack Park Invasive Plant Program and other local partners to quickly delineate a hemlock woolly adelgid (HWA) infestation along the shore of Lake George that encompassed more than 250 acres. Within a few months of the initial find, treatment of the infestation was underway to protect the surrounding hemlock forests from further HWA spread. Here, a surveyor inspects branches for infestation signs including the presence of the woolly egg sacs.

FY 19–20

25%

of agencies with properties that required outdoor space management **CONDUCTED INVASIVE SPECIES ASSESSMENTS**



15%

FOUND INVASIVE SPECIES that are regulated in New York

DEC, in cooperation with **AGM** and Rutgers University, expanded eDNA capabilities to survey for spotted lanternfly. This molecular technology allows the capture of even the smallest quantities of genetic material that a species sheds into the environment, helping to identify small populations that traditional survey methods often don't detect. Here, staff spray deionized water on tree surfaces and foliage, then capture, filter, and process the contents. ▼



DEC

ENDANGERED SPECIES

Habitat loss due to development or changing land use, climate change, and environmental contamination affect all wildlife, but impacts to our rarest species can be critical to their continued existence. In addition to Federal law, New York's endangered species law and regulations afford protection to occupied habitats that support our endangered and threatened species. Through efforts to enforce these rules and through active management, bald eagles once again thrive in New York, peregrine falcons are now found in our largest cities, and even piping plovers have returned to our Great Lakes shores after a two-decade absence. New York's endangered species efforts focus on the most sensitive elements in the system, and work to find and correct fish or wildlife problems before certain species are lost forever.

When air, land, water, plants, and animals support each other in a healthy environmental system, all species, including humans, flourish.

Idlewood Marsh - site of saltmarsh sparrow monitoring studies and restoration proposals. The area in red is occupied by saltmarsh sparrows. Areas A and C are proposed for restoration. Area B is not suitable. ▼

SUNY ESF





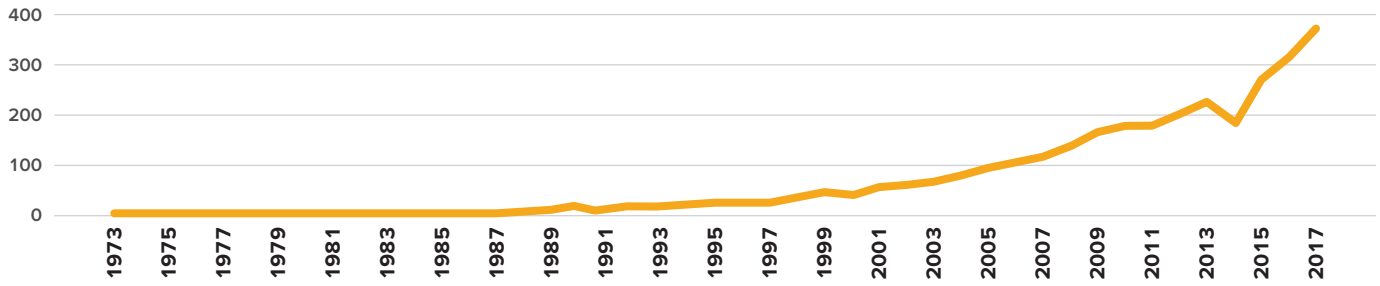
Buffalo Audubon Society

▲ Utilizing funding from NYPA, and partnering with DEC, the Buffalo Audubon Society began construction of a common tern nesting island in the Niagara River. When completed in 2021, this site will provide a secure nesting habitat for the common tern, a state listed threatened species.

A few examples of State agencies that worked to improve the habitats of our rarest species in FY 19–20 include:

- **SUNY ESF**, in collaboration with **DEC**, is evaluating habitat use by saltmarsh sparrows on existing occupied sites and sites being restored. Sea-level rise, in conjunction with past management of salt marshes, has reduced the amount of functional high marsh available for saltmarsh sparrows. The results of the evaluation will be applied to inform future efforts to restore function to this important habitat and benefit the species that use it;
- **NYPA** continues to support restoration of inland wetland habitats to benefit Blanding's turtle, the common tern, and other threatened species. Of particular note, a NYPA-funded project in the Niagara River implemented by Buffalo Audubon will create a new nesting site for the common tern, a state-listed threatened species; and
- **DEC**, working with **OGS**, Ducks Unlimited, and other partners have been working on a $5 million three-phase wetland enhancement project at the Perch River Wildlife Management Area. When fully operational in 2021, approximately 1,500 acres of improved marsh management capability will benefit least bitterns, black terns, bald eagles, and nesting waterfowl on the 7,000 acre complex.

MINIMUM NUMBER OF KNOWN ACTIVE EAGLE NESTS IN NEW YORK ▼



Water Conservation

Although New York State is rich with water resources, State agencies are conscious of their water use as the climate changes and that the inefficient use of water can impact the habitats where it is drawn from. In fact, almost 10 billion gallons of water are withdrawn from the environment every day in New York for all purposes. In addition, being water efficient reduces financial costs, energy consumption, and chemical usage. State agencies are continuously looking for ways to further conserve water, whether through replacing, repairing, and retrofitting existing infrastructure; developing and implementing practices and policies that reduce water use; or designing for the future with innovative new designs and techniques.

About 79% of state employees work at agencies that use high efficiency fixtures to reduce water consumption at all or most facilities.

Under a new law, water fixtures sold in New York State will soon be required to be WaterSense certified, which will provide user satisfaction at significantly lower flows. Most State agencies are already ahead of this requirement and have deployed low-flow fixtures that meet these requirements.

Outdoor water use is another area where performance is improving. Selection of lower water-demand plantings, use of grey water for irrigation, and sensible use of automated sprinklers by State agencies are all decreasing water use.

State agencies continued to reduce their water consumption in FY 19–20 by taking actions including:

- **Queens College (CUNY)** has continued installing automatic water-saving fixtures in restrooms around the campus;
- **NYSERDA** re-evaluated its lawn sprinkler use to find efficiencies and took actions, such as not running the system on weekends in case of a potential stuck valve and repairing and repositioning its sprinkler heads;
- **TAX** installed touchless fixtures with aerators in some of its facilities;
- **UNDC** upgraded the restrooms on 15 floors they manage with low-flow toilets and low-flow lavatory faucets;
- **HCR** installed low-flow toilets at a new work area;
- **DASNY** has changed its chiller management routine to ensure that chillers are only filled and drained once per cooling season to reduce water usage;
- **SUNY Old Westbury** added low-flush toilets, automatic flush vales, and water bottle refilling stations; and
- **NYPA** is in the process of benchmarking potable water consumption to better understand consumption patterns and identify opportunities for water efficiency improvement measures.



Nathan Carr, SUNY Potsdam

▲ **SUNY Potsdam's Heating Plant repaired leaking lines across the campus during the 2020 summer, and as a result, thousands of gallons of water are being saved each day.**

ABOUT

57%

of state employees work at **AGENCIES WHERE GREY WATER IS CAPTURED AND REUSED** for purposes like irrigation

Green Infrastructure

When open space is developed, rain and snowmelt are no longer able to soak into the ground and instead flow directly into streams and ponds. The quantity and speed of flow can cause erosion, flooding, pollution, and damage to aquatic habitat, personal property, and infrastructure such as roads, culverts, and sidewalks. Green infrastructure reduces the negative impacts of stormwater runoff by mimicking natural processes that slow and/or treat stormwater at its source. Green infrastructure is more cost-effective than constructing new stormwater and sewage catchment and treatment systems. Additional positive benefits include beautiful greenery, expanded wildlife habitat, improved air quality, energy savings, urban cooling, and enhanced resiliency to climate change. Sustainable stormwater management, an important subset of green infrastructure, uses both natural and engineered systems to manage stormwater in a way that conserves, protects, and even enhances ecosystems. Practices include rain gardens, green roofs, vegetated swales, bioretention areas, rain barrels, and permeable pavement.



DOT



DOT

New York State is a leader in incorporating green infrastructure into projects and State agencies continued to install green infrastructure in FY 19–20, including:

- **State Parks** coordinated with Save the Sound, DEC, and U.S. Fish and Wildlife to renovate Sunken Meadow State Park with green infrastructure practices to treat stormwater onsite. The project included the creation of large bioswales and bioretention areas that treat and prevent large amounts of stormwater from entering Sunken Meadow Creek and Long Island Sound;
- **DOT** coordinated with DEC, APA, and the Army Corps of Engineers to include the planting of live willow stakes in the repair of a washout along the East Branch of the Ausable River in the Town of Jay. Planting these stakes is an effective, low-cost method for protecting and restoring riparian areas;
- **University at Buffalo (SUNY)** implemented a student-led shore restoration project along the banks of Lake Lasalle on the North Campus that features a wildflower garden and tree plantings to prevent erosion and attract pollinators;
- **Medgar Evans College (CUNY)** began a project to open up a concrete hardscape and transform it into open landscaping. The removal of concrete, and its replacement with permeable soil in landscape beds, will divert storm water runoff; and
- **State Parks** opened a newly created intertidal pool at Roberto Clemente State Park in the Bronx, which diverts stormwater from the combined sewer system into a natural storm water management system.

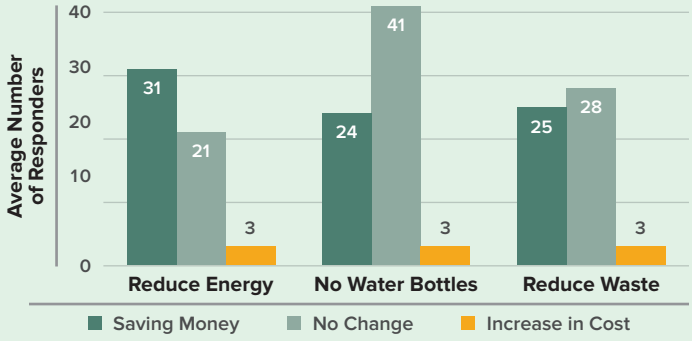
◂ Before and after photos of DOT's repair of a washout along the East Branch of the Ausable River in the Town of Jay showing the incorporation of live willow stakes to help prevent further erosion.

Savings and Costs

Many conservation and sustainability projects have upfront costs, but thankfully, over the past 11 years, the GreenNY Council has found that a vast majority of sustainable practices either save agencies money or don't change their costs. The two graphs below show the average number of agencies that responded as to whether certain practices saved money, resulted in no change in costs, or had an increase in costs. A full breakdown of each area of sustainability projects over the years can be found in this **fact sheet**.

Reducing energy use, eliminating the purchase of bottled water, and reducing waste are the top three sustainable practices that are saving agencies money.

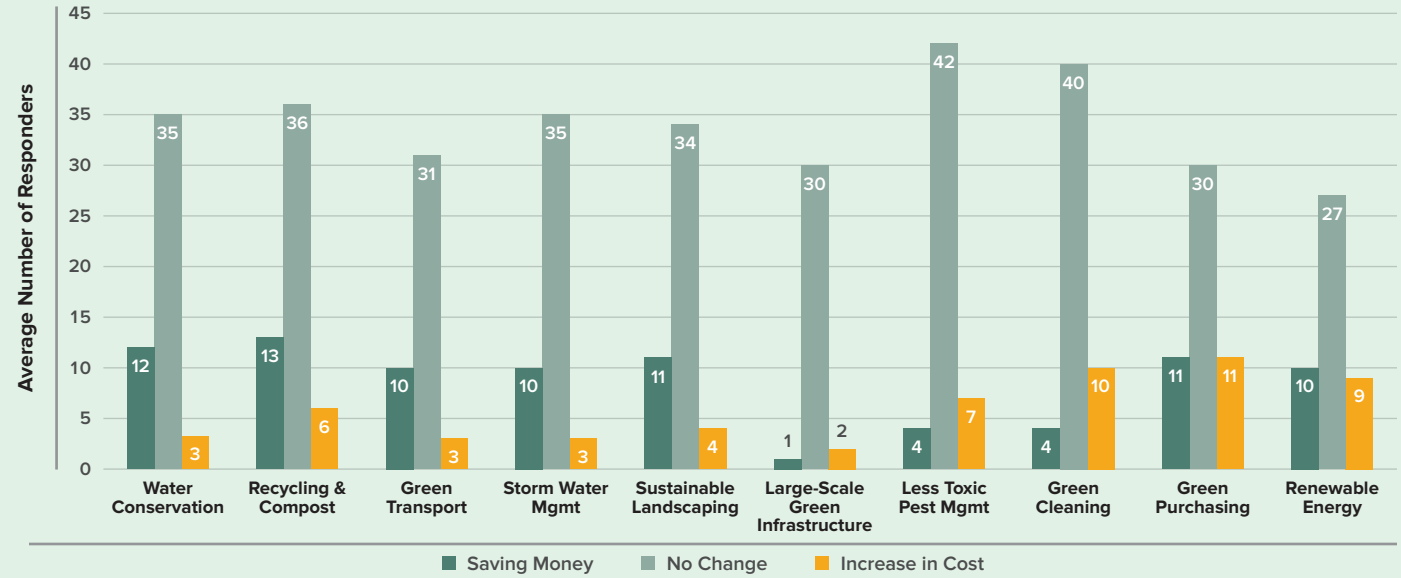
SUSTAINABLE PRACTICES THAT SAVED MONEY, FY 09–10 TO FY 19–20 ▼



Many agencies realized fiscal benefits from implementing projects in FY 19–20, including:

- **CUNY**'s Sustainability Investment Fund financed a "Fresh Eyes Study" to replace variable frequency drives and LED lighting, which is projected to save $170,000 annually;
- **OMH** has saved $80,000 as of March 2020 through a fuel cell power purchase agreement;
- **State Parks** staff installed 5 new solar PV systems in FY 19–20 that are estimated to save $18,000 annually;
- **DPS** saved an estimated $2,500 from recycling and reusing office supplies;
- **NYSERDA** asked their landscaping company to eliminate grub and weed control chemicals on their grounds, saving $600 annually without compromising the aesthetic;
- **SUNY Farmingdale** was able to separate heavy metals into their own waste stream, allowing a large portion of waste to be reclassified to a cheaper level, savings thousands of dollars over the long run; and
- **NYPA** and **MTA** collaborated on a lighting replacement project at the Castleton Bus Depot, which resulted in estimated first year utility bill savings of $101,387 and an estimated MMBtu Equivalent Savings of 3,670 MMBtus.

OTHER SUSTAINABLE PRACTICES THAT SAVED MONEY OR BROKE EVEN, FY 09–10 TO FY 19–20 ▼



Buying Green

Buying Green

New York State continues to be a national leader in environmentally preferable purchasing by using aggregated spending to procure competitively priced green products. In 2020 New York earned its fourth consecutive national award for excellence in sustainable electronics procurement from the Green Electronics Council, for requiring that all microcomputers purchased through OGS's aggregate buy **meet EPEAT requirements**, a global environmental rating system managed by the Council.

Experience has shown that green products are competitively priced and perform as well or better than conventional products, and in many cases can be purchased at a discount. Many green products, such as traffic safety equipment made from recycled plastic, glass beads in reflective paint made from recycled glass, and remanufactured toner cartridges, are consistently less expensive than conventional products. Many others, including 100% recycled content janitorial paper, green cleaning products, and soy-based ink, are consistently comparable in price to conventional products, and products such as green computers, lighting, solar power and zero emission vehicles can be purchased at a discount when life cycle costs and energy savings are considered. A list of competitively priced green products offered on state contract can be accessed **here**.

GREEN SPENDING

Data on green spending was obtained by reviewing sales reports from OGS centralized contracts and spending data reported by agencies through the GreenNY questionnaire. The total amount of purchases of green products from these two sources was $245,403,969 in FY 19–20, which is a significant increase from the amount reported in FY 18–19. The agencies that reported the greatest amount of green spending were DOT, OGS, SUNY, CUNY, DMV, and WCHC who together accounted for over 80% of the spending reported by agencies. The product categories with the highest levels of spending included EPEAT certified computers, Integrated Vegetation Management, EP Cleaning Products and Services, Furniture, and Recycled Copy Paper.

SAVINGS AND COSTS

Overall, data regarding the cost of green procurement continues to be encouraging. Although some agencies report working on ways to better track green spending, in FY 19–20 almost half of the agencies (48%) reported either a reduction in costs (9%) or that costs remained the same (39%), while only six agencies (9%) reported that there was an increase in costs as a result of implementing green procurement practices.



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Summary of Green Spending by Product Category	
Product	**Estimated Spend**
EPEAT Certified Computers	$138,895,000
Integrated Pest or Vegetation Management	$38,543,000
Green Cleaning Products and Services	$23,215,000
Furniture	$9,968,000
Copy Paper with Recycled Content	$9,042,000
Recycling and Composting Services	$6,373,000
Lighting Products	$4,112,000
Solar PPAs	$3,800,000
Carpet and Carpet Tile	$2,740,000
EV Charging Stations	$2,490,000
Re-refined Motor Oil	$2,463,000
Zero Emission Vehicles	$1,705,000
Water Fountains with Bottle Refill Stations	$788,000
Air Conditioners	$676,000
Photovoltaic Systems	$467,000
Community Solar	$50,000
Non-chemical Pest Management for Outdoor Spaces	$48,000
Compostable Cafeteria Trays	$20,000

KEY AREAS OF GREEN SPENDING INCLUDE:

Office of General Services'

COMPUTER AGGREGATE BUY

$138.9 MILLION

Office of General Services'

GREEN CLEANING PROGRAM

$21.7 MILLION

Department of Transportation's

INTEGRATED VEGETATION MANAGEMENT PROGRAM

$38.1 MILLION

FURNITURE PURCHASES

made by SUNY, New York State Insurance Fund, WCHC and several other agencies

$10 MILLION



OGS

Top 10 Green Purchasers FY 19–20	
Agency	**Estimated Spend**
Department of Transportation	$44,885,000
Office of General Services	$23,215,000
State University of New York	$10,404,000
City University of New York	$9,410,000
Department of Motor Vehicles	$5,248,000
Westchester County Health Corporation	$5,189,000
New York Power Authority	$4,532,000
New York State Insurance Fund	$2,763,000
Metropolitan Transportation Authority	$2,687,000
Department of Financial Services	$1,874,000

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Purchasing Recycled Paper

Paper is an essential commodity that is purchased in large quantities by New York State. Paper manufacturing uses significant amounts of energy and natural resources, and is a source of pollution and greenhouse gas emissions. To reduce these impacts, EO 4 requires the purchase of copy paper and the printing of agency publications on paper made from 100% post-consumer recycled content that is processed chlorine-free.

The term "processed chlorine-free" (PCF) refers to recycled paper in which the recycled content and any virgin material is unbleached or bleached without the use of chlorine or chlorine derivatives. Post-consumer material has completed its life as a consumer item and will be disposed of as solid waste if not recovered. The higher the post-consumer content, the more materials were diverted from the waste stream. The tables below present data on the amount of copy and janitorial paper purchased in five out of the past ten fiscal years, broken out by percentage of recycled content.

KEY COPY PAPER FINDINGS

By far the greatest amount, and almost two-thirds (63%) of the dollars spent on copy paper in FY 19–20 ($2.5 million), went to purchase 100% post-consumer recycled content, processed chlorine-free paper. This represents a 41% increase from the 22% (or $3.3 million) spent on such paper in FY 08–09.

In FY 19–20, 66% of agencies reported buying at least some 100% post-consumer recycled content, processed chlorine-free copy paper. About a third of agencies (32%) continued to purchase paper with less than 30% recycled content. However, those purchases accounted for only 12% of the total number of boxes of copy paper purchased, and 13% of total dollars spent on copy paper.

Analysis of paper purchasing data reveals that 100% post-consumer recycled content copy paper is not more expensive than copy paper with little to no post-consumer recycled content. On the contrary, over the past four fiscal years, agencies paid almost the same amount for 100% post-consumer recycled content copy paper (at $32 per box) as they did for 30–99% recycled paper (at $28.13 per box) and paper with less than 30% post-consumer recycled content (at $32.75 per box).

Copy Paper Purchases by Amount of Recycled Content

	Agencies Reporting Purchases	FY	Percent of Agencies Reporting Purchases	Total Boxes Purchased	Total Dollars Spent	Average Price Per Box	Percent of Expenditures by Recycled Content
100% Recycled Chlorine-free	54	09–10	77%	159,857	$6,320,148	$39.5	49%
	39	16–17	64%	97,747	$3,243,611	$33	52%
	45	17–18	65%	88,756	$3,097,998	$35	46%
	44	18–19	65%	90,806	$2,790,958	$31	48%
	47	19–20	66%	86,145	$2,526,902	$29	63%
30%–99% Recycled	43	09–10	61%	110,028	$3,803,229	$34.5	30%
	30	16–17	49%	67,859	$1,931,818	$28	30%
	36	17–18	52%	80,732	$2,544,265	$31.5	37%
	36	18–19	53%	57,955	$1,541,596	$27	26%
	31	19–20	44%	36,389	$960,282	$26	24%
<30% Recycled	21	09–10	30%	81,407	$2,665,794	$33	21%
	23	16–17	38%	32,544	$1,120,584	$34	18%
	28	17–18	41%	38,719	$1,165,436	$30	17%
	23	18–19	34%	38,890	$1,487,386	$38	26%
	23	19–20	32%	17,262	$500,813	$29	13%
Total Agencies Reporting Purchases	**70**	**09–10**	**N/A**	**351,292**	**$12,789,171**	**N/A**	**100%**
	61	**16–17**		**198,150**	**$6,296,013**		**100%**
	65	**17–18**		**208,207**	**$6,807,699**		**100%**
	63	**18–19**		**187,651**	**$5,819,940**		**100%**
	63	**19–20**		**139,796**	**$3,987,997**		**100%**

Janitorial Paper Purchases by Amount of Recycled Content						
	Agencies Reporting Purchases	FY	Percent of Agencies Reporting Purchases	Total Cases of Janitorial Paper Purchased	Total Dollars Spent on Janitorial Paper	Percent of Expenditures by Recycled Content
100% Recycled Chlorine-free	28	09–10	88%	236,139	$7,138,622	75%
	25	16–17	76%	147,803	$3,982,996	63%
	27	17–18	39%	166,802	$3,671,297	57%
	25	18–19	37%	157,545	$3,618,436	55%
	31	19-20	44%	176,628	$4,217,370	66%
1%–99% Recycled	22	09–10	69%	71,029	$1,699,169	18%
	21	16–17	64%	59,284	$1,730,950	27%
	21	17–18	30%	88,770	$1,894,017	30%
	18	18–19	26%	62,537	$2,046,644	31%
	20	19-20	28%	46,499	$1,565,156	24%
Unrecycled Janitorial Paper	9	09–10	28%	90,982	$727,420	8%
	7	16–17	21%	28,103	$640,311	10%
	11	17–18	16%	36,421	$833,064	13%
	6	18–19	9%	37,962	$860,177	13%
	8	19–20	11%	30,535	$662,487	10%
Total Agencies Reporting Purchases	**32**	**09–10**	**N/A**	**398,150**	**$9,565,211**	**100%**
	33	**16–17**		**235,190**	**$6,354,257**	**100%**
	37	**17–18**		**291,993**	**$6,398,378**	**100%**
	31	**18–19**		**258,044**	**$6,525,256**	**100%**
	37	**19–20**		**253,662**	**$6,445,013**	**100%**

KEY JANITORIAL PAPER FINDINGS

In FY 19–20, 66% of dollars spent on janitorial paper (approximately $4.2 million) went to purchase 100% recycled content paper. This amount represents a 32% increase from the 34% (or $1.2 million) spent on such paper in FY 08–09.

Only eight State agencies (11% of agencies reporting purchases) continued to purchase unrecycled janitorial paper in FY 19–20. Such purchases amounted to only 10% of all janitorial paper purchases.

OGS is focused on securing janitorial paper contracts requiring 100% post-consumer content, processed chlorine-free. Where this is not practicable, OGS aims for 100% recycled janitorial paper (containing 100% total recovered fiber), with a lesser amount of post-consumer fiber content.

OTHER PAPER PURCHASES

The GreenNY reporting form asks agencies whether they purchased other types of paper such as colored paper, card stock, plotter paper, graph paper, bond paper, map paper, steno pads, etc. 31 agencies reported purchasing other types of paper in FY 19–20.

Restricting the Use of Bottled Water

Single-use plastics are convenient, but have a large environmental impact both as litter in our streets and waterways and from the greenhouse gas emissions released in their production. That's why Executive Order 18 directs all executive agencies to "develop and implement a plan to eliminate the expenditure of State funds for the purchase of bottled water for use at executive agency facilities." EO 18 defines "executive agencies" as "any department, agency, division, commission, bureau, or other entity of the State over which the Governor has executive power." Notably, authorities, public benefit corporations, and any other state entity that is not an executive agency are not covered, but are encouraged to comply voluntarily.

Eight agencies or authorities saved money specifically through efforts to reduce bottled water in FY 19–20, and the total savings from their cost reductions is $92,759.

Agencies and authorities continue to report a high level of compliance with the directives of EO 18. All 39 executive agencies required to comply with EO 18 and reporting in FY 19–20 are in compliance. In addition, of the 31 authorities and other entities not covered by the Order, 24 adopted and met the goal of eliminating the purchase of bottled water even though they were not required to (77%). Thus, 63 out of the 70 reporting agencies and authorities report that they have eliminated their purchase of bottled water except for their documented and compliant exemptions.

Fifteen executive agencies covered by EO 18, and 14 entities not covered (but nonetheless successfully meeting its goals), documented their need for an exemption at one or more locations, as allowed under the Order. Reasons for exemptions include working in remote areas without access to potable water, and water contamination issues. Large centralized offices served by reliable municipal water supplies generally reported no need for exemptions.

This year, COVID 19 presented a challenge to many agencies, as it was of the utmost importance to ensure employee's health and safety, and in some cases the only way to do this was by using bottled water instead of refillable bottles and communal fountains and re-fillers. All of the aforementioned exemptions are in full compliance with the Order. Nevertheless, many agencies still managed to reduce their spending or spent the same amount on bottled water as they did in FY 18–19. Ten State agencies saved money specifically through efforts to reduce bottled water in FY 19–20, and the total savings from their cost reductions was $92,759. Notably, **CUNY** reported spending $30,000 less in FY 19–20 on bottled water compared to last year, and **DOT** reported spending $40,000 less.

In summary, the data for FY 19–20 continue to document that the executive agencies covered by EO 18 have virtually eliminated their purchase of bottled water.

▼ **A water bottle filling station at Jones Beach State Park.**



NYS Parks

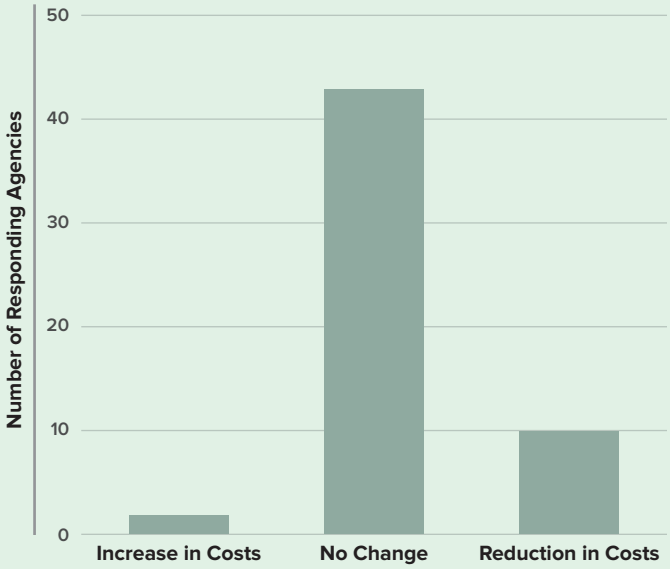


▲ **State Parks** installed a water bottle refill station at a busy trail head in Robert Treman State Park that was designed by their in-house carpenters. The station can serve up to four people at a time.

In addition, State agencies took actions in FY 19–20 to continue to decrease reliance on single-use items, as well as taking action to help the public decrease the amount of bottled water they purchase as well:

- **HCR** provided hot/cold reusable tumblers with reusable straws to their staff to reduce office waste and encourage the use of their new water bottle filling stations;
- **SUNY Potsdam** installed water bottle filling stations across campus and report that students and staff are pleased with them;
- **SUNY Maritime** has seen an increased use of reusable water bottles, as well as a reduction of empty water bottles in its recycling stream, due to the installation of combination watercooler/bottle fillings stations on campus; and
- **SUNY Stony Brook** continued to install more water bottle filling stations on campus and the Office of Sustainability gave out reusable water bottles for students to use at them.

NUMBER OF ENTITIES EXPERIENCING A DECREASE, INCREASE, OR NO CHANGE IN COSTS ▼



Stony Brook University (SUNY) continues to install Water Bottle Filling Stations around campus to promote the use of reusable drinking bottles. The Office of Sustainability often gives out reusable water bottles at events around campus. ▼



Green Specifications

Executive Order 4 created a green procurement and agency sustainability program that has led to the creation of 61 specifications currently approved for use in state procurement. They cover almost 120 different commodity, service, or technology products (e.g., the "Computers and Displays" specification covers nine types of devices: desktops, integrated computers, laptops, notebooks, tablets, small scale servers, thin clients, monitors and signage displays). A summary of the new specifications adopted by the Committee is provided below. A complete list of approved specifications, as well as their full text, is available on the **New York State OGS website**.

OGS



▲ **OGS added the GreenNY Icon to the eMarketplace to make it easier for agencies to find and purchase green products.**

In November 2020, four new specifications were approved by the Executive Order 4 Interagency Committee, including new specifications for "Adhesives" and "Lubricants", and revised specifications for "Floor Coverings" and "Computers and Displays".

The committee also tentatively approved four new specifications for "Apparel and Textile Materials," "Garment Cleaning," "Laundry Detergent," and "Coating Removal Products."

In FY 19–20, 96% of agencies reporting in FY 19–20 said they review and use GreenNY procurement specifications when making purchasing decisions at least some of the time, and 86% said they review and use the specifications all (47%) or a majority (39%) of the time. These rates are slightly higher than the rates reported in FY 18–19.

Green Specifications Tentatively Approved in 2020

Apparel and Textile Materials

This specification includes requirements for apparel and raw textile materials. It requires affected entities to minimize purchases of apparel and raw textile materials to the least amount needed to carry out their missions, and also places limits on sourcing, anti-microbial agents, anti-odor agents and products that can only be cleaned by dry cleaning. In addition, it encourages affected entities to purchase products that are produced with recycled content and/or with organic cotton, are third-party certified, minimize packaging, and do not contain perfluorinated substances.

Coating Removal Products

This specification sets standards for chemical coating removal products, including those used to remove paint (oil and latex-based), epoxy, shellac, lacquer, polyurethane, varnish, and automotive, boat, bathtub, tile, asphalt/tar, and furniture coatings, as well as adhesives and graffiti. It requires purchasers to avoid products that contain methylene chloride or Nmethyl-2-pyrrolidone, encourages the purchase of products that meet a third- party certification and encourages purchasers to avoid products that contain dimethyl formamide, ethyl benzene, methanol, naphthalene, Stoddard solvent, toluene, or xylene when products certified by one of the listed third-party certifications are not cost competitive or do not meet the form, function, and utility requirements of the purchaser.

Garment Cleaning

This specification covers the professional cleaning of garments, and requires affected entities to clean garments that require professional cleaning with a method that does not use perchloroethylene. It also encourages affected entities to utilize a hierarchy of alternative cleaning methods that includes professional wet cleaning, professional CO_2 cleaning, or cleaning with a DEC-approved solvent alternative.

Laundry Detergent

This specification sets standards for detergent used to wash clothing and other textiles. It requires affected entities to purchase in bulk, and purchase products that comply with Section 35 of the New York State Environmental Conservation Law and meets either Green Seal or UL EcoLogo certification.

Green Specifications Finalized in 2020

Adhesives

This specification sets environmental standards for general construction and flooring adhesives. It encourages affected entities to purchase products that meet a third-party certification program; have either an Environmental Product Declaration (EPD) or Health Product Declaration (HPD); do not contain chemicals on the Prop 65 list of substances that are known to the State of California to cause cancer, birth defects or other reproductive harm; and do not contain asthmagens.

Floor Coverings

This specification was amended to update the requirements contained in the existing EO4 specification for "Carpet and Carpet Tile." The updates included changing the title to better reflect the products covered by the specification, adding hard and resilient flooring to the covered products, establishing a hierarchy of flooring product preferences, requiring the purchase of products that meet a third-party certification, and placing limits on harmful chemicals for each product type.

Computers and Displays

This specification was amended to update the requirements contained in the existing EO4 specification for "Desktop and Laptop Computers" to reflect new EPEAT standards that were released in 2018.

Lubricants

This specification sets standards for facility maintenance lubricants including bar and chain oils, corrosion inhibitors, gear lubricants, greases, multi-purpose lubricants, penetrating lubricants, pneumatic equipment lubricants, and other types of facility maintenance lubricants. It encourages affected entities to purchase products that meet a third-party certification program, have an NFPA flammability rating less than or equal to 2, are not packaged in an aerosol container, have either an Environmental Product Declaration (EPD) or Health Product Declaration (HPD), do not contain chemicals on the Prop 65 list of substances that are known to the State of California to cause cancer, birth defects or other reproductive harm, and do not contain asthmagens or fluorinated non-stick compounds.

Conclusion

Under the leadership of Governor Andrew M. Cuomo, New York State government has become a national leader in sustainable operations. Taking action to reduce the environmental footprint of State government has not only lowered its impact on our planet, but also saved money. The holistic focus of the GreenNY program has also ensured that all of state government's negative environmental impacts are being reduced, not just those that receive attention in the latest headlines. This long-term, holistic approach has achieved stunning results, and due to recent announcements of new programs, such as the formation of the GreenNY Council and the BuildSmart 2025 program, will ensure that New York will continue to be a leader in showing that government operations can have a lower impact on our environment, while still providing the high quality services citizens expect.

Farmingdale State College (SUNY) has a solar carport that not only produces electricity, but also has 20 electric vehicle charging points, allowing students, faculty, and visitors to drive on the sun's rays. ▼

Farmingdale State College



Native plantings at Olana State Historic Site. ▼



State Parks

University at Buffalo (SUNY) commenced construction on the UB Solar Stroll, a 5 MW solar project being constructed on campus-owned land. The project will produce enough power to offset the usage of approximately 1,354 homes. ▼

