



Office of
General Services

Department of
Environmental
Conservation

Greening New York State

SEVENTH PROGRESS REPORT ON STATE GREEN PROCUREMENT AND AGENCY SUSTAINABILITY FISCAL YEAR 2017-18

Andrew M. Cuomo, Governor | RoAnn M. Destito and Basil Seggos, Commissioners



Message from the Commissioners

In January 2019, Governor Andrew M. Cuomo announced a bold suite of proposals to fight climate change, protect public health and the environment, and create a cleaner, greener, and more prosperous New York. He also explicitly called on state agencies, offices, and authorities to lead by example. With the launch of the Green New Deal, the State is making a renewed commitment to aggressively lower greenhouse gas emissions, reduce toxic chemicals and plastic waste, conserve natural resources, and make state facilities and operations more sustainable. GreenNY, the State's Green Procurement and Agency Sustainability program, is an ambitious effort led by our two agencies, the Department of Environmental Conservation (DEC) and the Office of General Services (OGS), to achieve these goals.

"Greening New York State: Seventh Progress Report on State Green Procurement and Agency Sustainability" documents the State's accomplishments during FY 17-18 and provides a road map for further improvement. New York State continues to lead in green purchasing, winning national awards from the Sustainable Purchasing Leadership Council and the Green Electronics Council in 2017 and 2018. Following the Governor's charge in June 2017 to redouble the fight against climate change and maintain the State's commitment to the Paris Climate Agreement, the OGS Green Procurement Team took action, establishing multiple new contracts to help agencies meet the Governor's ambitious greenhouse gas emissions reduction goals. Solar Power Purchase Agreements provide a streamlined method with up-front financing for agencies to become generators of solar power. In FY 17-18 state agencies released four Mini-Bids through the contract for more than 45 megawatts (mW) of solar capacity. Once built, these systems have the potential to more than quadruple agency solar output by generating an estimated 56 million kWh of energy per year.

We have also made considerable strides to incorporate sustainability into State operations. In FY 17-18, agencies generated 9 million kWh of solar energy for their own use, a more than three-fold increase over the previous year. In 2018, the Olympic Regional Development Authority earned a New York State Environmental Excellence Award for Gore Mountain Ski Resort's 5.3 mW net metered solar array in Washington County, the largest array dedicated to a ski resort in the nation. All executive agencies and 80 percent of authorities have virtually eliminated the purchase of bottled water, avoiding both waste and the energy used in transportation. A number of agencies improved recyclables collection, even in the face of shifting markets, and the number of agencies composting organic waste has more than doubled in the past five years.

We are proud of these successes, but our work is not done, and we're always striving to lead by example and redouble our efforts. Over the past few months we have been working closely with our colleagues at the New York State Energy Research and Development Authority and the New York Power Authority to integrate all of the State's climate and sustainability directives into a single, harmonized GreenNY action agenda. Our four agencies have joined together to lead a new GreenNY Council that will jointly engage with agency executives and sustainability teams and help identify priority projects and the resources needed for implementation. A new, streamlined reporting form for all climate and sustainability executive orders will be launched in July 2019.

The successes of the past and our hopes for the future rest on the dedicated work of the Sustainability Coordinators and Sustainability Teams designated by agencies and authorities across the State, who tirelessly advocate for the adoption of sustainable practices and tailor projects to fit their agency's unique mission. We are committed to supporting their efforts and making it as easy as possible for all state entities to achieve Governor Cuomo's vision of a more just and sustainable future for all.

A handwritten signature in black ink that reads "RoAnn M. Destito".

RoAnn M. Destito,
Commissioner,
Office of General Services

A handwritten signature in black ink that reads "Basil Seggos".

Basil Seggos,
Commissioner,
Department of Environmental
Conservation

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Executive Summary



OGS' Procurement Services team earned an award from EPEAT for sustainable electronics procurement. Commissioner RoAnn M. Destito (center) oversees all state contracts.

The vision of a vibrant, innovative, and sustainable economy underlies GreenNY, the State's Green Procurement and Agency Sustainability program. The program's most remarkable characteristic is that it is holistic, covering all aspects of the State's ability to positively impact our environment and economy through its own operations and purchasing. Areas of focus include energy efficiency, renewable energy, green transportation, waste reduction, recycling, toxics use reduction, water conservation, green infrastructure, and sustainable landscaping.

Progress Toward a Green New York

The past 10 reporting years, from fiscal year (FY) 08-09 to FY 17-18, have seen steady progress toward a greener New York. Overall paper use and waste generation levels have declined, and recycling rates are robust. The State's award-winning green procurement program is helping to green markets, and renewable energy use is growing.

- **Copy paper purchasing has decreased 53% since FY 08-09**, saving the State \$29.2 million in the first seven years of the Cuomo administration, \$55.4 million since reporting began, and \$8 million per year.
- **Executive agencies have virtually eliminated the purchase of bottled water**, and 80% of authorities have also eliminated or restricted use to special circumstances, such as for soldiers in the field.
- **The purchase of 100% post-consumer recycled content, processed chlorine-free copy paper has doubled since FY 09-10**, from 22% to 46% of all copy paper purchased in FY 17-18.
- **The recycling rate for FY 17-18 is 70%**, compared to 50% first measured in FY 08-09, and **the number of agencies composting has more than doubled since FY 12-13**.
- **The State's green purchasing program won national awards** in both 2017 and 2018.
- **\$106.8 million was spent on green products** in FY 17-18.
- **9 million kWh of solar energy were generated** for agency use in FY 17-18, more than triple the previous year.
- **Four mini-bids released under the State's new Solar Power Purchase Agreements contract** in FY 17-18 have the potential to more than quadruple agency solar output.

A significant majority of agencies continue to embrace a wide range of practices to reduce their use of materials, toxic chemicals, energy and water, and key leaders are generating renewable energy, protecting pollinators, and practicing sustainable landscaping. In FY 17-18, agencies reported the following levels of sustainable activity:

- **90%** use electronic means to provide documents to the public **all** or **a majority** of the time, and 82% use electronic means to receive documents from the public all or a majority of the time.
- **94%** set weather-appropriate building temperature control ranges to conserve energy at **all** or **a majority** of their facilities.
- **88%** use two-sided printing either **all** or **a majority** of the time.
- **80%**, including those in leased spaces and not directly responsible for cleaning, use green cleaning products at **all** or **a majority** of their facilities.
- **79%** installed ENERGY STAR® equipment or appliances at **all** or **a majority** of facilities.
- **61%** use carpooling and fleet management practices **all** or **a majority** of the time to reduce employee vehicle miles traveled (VMT).
- **44%** of agencies use non-chemical means of pest control for turf and ornamentals at **all** or **a majority** of their facilities.

Experience has shown that the most successful agency sustainability programs have staff formally dedicated to the work, be it a full-time Sustainability Coordinator or a multi-disciplinary sustainability team, who enjoy enthusiastic executive support and the resources they need to regularly review their operations, engage with staff, implement projects and troubleshoot challenges. Their effectiveness is enhanced when they have a recognized, formal role in the agency's structure and can cut across silos – i.e. across all agency program areas – and engage up and down the hierarchy – i.e. connect with both operations and policy makers.

Of the 69 entities reporting in FY 16-17, 87% have a designated Sustainability Coordinator or sustainability team. At six agencies, the Coordinator serves in a full-time capacity. The agencies with the strongest sustainability programs include: the **Office of Parks, Recreation and Historic Preservation (Parks)**, the **Jacob K. Javits Center (Javits Center)**, the **Metropolitan Transportation Authority (MTA)**, **DEC**, the **Development Authority of the North Country**, the **City University of New York (CUNY)**, and many **SUNY** campuses. Sustainability plans for many of these agencies and campuses can be accessed [here](#), and past Greening New York State Reports with additional information on activities and projects can be viewed [here](#).

Buying Green

New York's green purchasing program received national recognition again in 2018, when it earned an award for excellence in sustainable electronics procurement from the Green Electronics Council. This honor built on the award it earned from the Sustainable Purchasing Leadership Council in 2017.

Due to the efforts of OGS' Green Procurement Team, green products are offered on more than a dozen centralized state contracts. A suite of new, entirely green contracts was issued over the past two years to help agencies meet the Governor's ambitious climate emissions reduction goals, including Solar Power Purchase Agreements, Electric Lamps, Electric Vehicle Supply Equipment and Photovoltaic Systems.

The first of these, issued in May 2017, provides a streamlined method with up-front financing for agencies to become generators of solar power. In FY 17-18 four Mini-Bids were released through the contract by state agencies for over 45 megawatts (mW) of solar capacity. Once built, these systems have the potential to more than quadruple agency output of solar energy by generating more than 56 million kWh per year.

The purchase of green products through state contracts, including EPEAT computers, recycled content copy paper, green cleaning products, photovoltaic systems, energy efficient lighting, and recycling and composting services totaled \$106.8 million in FY 17-18. A list of state centralized contracts and Preferred Sources which offer green products is available on the GreenNY [website](#).

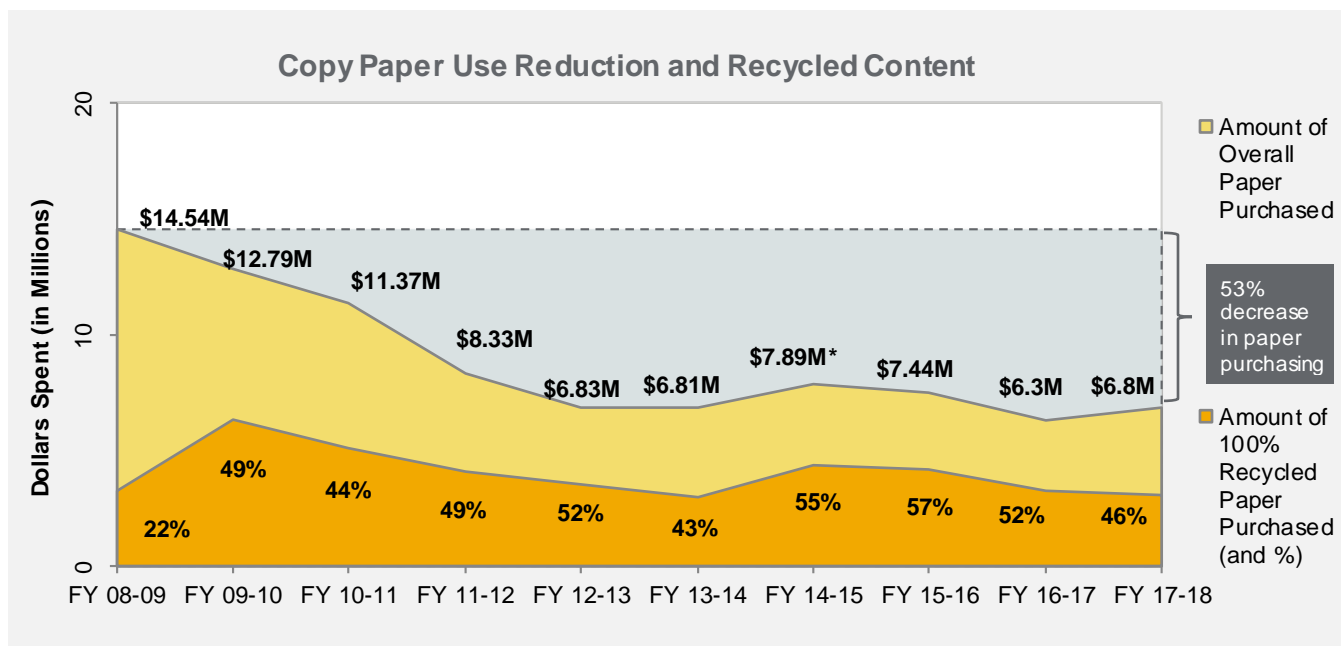
To date, the Interagency Committee has finalized 53 [green specifications](#) covering a broad and diverse array of 94 products and services, including computers, cleaning products, lighting, pest management, and sustainable landscaping. Many of these specifications are among the most protective in the country. In 2018, four specifications received final approval from the Interagency Committee, “[Batteries](#),” “[Food Service Containers and Wrappers](#),” “[Brake Pads](#),” and “[Reusable Bags](#).” 11 new and amended specifications were tentatively approved, including “[Floor Coverings](#)” and “[Imaging Equipment](#).”

Close to all agencies reporting (97%), consulted GreenNY specifications when making purchases at least some of the time in FY 16-17, and 67% did so all or a majority of the time.

Reducing and Recycling Waste

The GreenNY program has significantly impacted how State agencies generate and handle waste.

Most agencies adopted paper use reduction practices in the past ten years, resulting in a 53% decrease in copy paper purchasing in FY 17-18 as compared to FY 08-09. These actions saved \$29.2 million in FYs 11-12 through 17-18, and a total of \$55.4 million since reporting began. They will continue to save approximately \$8 million per year going forward. Almost half (46%) of dollars spent on copy paper in FY 17-18 (\$3.1 million), went to purchase 100% post-consumer recycled content, processed chlorine-free paper, a 24-percentage point increase from the 22% spent on such paper in FY 08-09.

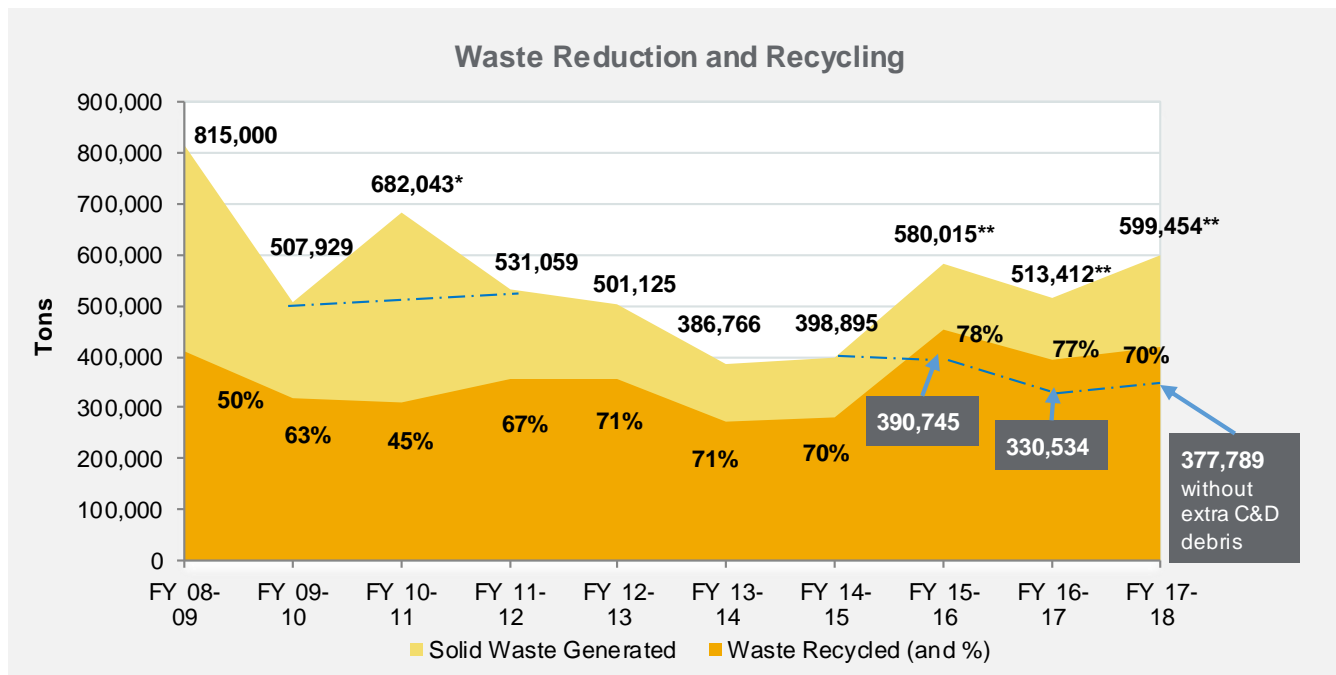


*The modest increase in paper purchased in FY 14-15 is primarily due to an increase in agencies reporting compared to previous years. In FYs 15-16 and 16-17, paper use declined even though the number of reporting agencies remained higher than 14-15. In FY 17-18, the number of agencies reporting increased again, helping to account for the modest rise in paper use and drop in recycled paper purchased.

Overall, the State continues to maintain an encouraging waste reduction trend and robust recycling rates. While FY 17-18 saw an increase in overall waste generation to 599,454 tons, the increase, like other large fluctuations over the years, was due to a big swing in construction and demolition debris (C&D) generated by two large agencies responsible for maintaining transportation infrastructure: **MTA** and **DOT**. The figure for this year includes 347,713 tons of C&D generated by these two agencies, which is 221,665 tons more than they generated in FY 14-15. When the latter number is subtracted from the total, the overall amount of waste generated for FY 17-18 is 377,789 tons, a 14% increase from the previous year's total (excluding excess C&D), but a 3% decrease from the total in FY 15-16 (excluding excess C&D).

This modest increase of 47,255 tons is primarily due to an increase in the number of agencies reporting and improved reporting. The reporting form for FY 17-18 placed a heightened emphasis on reporting waste disposed, and asked agencies to itemize C&D disposed. Improved reporting of disposal also accounts for the dip in the recycling rate, from 77% to 70%. The total amount of materials recycled in FY 17-18 actually increased 26,215 tons, or 7%, compared to FY 16-17.

An encouraging story told by the data is the remarkable progress made in recycling C&D. **MTA** adopted an ambitious C&D recycling goal in 2014 and continues an aggressive program; it recycled 176,412 tons in FY 17-18. **DOT** reported 52 lane miles (109,402 tons) of cold-in-place asphalt recycling in 17-18. Overall, agencies recycled 80% of the C&D generated in FY 17-18.



*The large increase in waste generated in FY 10-11 is primarily due to MTA reporting 200,000 tons more waste (most likely C&D) as compared to the previous or following years. **The increases in FYs 15-16 through 17-18 are due to MTA and DOT reporting significantly more tons of C&D generated than in 14-15. The blue dashed lines indicate the amount generated when those increases are subtracted. In FY 10-11, the increase was disposed, not recycled, while in FYs 15-16 through 17-18 the bulk of the increase was recycled.

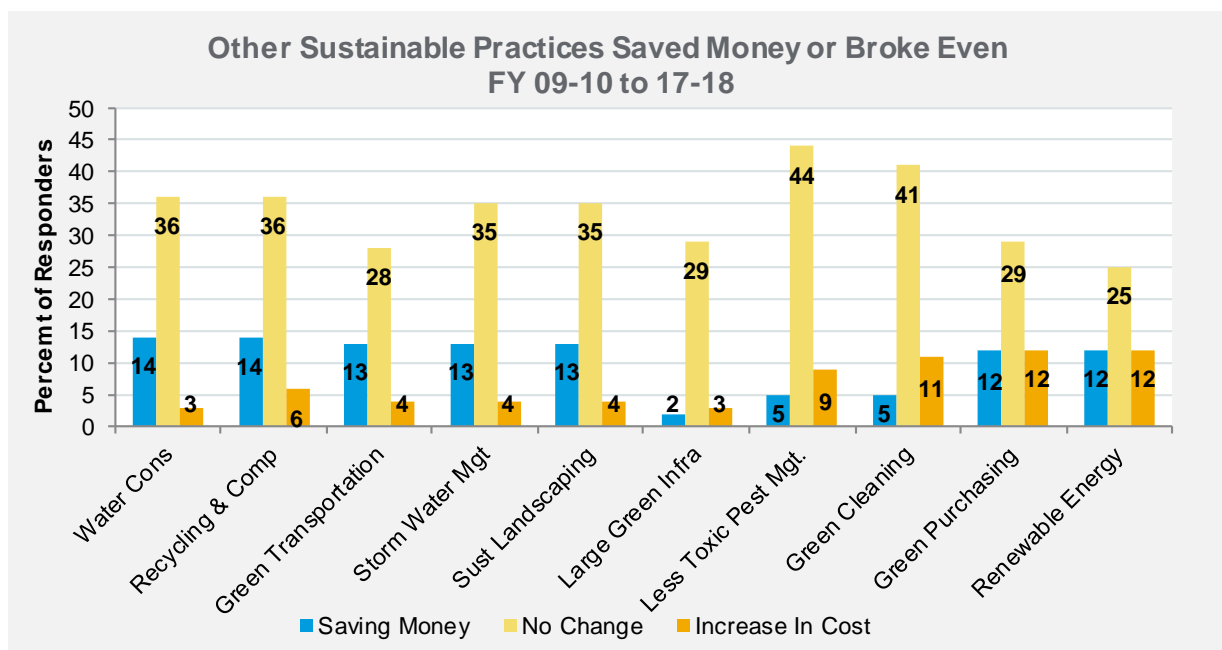
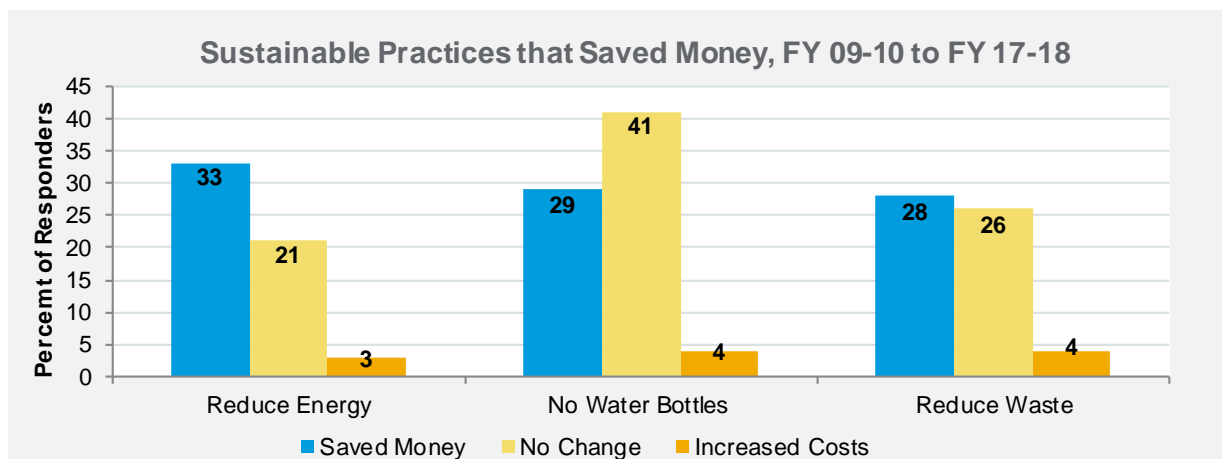
The number of agencies composting has more than doubled since FY 12-13. **SUNY**, **Parks** and the Department of **Corrections and Community Supervision (DOCCS)** accounted for 94% the material composted in FY 17-18.

The executive agencies covered by EO 18 have virtually eliminated the purchase of bottled water. Fifteen executive agencies continue to use bottled water under special circumstances, such as for soldiers on active duty. 80% of authorities and other reporting entities not covered by EO 18 have elected to comply anyway, restricting bottled water use to special circumstances or eliminating its use entirely.

Saving Money

On average for FY 09-10 through FY 17-18, agencies reported saving money through energy reduction (33%), eliminating the purchase of bottled water (29%), and waste reduction and reuse (28%).

Most reported either a reduction or no change in costs due to the implementation of projects across EO 4's other areas of focus: water conservation (50%), recycling and composting (50%), less toxic pest management (49%), stormwater management (48%), green cleaning (46%), green purchasing (41%), green transportation (41%), sustainable landscaping (38%), renewable energy (37%), and large-scale green infrastructure (31%). Significantly fewer agencies (3% to 12% depending on the activity) experienced increases in costs.



Success Stories, Challenges and Lessons Learned

Sustainability Coordinators gathered at the second annual **GreenNY Forum** in October 2018 to share success stories and troubleshoot challenges.

NYSERDA tackled a long-standing challenge for multiple agencies, the persistent cross-contamination of recyclables and trash, by implementing a transformative recycling education program. With help from in-house

behavioral specialists, they updated signs to use images over text and focus on desired behaviors instead of behaviors to avoid (e.g. the phrase “do not” was never used). Cross-contamination was successfully reduced.

Green cleaning continues to be widely practiced, despite initial concerns about price and performance. **SUNY Fredonia** surveyed vendors of chemical dilution systems and were able to find a Women-Owned-Business-Enterprise with a comparable product and significant savings of close to \$0.50 per diluted gallon.

Agencies with smaller staff, such as the **Capital District Transportation Authority (CDTA)**, shared examples of how they have tapped staff from multiple departments to coordinate sustainability efforts, including procurement, maintenance, marketing, and planning.

New and Noteworthy Initiatives in FY 17-18

- **SUNY Environmental Science and Forestry** created a Green Revolving Fund for sustainability projects.
- **SUNY Oneonta** donated 5.25 tons of reusable items to 200 members of the community at the end of the school year. The college also donates two tons of food waste to pig farmers every month.
- The **Office of Mental Health** adopted a nutritional menu database that forecasts food ordering needs based on existing inventory and dietary needs, significantly reducing food waste. They also worked with **NYPA** to use the power of expected savings to finance energy efficiency projects expected save more than \$545,000.
- The **Battery Park City Authority** partnered with CitiBike to give staff an emissions-free way to get around the grounds. They also partnered with Grow NYC to compost 6,000 pounds of food scraps from local businesses.
- The **Environmental Facilities Corporation** decreased vehicle miles traveled (VMT) 28%, achieving a 5-year reduction total of 64%.
- **SUNY Cobleskill** consistently reduced water usage 30% a month by improving their distribution system and using low-flow fixtures.
- **MTA** constructed the agency’s third green roof, totaling 8,800 sq. ft. In total, the roofs collect and reuse more than 290,000 gallons of rainwater.
- **NYPA** partnered with the Electric Utility Industry Sustainable Supply Chain Alliance to adopt a new supplier survey and is developing metrics, targets, and sustainable criteria to be integrated into the RFP process. They also installed 50 tap water coolers directly attached to the water line at four different sites.



The **Javits Center** has virtually eliminated the use of rodenticides by adopting spayed and neutered formerly stray cats as an effective way to control rodents.

Achieving the Promise of Sustainability



DEC's Five Rivers Environmental Education Center recently received LEED Platinum Certification.

Governor Cuomo's vision of a just, prosperous and healthy New York guides GreenNY, the State's Green Procurement and Agency Sustainability program. Through Executive Order No. 4 (EO 4), which establishes a State Green Procurement and Sustainability Program, and Executive Order No. 18 (EO 18), which restricts the purchase of bottled water by executive agencies, the State is making progress at improving sustainability.

EO 4 directs the approximately 73 State agencies, authorities, and other entities covered by the Order ("agencies" or "affected entities") 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 the Office of General Services (OGS) and the Department of Environmental Conservation (DEC), and charged it with several tasks, including preparation of this report.

EO 18 directs executive agencies to "eliminate the expenditure of State funds for the purchase of bottled water." Agency reporting under EO 18 has been combined with reporting under EO 4. For FY 17-18, 69 agencies reported under both Orders. This summary compiles those reports.

Prior progress reports can be found on the [GreenNY website](#), which includes more detailed information and case studies on every aspect of sustainable operations and purchasing.

The Benefits of Sustainability

New York is comparable in size to a Fortune 500 company, with a considerable environmental footprint and remarkable purchasing power. Currently, New York State government:

- Operates more than 16,000 facilities totaling more than 200 million square feet, with an estimated annual utility bill of \$400-500 million.
- Generates approximately 400,000 tons of solid waste.
- Operates more than 25,000 vehicles.
- Spends approximately \$8 billion per year on the purchase of commodities, services, and technology.

EO 4 INTERAGENCY COMMITTEE

CHAIRS:

- OGS and DEC

MEMBERS:

- *Division of Budget (DOB)*
- *Dormitory Authority of the State of New York (DASNY)*
- *Empire State Development (ESD)*
- *Environmental Facilities Corporation (EFC)*
- *Department of Health (DOH)*
- *NYS Energy Research and Development Authority (NYSERDA)*
- *Power Authority of the State of New York (NYPA)*
- *Department of Transportation (DOT)*

Greening State government is a win-win for both the environment and the economy because it significantly reduces pollution and waste while saving taxpayer dollars. Key benefits include reducing energy use and greenhouse gas emissions, reducing materials use, reducing toxic chemical use, and conserving water and other natural resources. Each has the potential to avoid or mitigate the impacts of climate change, reduce pollution, cut waste, protect public health, maintain biodiversity, and reduce the costs of treating drinking water and managing toxic materials and waste. Government can learn from efforts in the private sector (e.g., from winners of New York State's Environmental Excellence Awards), and in turn be a model for others.

In addition to EO 4 and EO 18, there are many State initiatives related to climate, efficiency and the environment that both inform and are supported by agency sustainability efforts. Key initiatives include:

- **Executive Order No. 166**, which directs agencies to reduce greenhouse gas emissions from operations, buildings and fleets.
- **Executive Order No. 88**, which directs agencies to improve energy efficiency in large state buildings.
- **New Efficiency: New York**, which directs agencies to reduce site energy use by 11 trillion BTU by 2025.
- The **Multi-State ZEV MOU and Action Plan**, which directs agencies to purchase zero emission vehicles (25% of purchases by 2025) and provide the infrastructure for all employees to charge by 2020.
- New York's **Beyond Waste** sustainable materials management plan, which establishes a goal of reducing waste disposed from 4.1 to 0.6 pounds per person per day by 2030.
- New York's **Green Cleaning Program**, which requires agencies and schools to use green products.

OGS and DEC are working closely with NYSERDA and NYPA, the other agencies charged with implementing these programs, to coordinate agency engagement and create a harmonized and integrated reporting platform. For more information, see the GreenNY Fact Sheet on "Key State Climate and Sustainability Initiatives."

Operating Green

Office of General Services

BUILDING ADMINISTRATION REAL ESTATE DESIGN & CONSTRUCTION PROCUREMENT SUPPORT OPERATIONS

GreenNY

State Purchasing and Operations

Governor Andrew Cuomo's vision of a vibrant economy built on innovation, social justice, and the protection of public health and the environment guides New York State's green purchasing and agency sustainability program.

BUY GREEN

ENERGY

RESOURCES

The GreenNY website provides a wealth of resources for sustainability coordinators and anyone interested in promoting sustainability.

New York enjoys the services of a wide range of government agencies with diverse facilities, including office space, highways, hospitals, prisons, parks, forests, fish hatcheries, golf courses, group homes, and universities. Each are required to adopt a sustainability program that works in the context of their unique mission.

Notably, New York's vision of agency sustainability is holistic, covering all areas of potential impact, including waste reduction, reuse, recycling and composting; toxics use reduction; energy efficiency; renewable energy; transportation; water conservation; green infrastructure, sustainable storm water management and landscaping; and the purchase of green products, services, and technology.

This report presents performance metrics and cost information for each area of sustainable activity. It shares how agencies have navigated challenges to achieve even greater success, and highlights noteworthy new initiatives begun, underway or completed in the reporting period.

An overarching theme of sustainability work is "continuous improvement." Each year, agencies discover more about what is possible and how to accomplish it. Each step forward paves the way for continued progress.

Engaging the Green Team: People, Planning and Money



NYPA eliminated under-the-desk trash bins and installed new waste stations close to every work space.

Based on ten years of experience, the Interagency Committee has found that agencies with two or more of the following assets have the most successful sustainability programs. Resources, support and capacity building can go a long way toward ensuring success.

- A **full-time Sustainability Coordinator** or **a multi-staff coordination team** with the authority to engage all levels of management and operations.
- A **sustainability plan** or **project list**, and a robust method for completing this **annual report**, all of which are powerful tools for creating momentum and measuring performance.
- Regular **engagement** of and **training** for staff.
- Sustainability **funding** to implement goals.

Agencies with strong sustainability programs include **CUNY**, **MTA**, **Parks**, **DEC**, the **Javits Center**, the **Development Authority of the North Country (DANC)**, and many **SUNY** campuses. Sustainability plans for CUNY, MTA, DANC and many SUNY campuses, as well as a list of New York agency sustainability coordinators, can be accessed [here](#).

Findings

In FY 17-18, 69 agencies reported the following about their sustainability structure:

- 60 entities (87%) have a designated sustainability coordinator or team (up from 83% the previous year). At six agencies (9%), the Sustainability Coordinator serves in a full-time capacity as coordinator only. They are: **CUNY**, **MTA**, **Parks**, the **Port Authority of NY/NJ**, **NYPA** and the **Javits Center**. The clear majority of agencies (75%) have a Sustainability Coordinator that serves only part time in that role.
- 20 agencies have a sustainability team, and 7 are working to establish one.
- 34 agencies (49%) are working on or have finalized a formal sustainability plan, up from 33 the previous year.
- A number of agencies have dedicated resources for sustainability initiatives, and more are working to establish them.
- Sustainability Coordinators serve a variety of functions, and their activities are becoming more robust.
- Most (93%) are directly responsible for data gathering and providing information for this report.
- 49% provide engagement and training opportunities to staff (up from 42% the previous year).
- 48% implement or help to implement new sustainability initiatives (up from 40% the previous year).
- 44% help set sustainability goals for their organization and monitor and evaluate areas for improvement (up from 33% the previous year).



SUNY Chancellor Johnson has a bold new goal to have all new construction designed to net zero energy standards by 2020.

In an encouraging development, more Coordinators (45%) are taking advantage of the training offered by the EO 4 Operations and Engagement Subcommittee (up from 26% the previous year), and more (41%) participated in the GreenNY Forum (up from 29% the previous year).

Success Stories, Challenges and Lessons Learned

One of the strengths of annual reporting is sharing agency stories, building a community of practice, and helping the Interagency Committee identify common needs. Specific circumstances, as always, range widely across reporting agencies. That said, many common issues point to common needs.

Agencies with smaller staff, such as the **Capital District Transportation Authority (CDTA)** shared how they have tapped multiple departments to play a part in coordinating sustainability efforts, including procurement, maintenance, marketing, and planning. It is precisely this type of collaborative approach that has been shown to work at other agencies, such as **DEC**.

Planning and Reporting

The reporting process itself is a tool for inclusiveness, and it is becoming more useful as we refine it each year. Several entities thanked the Reporting Subcommittee for improvements to the reporting process.

The **Division of Homeland Security and Emergency Services (DHSES)** has begun to identify sustainability contacts within each office and program. They hope that this will allow the Sustainability Coordinator to gather information more easily and prepare better reports. Similarly, **ESD's** Sustainability Coordinator is bringing other ESD staff into the process of developing a sustainability plan and undertaking projects.

Executive Support

Establishing a direct line of communication between sustainability staff and executive staff is key to empowerment and building momentum. At **SUNY Oneonta**, the Sustainability Coordinator reports to the Vice President of Finance and Administration, which gives direct access to executive support. **NYSERDA's** Sustainability Coordinator requested two meetings a year with the President and CEO to provide updates on sustainability. Updates on specific projects are given at routine management meetings.

Engaging Staff

Over the last year, the Operations and Engagement Subcommittee has implemented new strategies to improve engagement and inclusiveness in our work. These include having face-to-face meetings with agency sustainability staff, beginning a monthly lunchtime webinar series on how staff can adopt green practices, holding webinars on new resources that coordinators can use, and facilitating more conversations between coordinators to share best practices. The Subcommittee has also found that providing coordinators with toolkits that they can use to promote sustainable choices at their agencies has been very effective in increasing the actions taken at agencies.

Education and Training

For any agency to meet its sustainability goals, staff and other stakeholders, such as facility users, students, and residents, must all be aware of those goals and be familiar and comfortable with sustainable practices.

One of the most impressive success stories involving training comes from **Parks**. The agency trained regional maintenance staff across the State in energy auditing for buildings and solar array installation. These trainings increased regional buy-in for sustainability projects, helped staff better identify how to improve building performance, and lowered project costs 40-60% compared to the use of contractors, which also shortened the payback time. For example, staff trained in solar installation constructed the Peebles Island 144 kW photovoltaic array, which is the first array on the roof of a building on the National Historic Register. The Agency saved approximately \$235,500 on the project by using in-house labor.

Another impressive story comes from **NYSERDA**, which tapped the expertise of their own, in-house experts in FY 17-18 to design a transformative recyclables collection program based on what behavioral specialists know about how to change behavior. Signs were updated to use images over text, and to focus on desired behaviors instead of behaviors to avoid (e.g. the phrase "do not" was never used). A consistent color scheme, green for deposit containers, blue for comingled recycling, and gray for trash, was implemented across the Authority, and matched to the border color for each bin's associated signage. Once all the bins and signs were in place, the changes were communicated through the company-wide newsletter, and FAQ posters were hung in common spaces. After

Lead by Example Highlight:

Building A Green Team

Parks has a full-time Director of Energy and Sustainability plus five additional full-time staff in their Energy and Sustainability Bureau. High level regional staff help to develop and implement projects. \$4 million of Parks' capital budget is earmarked for sustainability projects each year, which return millions in operational savings. In addition, rebate monies from NY-SUN and energy efficiency projects are placed in a Sustainability Fund established by the Commissioner for non-capital projects such as the purchase of zero emission vehicles, charging stations, recycling bins, and hydration stations. This funding is also used to hire temporary, seasonal employees to help with sustainable programming.

deploying the new program in January 2018, NYSERDA has seen recycling increase and cross contamination decrease. [Learn more about NYSERDA's Waste and Recycling Program](#).

Funding

This reporting year has again shown that sustainable practices do not typically cost more money and reducing energy use and waste can even save money (see table on page v). While many energy projects require up-front, capital investment, most save money over time. Other types of projects, including reducing water and toxic chemical use, green cleaning, and green procurement, do not cost more and often yield important co-benefits, such as improved health and comfort of staff, visitors or residents. It is often easier to implement sustainability projects when they are aligned with a facility or service that is being upgraded and can better accommodate more sustainable outcomes.

Many agencies still find it challenging to measure and capture the savings associated with sustainability improvements. A number have dedicated resources for sustainability, including **CUNY** and **Parks. NYPA** annually allocates funds to its Sustainability Team for the implementation of energy efficiency projects, workplace campaigns, employee engagement activities and other initiatives.

The GreenNY Forum

The GreenNY Forum is a yearly event focused on increasing communication between Coordinators and staff. In October 2018, more than 60 attendees from over 35 agencies gathered to participate in round table discussions and presentations on new sustainability initiatives.

Leased and Managed Space

Location in leased space continues to raise unique challenges. The challenges can be particularly acute for small agencies located in large, shared office buildings.

One key is communication. The need to work with a separate agency, as well as a landlord, adds additional layers of people who must be consulted and ultimately sign-off on proposed sustainability projects. Sustainability Coordinators are encouraged to work with their facility managers and OGS real property staff to establish regular opportunities for consultation and problem solving.

New and Noteworthy Initiatives in FY 17-18

- **SUNY Environmental Science and Forestry (ESF)** created a Green Revolving Fund, which is managed by ESF's energy manager with advice from a campus Energy Working Group.
- **SUNY Oneonta** launched a sustainability-themed social event which they hope to make an annual tradition. They also created a number of sustainability awards and recognition opportunities which allow executives to exhibit their support to a wide audience.
- **NYSERDA** implemented a transformative recycling education program – see page 6 above.

Waste Reduction and Reuse



OMH's New York City Children's Center in the Bronx significantly reduced food waste with a new menu planning database.

Findings

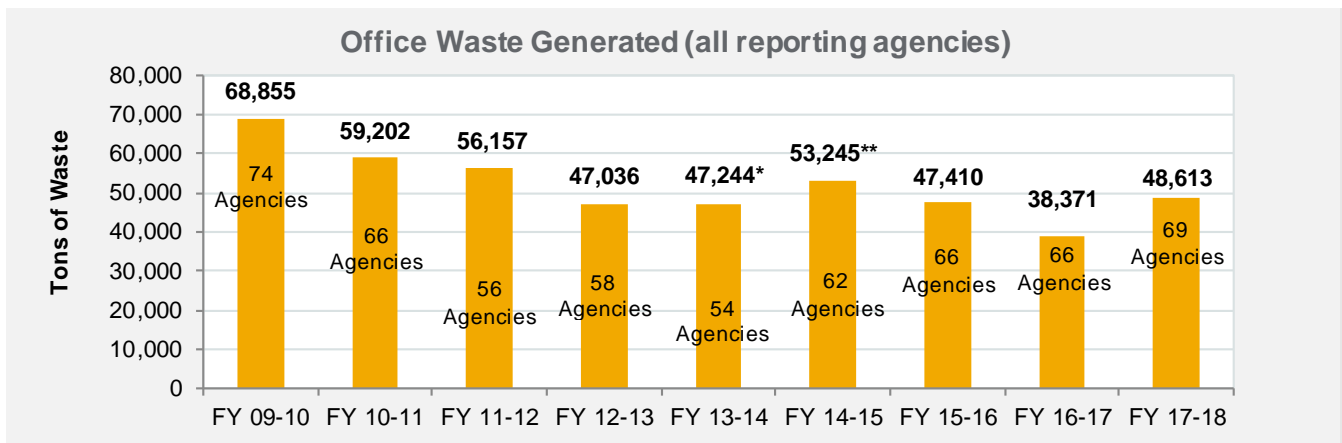
FY 17-18 saw an increase in overall waste generation, due to more C&D generated by **MTA** and **DOT**. When excess C&D generated by these two agencies is subtracted from the total, the overall amount of waste generated in FY 17-18 represents a 14% increase compared to FY 16-17, but a 3% decrease compared to FY 15-16 (see table on page iv of this report).

This modest increase is primarily due to an increase in the number of agencies reporting and improved reporting. The reporting form for FY 17-18 placed a heightened emphasis on reporting waste disposed and asked agencies to itemize C&D disposed. Thus, a portion of the reported increase is due to better data collection. Taking these factors into account, the State continues to maintain an encouraging waste reduction trend.

Office waste accounted for only 8% of total waste generated in FY 17-18 (non-office waste was 92%). The total amount of office waste generated in FY 17-18 was 48,613 tons, a 27% increase from FY 16-17. This increase is due in part to the increase in the number of agencies reporting office waste and to the heightened emphasis of collecting and reporting disposal data. Overall, office waste generation has decreased by 20,242 tons, or 29%, since FY 09-10, an encouraging downward trend.

With the adoption of waste conservation techniques, such as double-sided printing and the use of electronic documents, agencies have significantly reduced the overall amount of paper purchased and consumed. In FY 17-18, 65 agencies reported purchasing 208,207 boxes of copy paper for \$6.8 million. 46% of these dollars went towards purchasing 100% post-consumer recycled content copy paper, and 83% went towards purchasing at least 30% post-consumer recycled content copy paper. The overall amount spent on copy paper has fallen by an impressive 53% since FY 08-09 when agencies reported spending \$14.54 million on copy paper.

In addition, avoiding single-use plastic water bottles remains a high priority in New York. A summary of efforts made by agencies to eliminate the purchase of bottled water under EO 18 can be found on page 40 of this report.



In FY 17-18, agencies reported on their use of the following waste reduction strategies:

- 88% use two-sided printing always (48%) or most of the time (40%), an overall increase of three percentage points, and an increase of 10 percentage points in the number doing so all the time.
- 90% use electronic means to provide documents and information to the public either all (37%) or most (52%) of the time, an increase of 13 percentage points in the number doing so all the time.
- 82% use electronic means to receive documents and information from the public either all (21%) or most (61%) of the time.
- 79% use electronic means, other than email, to share documents and information with and among employees either all (21%) or most (58%) of the time.
- 64% have an office supply reuse program in place in at least some of their facilities; 36% have them in place at all (24%) or a majority (12%) of their facilities, an increase of six percentage points in the number of agencies reporting reuse programs in place at all their facilities.

Savings and Costs

On average over the past nine years, a significant number of agencies reported saving money through waste reduction, while the rest reported no change in costs. The agencies reporting savings had more comprehensive waste reduction, reuse, recycling and composting programs. Only a handful reported an increase in costs. For more details, see the chart on page v of this report and the GreenNY Fact Sheet on [“Saving Green.”](#)

Success Stories, Challenges and Lessons Learned

Reusing Office Supplies, Furniture, & Equipment

Agencies have shown a strong commitment to reusing furniture, equipment, and office supplies. 36% have established a reuse center at all their facilities. Others have taken their commitment further by developing tracking and advertising mechanisms, such as electronic lists that are shared throughout the organization to keep staff informed about available materials. For example, the **Development Authority of the North Country** uses a reuse list for surplus furniture, equipment and supplies that is updated by each division in the organization and tracks the weight of materials diverted. Many agencies also benefit from the OGS Surplus Property Program, which facilitates the reuse of furniture, equipment and supplies by agencies across the State, or its sale to the private sector. Several **SUNY** campuses, including **Albany**, **Oneonta** and **Buffalo**, conducted move out programs at the end of the school year to collect unwanted items from students and donate them to the community or reuse them on campus.

Waste Audits

Conducting a detailed waste audit continues to be the most effective way to obtain data on the composition and quantity of waste generated. Every year, agencies report positive experiences with audits, claiming that the data

gathered has given them valuable insight into their waste management practices. [A Waste Audit Guidebook and other resources](#) are available on the GreenNY website.

SUNY Oneonta conducts waste audits several times a year in the dining halls to inform students of preventable food waste on their campus and its environmental impact. **DEC** continues to perform a waste audit at least once a year at its Albany headquarters, and has expanded their waste audits efforts to include some of their regional offices. Representatives from other agencies are welcome to participate as a training exercise, and DEC will also provide technical assistance to individual agencies to conduct waste audits upon request.

New and Noteworthy Initiatives in FY 17-18

Among the waste reduction strategies introduced in FY 17-18, there is a trend towards the introduction of creative new ways to reuse unique materials, improvement in waste data reporting, and the expansion of reuse initiatives. Sustainability Coordinators are encouraged to contact the agencies listed below to better understand the potential for adopting these actions in their own operations.

Lead by Example Highlight:

Reducing Food Waste

*The **Office of Mental Health** adopted a new menu planning program that forecasts food ordering needs based on existing inventory and dietary restrictions, allowing them to order only what is needed and significantly reduce food waste.*

Waste Prevention

- **SUNY Cortland** adopted an electronic, online purchase requisition system, which reduces paper use.
- The **Justice Center** purchased reusable bags with the Agency name and logo, which are used by staff and passed out to the public at promotional events to reduce the use of plastic bags.

Reuse and Diversion

- **SUNY Oneonta's** Move Out Donation and ReUse Program collected 5.25 tons of material from students at the end of the school year and donated it to more than 200 members of the community.
- **The Division of Military and Naval Affairs** launders rags used for automotive maintenance for reuse.

Food Waste Reduction and Diversion Efforts

This reporting year, 17 agencies employed practices to reduce wasted food at their facilities and 13 had a food donation program. Diverting excess food and food scraps from disposal has many potential benefits, including the support of populations struggling with food insecurity.

- **CUNY School of Law** advertises excess food from events to the college community, so it can be consumed instead of thrown out.
- **SUNY Oneonta** donates two tons of pre-consumer food waste from its dining halls to pig farmers every month.
- **The Javits Center** donates surplus food from events and shows to local food banks.
- **The Office of Mental Health** significantly reduced food waste. See the Lead by Example Highlight above.
- Food waste reduction and prevention efforts at **SUNY Farmingdale** implemented by their food service operator, Aramark, have been able to reduce overall food waste by 11%.
- During certain parts of the year, the foodservice company at **SUNY Purchase**, Chartwells, incorporates "[Root to Stem](#)" recipes to utilize the entirety of the produce and prevent food waste.

Recycling, Composting and Special Waste



Findings

Reports for FY 17-18 continue to document a robust and encouraging trend of high recycling rates by State agencies. Agencies reported a 70% recycling rate, and the total amount of materials recycled increased 7% (from 375,012 to 401,227 tons) compared to the previous reporting year, a difference of 26,215 tons. In the last five reporting years, 70% or more of the solid waste generated by agencies was recycled or composted, compared to a 50% rate of recycling in FY 08-09.

Agencies continue to recycle large quantities of non-office waste, such as C&D materials and bulk metals. FY 17-18 saw a 9% increase in the amount of recycled bulk metal and C&D debris, from 302,856 tons in FY 16-17 to 329,859 tons.

Another story told by the data is the remarkable progress made in recycling C&D debris, which includes concrete, asphalt, brick, and clean wood from building construction and demolition as well as highway construction and maintenance. **MTA** adopted an ambitious C&D recycling goal in 2014 and continues an aggressive program, recycling 176,412 tons in FY 17-18. **DOT** reported 52 lane miles (109,402 tons) of cold in place asphalt recycling in 17-18. Overall, agencies recycled 80% of the C&D reported as generated in FY 17-18.

The total amount of organic material composted in FY 17-18 decreased by 2,250 tons (or 12%) to a total of 15,874 tons. Food scrap composting, a subset of this number, decreased slightly by 134 tons (or 2%) to 7,793 tons. These numbers still represent an increase of 8% over the 14,625 tons of total organic material composted in FY 14-15, and a 5% increase over the amount of food scraps composted in 14-15.

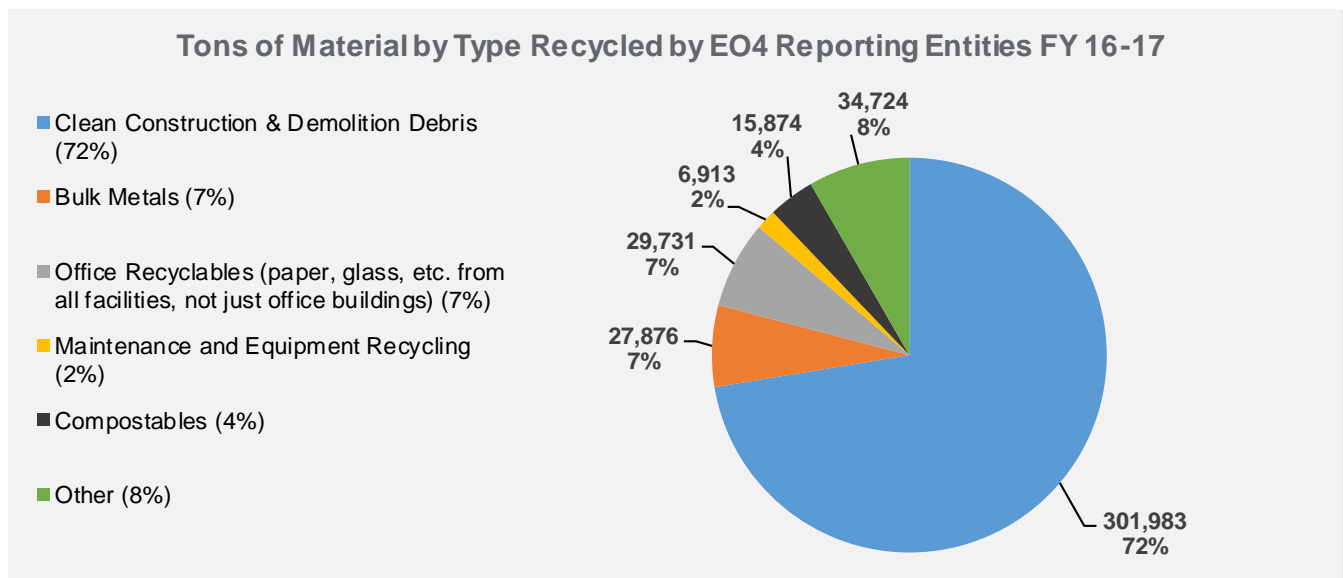
In FY 17-18 the number of agencies that reported composting increased to 17 from 14 in the previous reporting year. The number of agencies composting has more than doubled since FY 12-13, in which eight agencies reported composting. **SUNY, Parks** and **DOCCS** accounted for 94% of tons of material composted in FY 17-18.

In addition to composting organic materials, several agencies have introduced processes to divert excess food from disposal in landfills as part of their operations. Diverting food scraps and other organic waste that cannot be donated to composting or anaerobic digestion reduces methane generation in landfills and sequesters significant amounts of elemental carbon, all while producing a beneficial soil amendment that contributes to healthy soil and reduces the need for energy-intensive fertilizers and pesticides.

Total Waste Generated and Percent Recycled

	Total Tons of Waste Generated	Tons of Materials Recycled	Percent Recycled
FY 2008-09	815,000	410,500	50%
FY 2009-10	507,929	318,181	63%
FY 2010-11	682,043*	308,566	45%*
FY 2011-12	531,059	355,865	67%
FY 2012-13	501,125	355,226	71%
FY 2013-14	389,510	273,712	70%
FY 2014-15	398,895	280,172	70%
FY 2015-16	580,015**	452,962	78%**
FY 2016-17	513,412**	393,136	77%**
FY 2017-18	599,454**	417,101	70%**

*The large increase in waste generated in FY 10-11 is primarily due to MTA reporting 200,000 tons more waste (most likely C&D debris) as compared to the previous or following years. **The increases in waste generated in FYs 15-16, 16-17 and 17-18 are due to MTA and DOT reporting significantly more tons of C&D debris generated as compared to 14-15. In FY 10-11, the increased waste was disposed of, not recycled, while in FYs 15-16, 16-17, and 17-18 the bulk of the increase in materials generated was recycled, maintaining the State's impressive recycling rate.



The pie chart above provides a breakdown of the total quantity of materials recycled by agencies, on average, in FY 17-18. 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.

Savings and Costs

On average over the past nine years, most agencies reported a reduction or no change in costs as a result of recycling efforts. A much smaller number reported an increase in costs. For more details, see the chart on page v of this report and the GreenNY Fact Sheet on [“Saving Green.”](#)

Success Stories, Challenges, and Lessons Learned

Improved Recycling & Composting Collection Strategies

It has been proven that better signage, bin type and color, and bin placement go a long way in making recycling and food scraps diversion more convenient and effective, and improving recycling habits. Many agencies have invested in updating their collection strategies as way to boost recycling and food diversion rates.

- **NYPA** implemented a new system for collecting office waste and recycling at its White Plains headquarters, which included the elimination of individual under-desk trash bins and introduced multi-stream waste stations located within a 10-second walk from every work space.

In addition to innovative changes to recycling programs, composting initiatives have taken off across the state.

- **Buffalo State College** expanded their composting program to the daycare center on campus – where the youngest members of the campus community can learn about composting and participate first-hand.
- **Lehman College** implemented a more unified approach to composting by composting food scraps and dry leaves together, enabling them to compost more than 20 tons of organic material since November 2017.

Overcoming Challenges

While recycling and composting commitments are strong across the state, many agencies and authorities are facing challenges with cross contamination of their recyclables and trash. Some agencies have been successful in improving this through educational campaigns on proper waste sorting habits. For instance, **NYSERDA** created a FAQs document to place on all refrigerators to clarify any questions staff may have about recycling correctly at work.

A common issue faced by several agencies and authorities is the lack of control over their waste disposal due to their status as a tenant, and difficulty in obtaining exact weights of waste produced and diverted. Providing data on individual waste streams can be challenging when a large variety of waste with different weights are mixed together.

Special Wastes

This year's reporting form asked agencies to report on their disposal and recycling of special wastes for the first time, including rechargeable batteries, fluorescent lamps, mercury-added consumer products and electronics. All agencies that handle such items report having proper disposal or recycling mechanisms in place.

Many agencies have facilities located in space owned by **OGS** or leased from a third party which manages their special wastes, and do not need to handle such wastes directly. Some agencies that frequently generate high volumes of certain types of special wastes have contracts with third party vendors to recycle or dispose of it safely. Others reported having Hazardous Waste Disposal Contracts or Universal Waste Management Plans in place to manage all their special wastes. A few agencies that do not generate large amounts of special waste take advantage of ways to properly dispose of or recycle such wastes through local businesses such as Home Depot and Lowe's, municipal drop-off locations and events, or mail-in programs to manufacturers.

In FY 17-18, agencies reported managing their special waste in the following ways:

- **Batteries that contain acid, lead, nickel-cadmium, nickel metal hydride, silver, lithium or mercury:** 49% use third-party contracts; 26% rely on **OGS** or their landlord; 25% do not often have this type of waste, but when they do use local drop-off boxes or collection events.

- **Mercury-added consumer products:**
52% use third-party contracts; 33% rely on OGS or their landlord; 15% report do not often have this type of waste, but when they do use local drop-off boxes or collection events.
- **Fluorescent lamps:**
49% use third-party contracts; 44% rely on OGS or their landlord; 7% do not often have this type of waste, but when they do use local drop-off boxes or collection events.
- **Electronic waste:**
53% use third-party contracts; 43% rely on OGS, ITS or their landlord; 4% do not often have this type of waste, but when they do use local drop-off boxes or collection events.

Above and Beyond

Many agencies are working to identify more ways to reduce their waste that go beyond the regularly collected recyclable items from their haulers. These agencies report recycling items such as glasses, DVDs, Tyvek envelopes and water filters as well as used oil, antifreeze, scrap metal, used tires, automotive batteries, and lightbulbs. For instance, the **Central New York Regional Transportation Authority** pumps used engine oil from their buses into a storage tank and uses it to heat their buildings in winter, reducing heating costs. **SUNY ESF** diverted 530 pounds of plastic film from the landfill through their participation in the Trex Recycling Company Challenge. **Military Affairs** uses vendors to recycle used oil and anti-freeze to help keep those materials out of the waste stream.

Agencies that find creative ways to deal with materials that may be hard to recycle can serve as inspiration to other agencies developing strategies to address such materials. This report helps agencies share ideas and efforts.

New and Noteworthy Initiatives in FY 17-18

Among the strategies introduced in FY 17-18, comprehensive efforts to improve the diversion rate for recyclables and organic material by making it easier and more convenient were themes throughout.

New or Improved Recycling and Composting Programs

- The **Battery Park City Authority/Parks Conservancy** partnered with Grow NYC to collect food scraps from neighborhood businesses and residences. About 6,000 pounds were composted.
- **SUNY Buffalo** created a strategic plan to move toward Zero Waste. The plan focuses on improving diversion rates campus-wide and expanding composting, with a focus on the football stadium and move-out program.
- **Development Authority of the North Country** purchased a book de-binder to increase the recycling of paper and reduce the number of books entering the landfill throughout the North Country region.
- **The Department of Financial Services** implemented an office recycling program at their New York City location in FY 17-18. As a result, they recycled 136 tons of office waste compared to 27.5 tons in 16-17.

Reducing Hazardous Chemical Use



NYPA's Integrated Vegetation Management (IVM) program relies on the targeted use of herbicides to reduce chemical use and promote desirable low-growing plant communities.

Reducing hazardous chemical use remained a priority for the state in FY 17-18. Sustainable pest management and green cleaning continued to be practiced by most agencies, with some adopting such practices for the first time.

Pest Management

Most agencies continue to use Integrated Pest Management (IPM) to prevent indoor pests. IPM is a set of practices that minimize pesticide use and focus on prevention through monitoring, good sanitation, and structural and biological controls, with least-toxic pesticide use as a last resort.

A plurality of agencies use solely mechanical, sanitary, cultural, or biological means to control pests on their lawns and grounds, as required under New York's green specification for "[Turf and Ornamental Management](#)." Currently, many specific types of facilities and uses are exempt from the specification, including golf courses, land in agricultural production, and utility rights of way. Based on a recommendation in the [Pollinator Task Force Report](#), issued by Governor Cuomo in 2016, the Interagency Committee proposed amendments to the specification that would require exempt facilities to practice IPM or Integrated Vegetation Management (IVM), as well as require agencies to avoid the purchase of nursery stock treated with insecticides.

Findings

In FY 17-18, *all* agencies, not just those responsible for pest management (either directly or through contractors) were asked about the use of IPM and non-chemical means of pest control at their facilities. Understandably, the level of reported performance dropped somewhat due to this expansion. The Interagency Committee thinks it is important for agencies in leased or managed space to be aware of and advocate for the adoption of these practices, as they can improve the well-being of building occupants and outdoor facility users.

- 65% of all agencies reported using IPM at all (46%) or a majority (19%) of their facilities.
- 44% of agencies answering the question used non-chemical means of pest control at all (29%) or a majority (15%) of their facilities.
- 35% of agencies with exempted outdoor facilities, such as golf courses and rights-of-way, reported using IPM or IVM at all (23%) or a majority (13%) of such facilities.
- 40% of agencies answering the question avoided nursery stock treated with insecticides at all (21%) or a majority (19%) of their facilities, up four percentage points from the previous year.

Savings and Costs

On average over the past nine years, most agencies reported a reduction or no change in costs as a result of practicing IPM, IVM, or non-chemical means of pest control. A much smaller number reported an increase in costs. For more details, see the chart on page v of this report and the GreenNY Fact Sheet on ["Saving Green."](#)

Success Stories, Challenges, and Lessons Learned

Agency reports continued to document widespread adoption of IPM, IVM, and non-chemical means of pest management over the past nine years, with some agencies reporting the exclusive use of such approaches, including **OGS**, **Parks**, **NYPA** and **NYSERDA**. OGS has been a leader on the use of IPM in public buildings for the past 30 years. All the golf courses in Parks' system have adopted a progressive model for the use of IPM on turf grass, first developed at Bethpage State Park. Parks has found that less toxic products have higher efficacy and lower costs. **CUNY Lehman** reports that cryogenic control continues to be highly effective at eliminating bedbugs without the use of toxic chemicals. Less than a handful of agencies received reports from one or more of their facilities that less toxic or non-toxic means of pest control can be more expensive or less effective.

Lead by Example Highlight:

Protecting Pollinators

In 2017, NYPA had the Pollinator Partnership review their IVM program to ensure compliance with the NYS Pollinator Protection Plan. They also began a bee survey. 35 locations were surveyed in 2018, and over the next three years they plan to survey more than 100 additional locations. The surveys will be performed randomly across the 1,400 miles of their system.

New and Noteworthy Initiatives in FY 17-18

- **MTA** has reduced pesticide use through IPM, tenant education and inspections in indoor settings.
- **SUNY Cortland** aerifies, de-thatches, and topdresses turf to promote health and minimize chemical use. They scout for disease and pests on a more frequent basis and calibrate application equipment prior to each use. While time intensive, these practices can reduce total costs and the amount of chemicals used.
- **CUNY Medgar Evers** has taken a holistic approach to reducing fungicide and insecticide use by selecting hardy, disease-resistant plants and using ample mulch made from composted leaves.
- **Parks** employees took classes to become certified pesticide technicians. Hand weeding, flame weeding, vinegar mixtures and shading poison ivy with plastic or cloth are used as alternatives to herbicides.

- **NYPA** implemented a new outdoor IPM program to properly identify pests, monitor population dynamics and utilize cultural, physical, and biological means of control as well as chemicals. Recognized as a Right-of-way Steward, NYPA already has a well-established IVM program that relies on the targeted use of herbicides to reduce chemical use and promote desirable low-growing plant communities.
- The **Javits Center** has virtually eliminated the use of rodenticides around their busy loading docks by employing cats as a sustainable way to control rodents. The Center works with local organizations to spay and neuter any cats coming to live on the site, and the former strays are given beds, food, treats, clean water and litter boxes.

Green Cleaning

Green cleaning is an area where New York continues to shine. An impressive majority of agencies use non-toxic cleaning products, benefiting the health of the public who use state facilities, facility residents, and employees.

Findings

In FY 17-18, *all* agencies, not just those responsible for performing or contracting for cleaning services at their facilities, were asked about the use of green cleaning products and practices. The level of performance remained essentially the same, which is highly encouraging and illustrates how widespread adoption of green cleaning practices in state facilities. As with pest management, the Interagency Committee notes that it is important for agencies in leased or managed space to be aware of and advocate for the adoption of non-toxic practices.

- 80% of all agencies use green cleaning products that meet the State's green specifications (also see OGS' List of Approved Products) at all (42%) or a majority (38%) of their facilities. This represents a decrease of only two percentage points from the rate of use reported by agencies responsible for cleaning at their facilities, which was 80% in FY 16-17. Less than 5% of agencies reported that they don't use these products at any of their facilities, a remarkable decrease from 6% the previous year, when only agencies responsible for cleaning services reported.
- 71% of all agencies use fragrance-free products at all or a majority of their facilities, the same as last year.
- 79% use concentrated products at all or a majority of their facilities.
- 69% reported the use of walk-off mats and microfiber mops and cloths at all or a majority of their facilities, a decrease of 11 percentage points from last year. Mats and microfiber products reduce the need for chemicals.
- 78% reported that they reduced the number of different kinds of cleaning products used at all or a majority of their facilities, a three percentage point increase from the previous year.

Savings and Costs

On average over the past nine years, most agencies reported a reduction or no change in costs as a result of adopting green cleaning practices. A smaller number reported an increase in costs. For more details, see the chart on page v of this report and the GreenNY Fact Sheet on "Saving Green."

Success Stories, Challenges, and Lessons Learned

A significant number of agencies continued their work towards maximizing the use of green cleaning products and practices in FY 17-18. Several agencies found success with green cleaners in multiple applications. Others added education to their program to increase awareness of best practices and benefits. Some of these successes and challenges are described below.

- The **Development Authority of the North Country** compares the hazard codes in Safety Data Sheets for each product to identify less-toxic alternatives that could be used to perform similar functions.
- **SUNY Alfred State** trains their staff on ways to reduce the use of toxic cleaning products.
- The **Department of Motor Vehicles'** janitorial contracts include the use of green cleaning practices.

Less than a handful of agencies noted that it can be challenging to find effective green products to disinfect public spaces. For help with this issue, agencies are encouraged to consult New York's green specification on "Disinfectants and Sanitizers" which establishes criteria to reduce adverse impacts on public health and the environment while maintaining high performance. Products with active ingredients such as hydrogen peroxide, citric acid, lactic acid, and caprylic acid meet the specification, and are available at reasonable prices on OGS' Environmentally Preferable Cleaning Products contract. Effective odor control may require engineered solutions, such as increased ventilation, in addition to the use of green products.

New and Noteworthy Initiatives in FY 17-18

New efforts showed noteworthy entrepreneurial and innovative thinking. These and the examples above show that significant improvements can be achieved through less intensive efforts as well as major capital projects.

- **Parks** increased the number of parks that use concentrated green cleaning product dispensing stations. The stations provide precise measurements to ensure best practices, reduce waste and improve chemical safety.
- **SUNY Fredonia** surveyed vendors of chemical dilution systems and were able to find a Women-Owned-Business-Enterprise with a comparable product and significant savings of close to \$0.50 per diluted gallon.
- **CUNY's Brooklyn College** updated their lab chemical program to reduce chemical use. See the Lead by Example Highlight, above.

Lead by Example Highlight:

Reducing Hazardous Chemical Use

CUNY's Brooklyn College updated their surplus chemical program by allowing unused chemicals in good condition to be redistributed amongst on-campus laboratories. In addition, their Environmental Health and Safety team updated their lab safety training to focus on planning experiments that use up current chemical inventories and substitute less hazardous materials when possible.

Energy Efficiency



New York Psychiatric Institute in Manhattan, NY - An OMH facility with new energy efficiency measures in place.

A number of key Executive Orders and policies direct agencies and authorities to reduce energy use and greenhouse gas (GHG) emissions, including Build Smart ([EO 88](#)), and [EO 166](#). In April 2018, Governor Cuomo announced a new, ambitious energy efficiency target and a commitment by the State to lead by example. The [New Efficiency: New York \(NE:NY\)](#) White Paper establishes the statewide goal of reducing cumulative annual site energy use by 185 trillion British thermal units (BTUs) relative to forecasted energy consumption in 2025—a level of savings equivalent to fueling and powering over 1.8 million New York homes by 2025.

The White Paper calls on State agencies to lead by example in their own facilities and construction investments by reducing site energy use by 11 BTUs by FY 25-26. Recommendations to achieve that goal include adopting energy master plans, pursuing net-zero energy new construction, accelerating LED retrofits, and performing annual energy benchmarking. These activities will be tracked and reported on in a new, combined “Greening New York State” report covering all agency climate and sustainability initiatives in FY 18-19.

Findings

In FY 17-18, agencies reported that:

- 94% set weather-appropriate building temperature control ranges to conserve energy at all (51%) or a majority (43%) of their facilities, a small increase from FY 16-17.
- 79% installed ENERGY STAR® equipment and/or appliances at all (41%) or a majority of facilities (38%), a slight increase from the previous year.
- 64% used motion detectors to reduce unnecessary lighting at all (26%) or a majority of their facilities (38%), a seven percentage point increase from the previous year.

Savings and Costs

On average over the past nine years, a significant number of agencies reported saving money as a result of their energy use reduction efforts, while the rest reported no change in costs. Less than a handful reported an increase in costs. For more details, see the chart on page v of this report and the GreenNY Fact Sheet on “[Saving Green](#).”

Challenges and Success Stories

Agency experience shows that energy efficiency measures can save money, and that savings are most frequently realized in the agency’s operating budget, where they can be of great value. Even so, most agencies do not have a mechanism for tracking savings, and the potential for savings from energy efficiency is too often overlooked.

Maintaining efficient energy practices can also be challenging. Success requires not only initial project implementation, but the maintenance of complex systems, like digital, intelligent controls and sensors which generate significant amounts of data. The NE:NY Whitepaper states that New York needs a workforce prepared to install and manage these systems, as well as energy managers trained to use the real-time system information to drive cost savings.

The most successful agencies are finding ways to capture and use potential savings to finance projects, building a professional, trained workforce, and using master plans and audits to inform investment. For example, **SUNY** has engaged in comprehensive facility master planning for years and recently adopted a bold new goal to have all new construction designed to net zero energy standards by 2020. **SUNY Brockport** offers a new advanced energy management program that will soon be expanded to other campuses.

Lead by Example Highlight:

Audit and Save

The Office of Mental Health is working with NYPA to use the power of expected savings to finance energy efficiency measures identified through an ASHRAE Level II energy audit (using standards developed by the American Society of Heating, Refrigeration and Air Conditioning Engineers). Phase 1, an agency-wide lighting project, will result in more than \$545,000 in savings.

New and Noteworthy Initiatives in FY 17-18

- **CUNY** comprehensively evaluated the automated energy systems at six community colleges, resulting in immediate efficiency gains as well as a roadmap for medium- and long-term improvements.
- The **Office of Mental Health** worked with **NYPA** to audit their energy use and save money. See the Lead by Example Highlight, above.
- **Parks** provided 10 staff with professional training on how to analyze buildings and their envelopes to determine where improvements can be made to increase energy efficiency.
- The **United Nations Development Corporation** installed high-efficiency lighting at 3 UN Plaza, which is expected to result in annual cost savings of approximately \$97,000.
- The **New York State Insurance Fund** is replacing fluorescent lighting with LEDs at each of its owned locations and in leased locations upon lease renewal.

Renewable Energy



The *Olympic Regional Development Authority* earned a NYS Environmental Excellence Award in 2018 for Gore Mountain Ski Resort's 5.3 mW remote net metered solar array, the largest array dedicated to a ski resort in the nation.

New York State continues to lead the nation under Governor Cuomo's "Green New Deal" mandating that 100% of the State's electricity come from renewable sources by 2040. Compared to other states, New York's power grid includes a high percentage of renewable, clean energy sources, and we are proud of the contribution made by New York state entities, like **NYP&A** and **NYSERDA**, to that record. Recently, Governor Cuomo announced that state-supported solar power in New York increased nearly 1,500% from December 2011 to December 2018.

Findings

In addition to broad policies and programs that support private sector efforts, there are several ways in which state entities can directly participate in the generation of renewable energy to support their own operations. These include building systems themselves or entering into power purchase agreements (PPAs) where a developer arranges for the design, permitting, financing, and installation of a system for little to no upfront cost, and is reimbursed through utility bill savings. Systems can be constructed on the site of a state facility, or off-site as part of a net metered or community solar system. Renewable energy credits (RECs) can also be purchased.

Reporting on renewable energy is still relatively new, and each year has brought increased clarity around the terms "generation" and "use." The Interagency Committee has determined that calculations of renewable energy generation by state entities should include only the following: energy generated on-site and used at a state facility; energy generated off-site but dedicated to use at a state facility through remote net metering or a community energy project; or energy invested in through RECs to offset facility energy use. Contributions from renewable energy embedded in New York's overall grid will not be counted. In this year's report, only solar energy generated through the first two methods by agencies with robust data is being reported. Improvements are being made to the reporting process to ensure more accurate data in future years.

As presented below, several agencies grew their on-site solar energy generating capacity in FY 17-18. Overall, the agencies generated 9 million kWh of solar energy for agency use in FY 17-18, a more than three-fold increase over the previous year.

Solar Photoelectric Energy Generation by State Agencies (either on-site or off-site but dedicated to a state facility)				
	Total kWh FY 15-16	Total kWh FY 16-17	Total kWh FY 17-18	Increase from 16-17
CUNY			61,700	
DASNY	40,000	40,000	40,185	
DEC	11,000	120,000	150,000	
OGS			2,239	
ORDA			5,821,320	
Parks	181,147	241,271	1,019,033	
SUNY	2,073,507	2,169,347	1,901,294	
TOTAL	2,305,654	2,570,618	8,995,771	x 3.5

Savings and Costs

On average over the past four reporting years, a significant number of agencies reported a reduction or no change in costs due to their renewable energy generation or purchasing efforts. The number of agencies reporting an increase in costs declined 16 percentage points, from 25% in FY 14-15 to 9% in FY 17-18. For more details, see the chart on page v of this report and the GreenNY Fact Sheet on [“Saving Green.”](#)

Success Stories, Challenges and Lessons Learned

The State continues to make advancements in renewable energy projects and while upfront costs are a consideration, training in-house staff to install solar systems and using tools like PPAs can help. [Parks' program to train staff in renewable energy installation](#) has paid for itself in savings.

In May 2017 OGS awarded a new contract for the installation of solar systems through PPAs (see more detailed description on page 35 of this report). In FY 17-18 four mini-bids were released through the contract by state agencies for over 45 megawatts (mW) of solar capacity. Once built, these systems have the potential to increase the generation of solar energy by more than 56 million kWh per year.

New and Noteworthy Initiatives in FY 17-18

- The **Olympic Regional Development Authority** earned a New York State Environmental Excellence Award for Gore Mountain Ski Resort's 5.3 mW net metered solar array in Washington County, the largest dedicated to a ski resort in the nation. A 25-year PPA will power 85% of resort operations.
- **Parks** announced five new solar projects on Long Island totaling over 250 kW, all installed by Parks staff.
- **CUNY Queens College** installed a solar array with battery storage at their College Summit Dormitory. It will provide peak shaving capacity (to reduce excess demand charges) and emergency backup power.
- **SUNY New Paltz** completed construction on a 217 kW solar PV array with battery storage. Combined with a project to upgrade interior and exterior lighting, the project reduced the college's electric bill by 9%.
- **SUNY Cobleskill** installed solar powered, off-the-grid site lighting in a parking lot and around a rehabilitated building.

Sustainable Transportation



Findings

In FY 17-18, agencies reported that:

- 65% used webinars or videoconferencing all (26%) or a majority (39%) of the time to reduce employee vehicle miles traveled (VMT).
- 61% use carpooling and fleet management all (38%) or a majority (23%) of the time to reduce VMT.
- Of the 42 agencies reporting VMT data, 31% reduced VMT between FY 16-17 and 17-18.
- Total VMT reported by 54 agencies in FY 17-18 was 172.4 million miles, a slight increase of 4.4% over the previous year, when fewer agencies reported.
- The average fuel efficiency of agency light duty fleets (including SUVs, trucks, vans, and sedans) was 22.4 miles per gallon (MPG).
- 3% of the current light duty fleet is made up of Zero Emission Vehicles (ZEVs) (464 out of 14,788).
- 4% of light duty vehicles acquired in FY 17-18 were ZEVs (75 out of 1,985 vehicles), an increase.

- 52% of agencies promote and support carpooling all (32%) or a majority (20%) of the time to reduce employee commuter miles driven. A similar number promotes the use of public transportation.
- Some agencies promote and support the use of compressed pay periods (7% all, 7% a majority, 37% some of the time); telecommuting (3% all, 4% a majority, 50% some of the time); and co-location (1% all, 6% a majority, 42% some of the time). All three practices are growing modestly in use.

In addition to agency level initiatives to reduce commuter miles, the State encourages the use of public transportation by its employees through the NYS-Ride program, which lowers the cost of commuting by transit by allowing employees to purchase public transportation fare using pre-tax dollars.

Savings and Costs

On average over the past four reporting years, a significant number of agencies reported a reduction or no change in costs due to their green transportation policies. A much smaller number reported an increase in costs. For more details, see the chart on page v of this report and the GreenNY Fact Sheet on "Saving Green."

Success Stories, Challenges and Lessons Learned

While the initial cost premium of more fuel-efficient vehicles can present a challenge, ZEVs and higher efficiency vehicles save operating costs over time.

The 2018 Green Your Commute Day saw a significant increase in both the amount of staff participating and emissions reduced. Participation was up 37% over 2017 with 2,350 employees participating, offsetting 22.1 tons of carbon emissions. Year-over-year data also shows an increase in the frequency with which staff are choosing a green commute year-round.

New and Noteworthy Initiatives in FY 17-18

- The **Inspector General** conducted a fleet analysis and was able to significantly increase efficiency and reduce carbon emissions by replacing 6 old low MPG vehicles with 3 high MPG vehicles.
- **CUNY Lehman College** reduced its gasoline fleet of vehicles resulting in an 18.9% reduction in fuel use.
- The **Battery Park City Authority** partnered with CitiBike to allow maintenance staff to utilize the system as an emissions-free way to get around the grounds. They are also switching from gas-powered tools and vehicles to electric and other sustainable power sources as replacements are needed. While this has increased up-front costs, long-term savings are expected from reduced fuel use.
- The **Environmental Facilities Corporation** decreased their VMT another 28%, bringing their 5 year VMT reduction total to 64%.
- The **Gaming Commission** replaced a gas-powered golf cart at the Finger Lakes Racetrack with a refurbished electric version from OGS Surplus, a partnership that reduced both waste and emissions.
- The **Department of Labor** launched a telecommuting program for staff.
- The **Department of Agriculture & Markets** relaunched both a telecommuting and compressed pay period program.
- **SUNY Cortland** conducted an employee commuting carbon footprint survey to better understand the impact of employee commutes and develop programs to lessen it.
- **SUNY Buffalo** increased the size of the Zipcar fleet on campus to 17, making it easier for students and staff to go car free.
- **DEC** began offering transit passes to staff in their Central Office for local travel as opposed to taking a pool vehicle. There are plans to expand the program to other offices.

Water Conservation and Reuse



Water conservation and sustainable stormwater practices such as rainwater harvesting, grey water reuse, porous paving and stormwater retention ponds were incorporated into the design of DEC's Five Rivers Environmental Education Center.

New York State is a land of plentiful water resources, and much work is being undertaken to protect the State's fresh water resources and deliver high quality drinking water to millions of users throughout the state. Water conservation ensures those efforts are not wasted and protects an important resource for future generations.

Findings

Numerous agencies have taken measures to advance the cause of indoor water conservation. In FY 17-18, agencies reported that:

- 41% use high-efficiency plumbing fixtures in all (12%) or a majority (29%) of their facilities. These rates of performance are similar to FY 16-17.
- 16% use grey water collection in a majority (1%) or some (15%) of their facilities. These rates are similar to FY 16-17. Grey water is gently used water from drinking fountains, sinks, dishwashers, tubs and showers.

Savings and Costs

On average over the past nine years, most agencies reported a reduction or no change in costs as a result of implementing indoor water conservation measures. Less than a handful reported an increase in costs. For more details, see the chart on page v of this report and the GreenNY Fact Sheet on "[Saving Green](#)."

Success Stories, Challenges and Lessons Learned

Agencies continue to find creative ways to conserve and reuse water. Many agencies have implemented successful projects in this area, and their work has inspired others who are in the planning stages of developing projects.

A large number of agencies have installed fixtures and equipment at their facilities that are low flow, or in some cases waterless. **CUNY City College of New York** has installed low-flow and waterless urinals, **Battery Park City Authority** has installed several waterless urinals in their public restrooms, and **CUNY Lehman College** has reduced water usage by installing automatic shutoff features in nearly all their sinks and toilets. **Erie County Medical Center** replaced a water-cooled system with an air-cooled vacuum system to supply air and suction to meet the hospital's operational needs.

Lead by Example Highlight:

Reducing Water Use

***SUNY Cobleskill** improved their water distribution system and are now using low-flow equipment and fixtures. As a result, they have achieved a consistent 30% reduction in monthly water use compared to previous years.*

Water reuse measures have been implemented by several agencies which demonstrate a strong commitment to protecting a vital resource. **CUNY's Borough of Manhattan Community College**, for example, reuses grey water from the HVAC system to support operation of the cooling tower at Fiterman Hall. In addition, the **MTA** noted that most of their bus, subway and train car washing equipment is equipped with a water reclamation system that collects and reuses water during the cleaning process.

The installation of new fixtures may be easiest to justify when renovations or new construction are scheduled, or after a failure or breakdown of existing equipment. When those opportunities arise, several agencies have seized on them to move forward.

New and Noteworthy Initiatives in FY 17-18

- **NYSERDA** has discontinued watering their plants and grass, which conserves water and energy.
- The **Olympic Regional Development Authority** installed composting toilets in the lodges at Mount Van Hoevenberg and Gore Mountain, which will significantly reduce water use compared to traditional plumbing.
- **SUNY Cobleskill** significantly reduced water use. See the Lead by Example Highlight, above.

Green Infrastructure and Storm Water Management



MTA constructed the agency's third green roof, totaling 8,800 square feet, at the new Bus Command Center.

As 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 storm water runoff by mimicking natural processes to capture stormwater. Green infrastructure is much more cost effective than constructing new (or expanding existing) storm water and sewage treatment systems. Additional positive benefits include beautiful greenery, expanded wildlife habitat, improved air quality, energy savings, urban cooling and climate change mitigation.

Sustainable storm water management, an important subset of green infrastructure, uses both natural and engineered systems to manage storm water in a way that conserves, protects, and even enhances ecosystems. Practices include rain gardens, green roofs, vegetated swales, bio retention areas, rain barrels, and permeable pavement. Many examples of green infrastructure can be found on state properties.

Findings

In FY 17-18, all agencies, not just those responsible for landscaping at their facilities, reported that:

- 24% use large-scale green infrastructure practices such as forests, riparian buffers, floodplains and wetlands. Nearly 8% of agencies use these practices at all or most of their facilities.
- 25% use smaller scale green infrastructure practices to maintain or restore natural stormwater infiltration by using rain gardens, urban trees, green roofs and green walls, with 10% using these practices at all or most facilities.
- 20% use practices that reduce the use of potable water and help manage storm water by capturing and reusing rainwater for a variety of purposes including landscape maintenance and vehicle washing. 5% of agencies report using these practices at all or most facilities.

Savings and Costs

Over the past nine years, most agencies reported a reduction or no change in costs due to implementing storm water management measures. Less than a handful reported an increase in costs. For more details, see the chart on page v of this report and the GreenNY Fact Sheet on “[Saving Green](#).”

Over the past two years, most agencies reported a reduction or no change in costs due to implementing green infrastructure practices. Less than a handful reported an increase, and the number of agencies reporting an increase decreased from 5% in FY 16-17 to 1% in FY 17-18. Agencies reporting savings increased. For more details, see the chart on page v of this report and the GreenNY Fact Sheet “[Saving Green](#).”

- **OGS** reports that green infrastructure can be used to save money. The Empire State Plaza contains areas of grass, reflecting pools, and white marble, which collectively cool the Concourse area during the summer and reduce energy demand.

Success Stories, Challenges and Lessons Learned

Parks reports that harnessing stormwater as a resource (for watering, etc.) reduces the use of municipal water, which saves money. Those savings can then be directed to additional improvements such as rain gardens, permeable pavement, and reusing waste water for golf courses and equipment washing. **Development Authority of the North Country**, which has been investing in sustainable storm water practices such as forebays, vegetated filters and storm water ponds since 2014, reports that these structures continue to contribute to noticeable improvements in the runoff discharged to neighboring streams.

Lead by Example Highlight:

Green Roof in the Big City

MTA constructed the agency's third green roof, totaling 8,800 square feet, and installed permeable pavement at the new Bus Command Center. Storm water management efforts include rainwater collection from the roofs of three bus depots, resulting in the reuse of over 290,000 gallons of rainwater.

New and Noteworthy Initiatives in FY 17-18

- **MTA** has significantly reduced water use and storm water runoff through the construction of green roofs, permeable pavement, and rainwater collection systems. See Lead by Example Highlight, above.
- **DEC's Five Rivers Education Center** received LEED Platinum Certification. Sustainable storm water practices such as porous pavement, rainwater harvesting, and grey water reuse were incorporated into its design.
- **Parks** renovated the parking lot at Sunken Meadow Park to include a variety of storm water management practices including rain gardens, permeable pavement, filtering, and bioretention.
- **DANC** is constructing additional forebays and storm water ponds with aquatic benches that will act as biological filters to mimic natural wetlands at their Solid Waste Management Facility in Rodman, NY.

Sustainable Landscaping



CUNY Macaulay Honors College installed beehives to support pollinators around the campus.

Sustainable landscaping enhances the beauty of a property while responding to a variety of environmental concerns such as water and energy use, erosion, soil degradation, and providing needed habitat for wildlife and pollinators. With the adoption of sustainable landscaping practices, the green space associated with the array of facilities operated by New York State is serving a greater purpose: protecting the environment and natural resources, all while saving money and reducing maintenance time.

Conventional landscaping requires watering and fertilizing, and sometimes, annual re-planting and the application of pesticides. Non-native plants are also frequently used, which can lead to the inadvertent planting of invasive species. Sustainable landscaping uses native, low-maintenance plants that are adapted to New York's specific climate conditions. Perennial plants require less time to establish each season than annuals and can be chosen to be more drought tolerant than traditional landscaping plants. These all save water and reduce staff maintenance time. Sustainable landscaping also creates learning opportunities for New Yorkers and showcases the beauty of our native species.

Lead by Example Highlight:

Queen City Native Plantings

SUNY Buffalo has installed a native wildflower garden designed to mimic the area's natural wetland meadow and provide habitat for pollinators as part of an ongoing project to restore the shoreline of Lake LaSalle and mitigate further erosion by building a living shoreline.

Findings

In FY 17-18, all agencies, including those not responsible for landscaping at their facilities, reported that:

- 40% use practices that preserve or enhance soil (e.g. creating wind breaks or using compost made on site) at all (7%), a majority (4%) or some (29%) of their facilities.
- 42% use practices that preserve or maximize the use of native vegetation to support pollinators and reduce water, energy, and toxic chemical use, such as low- or no-mow policies, at all (7%), a majority (6%), or some (29%) of their facilities.
- 36% plant xeric, native, or pollinator-friendly plants at all (9%), a majority (7%), or some (20%) of their facilities.
- 32% implemented green infrastructure, sustainable storm water and landscaping practices in the design and construction of new facilities at all (9%), a majority (11%) or some (12%) of their facilities, while a comparable number, 33%, implemented such practices when renovating existing facilities (all: 9%; a majority: 7%; or some: 17%).

Savings and Costs

On average over the past nine years, of agencies that contract for landscaping or manage it themselves, most reported a reduction or no change in costs as a result of implementing sustainable landscaping. Less than a handful reported an increase in costs. For more details, see the chart on page v of this report and the GreenNY Fact Sheet on [“Saving Green.”](#)

Success Stories, Challenges and Lessons Learned

Seven agencies reported developing pollinator gardens or other support for pollinators. Three agencies reported installing riparian buffers to stabilize landscapes from erosion to reduce the need of the ecosystem to constantly adapt to changing conditions. Both kinds of projects can also incorporate native species to restore an area’s natural habitat. For example, **SUNY Buffalo** has installed a native [wildflower garden](#) designed to mimic the area’s natural wetland meadow see “Lead by Example Highlight” on page 29 of this report.

As with other types of projects, it is challenging to implement sustainable landscaping practices in space that is leased from or managed by third parties. **SUNY Cortland** reports that traditional views of what constitutes beauty can also pose challenges. Some alumni and visitors have expressed their view that the campus’ no-mow areas should have a more manicured appearance. The bold adoption of sustainable landscaping [at New York State facilities](#) is leading the way to broader cultural acceptance of landscapes that protect native plants and pollinators.

Agencies should be aware that sustainable landscaping, especially when using native species, often requires an adjustment in maintenance, such as less frequent watering, and a caretaker that knows how to care for such plants. Resources on design and maintenance of sustainable landscaping can be found on the [GreenNY](#) website.

New and Noteworthy Initiatives in FY 17-18

- **CUNY Macaulay Honors College** installed two beehives to support pollinator populations in and around the campus.
- **Lehman College** added compost to low-lying planted areas that are waterlogged during rain events. This improved absorption and retention, reduced the need for watering, and improved soil condition and fertility.

Buying Green



Green products, featured at the annual OGS GovBuy event, perform well and are competitively priced compared to their conventional counterparts.

New York State continues to be a national leader in environmentally preferable purchasing by using aggregated spending to procure competitively priced green products. In April 2018, New York earned a 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.

In general, 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](#).

Purchasing Recycled Paper

Paper is an essential commodity purchased in large quantities by the 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 nine fiscal years, broken out by percentage of recycled content.

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%
	36	14-15	64%	140,792	\$4,354,301	\$31	55%
	40	15-16	66%	123,821	\$4,202,536	\$34	57%
	39	16-17	64%	97,747	\$3,243,611	\$33	52%
	45	17-18	65%	88,756	\$3,097,998	\$35	46%
30%-99% Recycled	43	09-10	61%	110,028	\$3,803,229	\$34.5	30%
	32	14-15	57%	83,527	\$2,739,832	\$33	35%
	39	15-16	64%	78,438	\$2,402,276	\$31	32%
	30	16-17	49%	67,859	\$1,931,818	\$28	30%
	36	17-18	52%	80,732	\$2,544,265	\$31.5	37%
<30% Recycled	21	09-10	30%	81,407	\$2,665,794	\$33	21%
	16	14-15	29%	24,233	\$795,008	\$33	10%
	22	15-16	36%	21,277	\$833,689	\$39	11%
	23	16-17	38%	32,544	\$1,120,584	\$34	18%
	28	17-18	41%	38,719	\$1,165,436	\$30	17%
Total Agencies Reporting Purchases	70	09-10	N/A	351,292	\$12,789,171	N/A	100%
	56	14-15		248,552	\$7,889,141		100%
	61	15-16		223,536	\$7,438,501		100%
	61	16-17		198,150	\$6,296,013		100%
	65	17-18		208,207	\$6,807,699		100%

Key Copy Paper Findings

By far the greatest amount, and almost half (46%) of dollars spent on copy paper in FY 17-18 (\$3.1 million), went to purchase 100% post-consumer recycled content, processed chlorine-free paper. This represents a 24-percentage point increase from the 22% (or \$3.3 million) spent on such paper in FY 08-09.

65% of agencies in FY 17-18 reported buying at least some 100% post-consumer recycled content, processed chlorine-free copy paper. About two-fifths of agencies (41%) continued to purchase paper with less than 30% recycled content. Those purchases, however, accounted for only 17% of total copy paper purchased, down a percentage point from the total percentage of such paper purchased in FY 16-17, and 4 percentage points less than the 21% of such paper purchased in FY 9-10.

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 \$33.25 per box) as they did for 30-99% recycled paper (at \$30.88 per box) and for copy paper with less than 30% post-consumer recycled content (at \$34.00 per box).

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%
	20	14-15	51%	183,775	\$3,622,217	63%
	23	15-16	72%	138,048	\$4,253,639	61%
	25	16-17	76%	147,803	\$3,982,996	63%
	27	17-18	39%	166,802	\$3,671,297	57%
1%-99% Recycled	22	09-10	69%	71,029	\$1,699,169	18%
	16	14-15	41%	45,275	\$1,394,914	24%
	24	15-16	75%	85,395	\$1,909,007	27%
	21	16-17	64%	59,284	\$1,730,950	27%
	21	17-18	30%	88,770	\$1,894,017	30%
Unrecycled Janitorial Paper	9	09-10	28%	90,982	\$727,420	8%
	5	14-15	13%	28,719	\$781,307	13%
	9	15-16	28%	33,188	\$814,128	12%
	7	16-17	21%	28,103	\$640,311	10%
	11	17-18	16%	36,421	\$833,064	13%
Total Agencies Reporting Purchases	32	09-10	N/A	398,150	\$9,565,211	100%
	39	14-15		257,769	\$5,798,438	100%
	32	15-16		256,631	\$6,976,774	100%
	33	16-17		235,190	\$6,354,257	100%
	37	17-18		291,993	\$6,398,378	100%

Key Janitorial Paper Findings

57% of dollars spent on janitorial paper in FY 17-18 (or approximately \$3.7 million) went to purchase 100% recycled content paper. This amount represents a 23-percentage point increase from the 34% (or \$1.2 million) spent on such paper in FY 08-09.

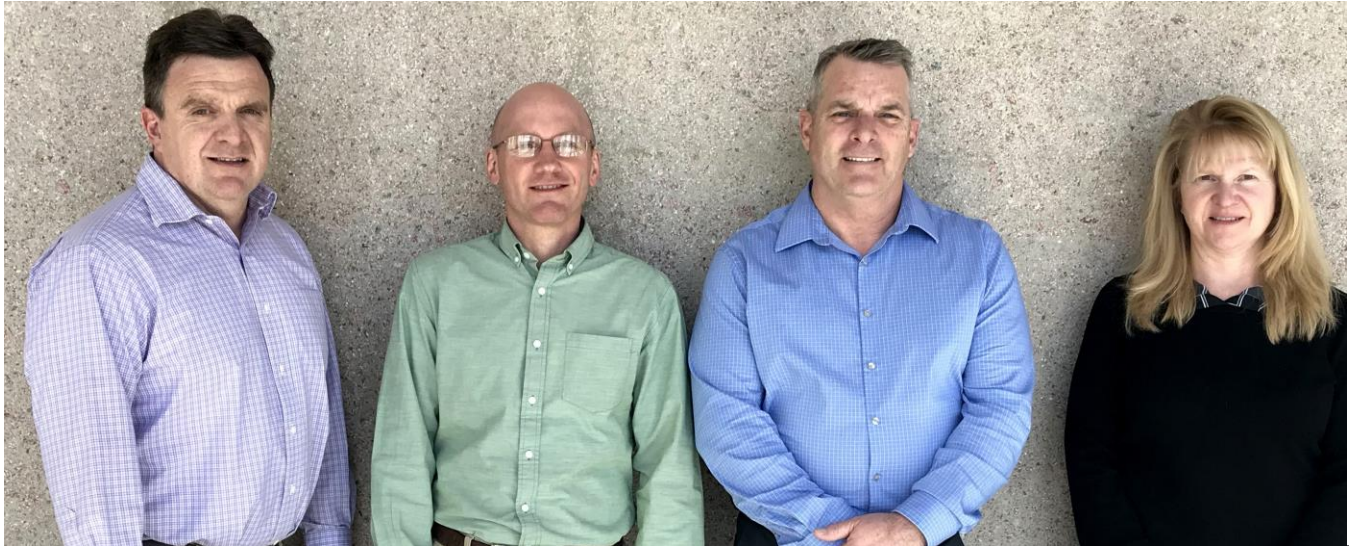
Only 11 agencies (16% of agencies reporting) continued to purchase unrecycled janitorial paper in FY 17-18. Such purchases accounted for only 13% of all janitorial paper purchases.

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 EO 4 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. 33 entities reported purchasing other types of paper in FY 17-18.

Green Specifications and Centralized Procurements



The Green Procurement Team at OGS is making it easier and more cost effective for agencies to purchase green products.

Green Specifications

In 2018, four specifications received final approval from the Interagency Committee, “Batteries (AAA, AA and D),” “Food Service Containers and Wrappers,” “Brake Pads,” and “Reusable Bags.” 11 new and amended specifications were tentatively approved, including “Adhesives,” “Floor Coverings,” “Imaging Equipment,” “Janitorial Paper,” “Lubricants,” “Paint,” “Pest Management for Indoor Spaces,” “Pest Management for Outdoor Spaces,” “Pre-Packaged Snowmelt and Deicing Products,” “State-Funded Lodging,” and “Trash Bags.”

A total of 53 specifications are currently approved for use in state procurement covering approximately 94 different commodity, service, or technology products (e.g., the “Desktop and Laptop Computer” specification covers three types of devices: desktops, notebooks (including laptops) and tablets). 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](#).

Centralized Green Procurements

OGS Procurement Services is the State’s centralized procurement office, establishing and managing over 1,500 contracts for commodities, services and technology, including many contracts containing environmentally friendly products and services. Procurement Services is dedicated to helping customers meet their green procurement goals by providing environmentally preferable purchasing contracts which are driven by five major directives:

- The New York State Green Cleaning Law (State Education Law § 409-i)
- Executive Order No. 4 (Green Procurement and Agency Sustainability)
- Executive Order No. 18 (Eliminate State Purchases of Bottled Water)
- Executive Order No. 142 (Diversify Transportation Fuel and Heating Oil in State Vehicles and Buildings)
- Executive Order No. 166 (Redoubling New York’s fight Against Threats Posed by Climate Change)

Green Procurement Team

Procurement Services established a new Green Procurement Team in April 2017 to develop green contracts, identify green products, and help contract users find green products. In FY 17-18 the team awarded contracts for Environmentally Preferable Lighting Products and Photovoltaic Systems, and plans are currently underway to expand offerings for solar power including the development of a periodic recruitment for Solar Power Purchase Agreements and a new solicitation for Community Solar. OGS maintains a variety of contracts that offer green products including Recycling and Trash Removal Services, Recycled Copy Paper, Wove and Kraft Envelopes, Recycled Opaque Rolls, Environmentally Preferable Cleaning Products, Floor Coverings and Motor Oil.

The Green Procurement Team also maintains a list of OGS centralized contracts and Preferred Source offerings which contain green products. Examples of key green procurements developed, issued, or maintained by Procurement Services in FY17-18 include the following:

Solar Power Purchase Agreements

In May 2017 OGS awarded a new contract for the installation of solar panels and equipment and the purchase of solar generated electricity. The contract includes six lots, including on-site and remote net metered systems, and a battery storage option for the installation of combined solar and storage projects. It provides all the documentation necessary to use a PPA and includes a model agreement that can be customized by agencies. It has nine pre-qualified vendors, and in FY 17-18 five mini-bids were released for 48 megawatts of solar capacity (four by state entities (45 mW) and one by a town (3 mW)) and bids are being reviewed. Use of the contract is likely to increase in the next few years as agencies implement projects to meet EO 166 goals.

Green Specifications Finalized in 2018

Batteries (AAA, AA and D)

This specification encourages agencies to purchase products that don't need to be powered by batteries. When a product does need batteries, agencies are encouraged to purchase a model that includes a multi-use rechargeable battery which uses Nickel Metal Halide (NiMH) chemistry, retains at least 75% of its charge after 3 years of storage, and has a minimum power rating of 2,000 mAh for AA, 800 mAh for AAA, and 8,000 mAh for D. Agencies are required to properly dispose of batteries at the end of their life, and guidelines are provided for proper storage, use and disposal.

Food Service Containers and Wrappers

This specification replaces the previously approved specification for Single Use Food Service Containers and contains revised requirements for dishware (plates, bowls, cups, wrappers, trays, take out containers, etc.). Agencies are encouraged to follow a hierarchy of dishware options with reusable dishware as the first option, compostable dishware second, easily recyclable dishware third, and dishware with post-consumer recycled content fourth.

The specification also requires that all covered products purchased by affected entities, offered by preferred sources, or on State contract avoid the use of perfluorinated chemicals (as defined in the specification) or polystyrene.

Electric Lamps

OGS awarded a new all green contract for Environmentally Preferable Lighting in August 2018 with a variety of energy efficient products at competitive pricing, including: lots for LED recessed troffers, high bay lighting, street lighting and wallpacks; LED T8 replacement tubes, and T8 linear fluorescent lamps and electronic ballasts. In addition, energy efficient lighting can also be purchased through the OGS contract for Industrial and Commercial Supplies. Approximately \$1.0 million dollars of EP lighting products were purchased through these contracts.

Electric Vehicle Supply Equipment (EVSE) and Network Services

In November 2018 OGS awarded a new piggyback contract for electric vehicle charging stations. This contract offers network and non-network electric vehicle charging station hardware (including Level 1, Level 2 and DC Fast Charge equipment) and services such as site assessment and preparation, installation, maintenance, repair and network services.

Photovoltaic Systems

In December 2018 OGS issued a new contract for Photovoltaic Systems which includes improved offerings for installation and design services in addition to solar products such as solar panels, packaged photovoltaic systems and solar powered street lights. OGS has offered solar powered photovoltaic systems through its contracts since 2009, and sales average approximately \$1.3 million dollars annually.

Microcomputer and Related Systems

Since 2008, New York government entities have purchased almost 1.7 million microcomputers that meet an EPEAT Gold "Plus 6" standard – meaning the products meet all criteria for the reduction of toxic materials. Between July 2017 and June 2018, over \$93 million was spent on the purchase of green computers (including tablets, desktops, displays and notebooks) through a combination of aggregate buy and user-issued mini-bids.

Number of EPEAT Registered Microcomputers Purchased, 2008-2018				
	EPEAT Silver	EPEAT Gold	Spend* (millions of \$)	Savings** (millions of \$)
April 2008 through March 2009	418,915	–	\$154.9	\$130.9
April 2009 through June 2010	47,369	405,964	\$188.3	\$143.8
June 2010 through January 2012	7,606	194,530	\$127.8	\$130.9
February 2012 through January 2014	–	569,106	\$199.8	\$188.4
April 2014 through December 2015	–	235,156	\$109.3	\$121.8
January 2016 through June 2017	–	115,069	\$101.7	\$63.7
July 2017 through June 2018	37,503	172,837	\$93.2	\$74.6
Totals	511,393	1,692,662	\$975.0	\$854.1

Notes: *Spend represents the total amount spent by users of the aggregate buy program. **Savings represents the difference between the price of the computers purchased through the aggregate buy compared to the prices on the state contract.

Summary

In FY 17-18, total sales for green products on state contract were approximately \$106,775,000, as shown below:

Amount Spent on Green Products Offered on State Centralized Contracts, FY 2017-18	
Green Product Type	Estimated Annual Spend
EPEAT Certified Computers and Displays	\$92,250,000
Recycled Paper (copy paper, opaque rolls & envelopes)	\$6,000,000
Solar Power Purchase Agreements	\$3,400,000
Environmentally Preferable Cleaning Products	\$2,000,000
Photovoltaic Systems	\$1,300,000
Lighting	\$1,000,000
Re-refined Motor Oil	\$200,000
Recycling and Composting Services	\$325,000
Carpet and Carpet Tile	\$300,000
Total	\$106,775,000

Buying Green



The annual OGS GovBuy event promotes Green Procurement for NY state purchases.

97% of agencies reporting in FY 17-18 said they review and use GreenNY procurement specifications when making purchasing decisions at least some of the time. 67% said they review and use the specifications all (34%) or a majority (33%) of the time. These rates are slightly higher than the rates reported in FY 16-17.

Top 10 Green Purchasers, FY 2017-18	
Agency	Amount
Office of Children & Family Services (OCFS)	\$15,000,000
State University of New York (SUNY)	\$10,815,877
City University of New York (CUNY)	\$4,999,563
New York State Insurance Fund (NYSIF)	\$3,001,883
Office of Parks, Recreation and Historic Preservation (OPRHP)	\$2,850,397
Westchester County Health Corporation (WCMC)	\$2,619,707
Metropolitan Transportation Authority (MTA)	\$2,070,914
New York State Thruway Authority (NYSTA)	\$611,000
Jacob K. Javits Center (NYCCOC)	\$494,088
Division of Military and Naval Affairs (DMNA)	\$482,081

Starting with last year's reporting form, agencies were asked to itemize their spending on twelve categories of products and services that meet EO 4 specifications. As a result, both the number of responses and dollar values were higher in FY 16-17 and 17-18 than previous years.

In FY 17-18, the number of respondents increased to 42 (63%) compared to 33 in FY 16-17 (50%), and the reported amount of green spending increased to over \$45 million from approximately \$33 million in 16-17.

The greatest reported expenditures were made by the **Office of Children & Family Services, SUNY, CUNY**, the **New York State Insurance Fund** and the **Office of Parks, Recreation and Historic Preservation**, who together accounted for approximately 80% of the reported spending. Reported expenditures for green purchases among the remaining entities ranged from \$38 to \$2.6 million with the total for all entities being \$45,044,324.

Green Purchasing by Product Category, FY 2017-18		
Category	Amount	Number of Respondents
Lighting	\$24,300,083	21
Computers	\$7,328,730	24
Office Furniture	\$4,017,071	22
Integrated Pest or Vegetation Management Services	\$2,854,648	10
Green Cleaning Products	\$1,733,226	25
Photovoltaic Systems	\$1,406,890	5
Re-refined Motor Oil	\$1,300,502	9
Recycling or Composting	\$887,504	19
Carpeting	\$759,726	13
Zero Emission Vehicles	\$312,363	5
Other	\$82,609	3
Non-Chemical Pest Management Services	\$60,972	10
TOTAL	\$45,044,324	42

Savings and Costs

Overall, data regarding the cost of green procurement is encouraging. On average over the past nine years, most agencies reported a reduction or no change in costs as a result of implementing green procurement practices. A smaller number reported an increase in costs. For more details, see the chart on page v of this report and the GreenNY Fact Sheet on "[Saving Green](#)."

Success Stories, Challenges, and Lessons Learned

Long-term success depends on changing the culture and making it as easy as possible for procurement staff to routinely consider the sustainability of goods and services during the purchasing process. The most important recent shift in this direction is OGS' establishment of the Green Procurement Team, dedicated to making it easier and more cost effective for agencies to purchase green products. Other important changes are the inclusion of green purchasing into the routine training offered by OGS to purchasing agents and inviting vendors of recycled and remanufactured products to promote their offerings at "[GovBuy](#)," the annual conference for state and municipal procurement officers.

Finding Green Products that Work Well at an Affordable Price

Most statewide contracts are not exclusively green, and it can be time consuming for purchasers to navigate offerings and identify green products. As consumer demand has grown, the market has responded, and more green products with high levels of performance are available than ever before. Unfortunately, however, some companies have resorted to “greenwashing,” which is the making of green claims that are intentionally misleading or provide too little information to allow meaningful comparison. A number of agencies continue to report that they find it challenging to purchase green products cost effectively.

- **NYPA** has responded to this challenge by creating a supply chain sustainability working group to develop metrics, targets, and sustainable criteria to be integrated into the RFP process and used to score bids. Working with the Electric Utility Industry Sustainable Supply Chain Alliance, they also upgraded the sustainability survey vendors must complete when submitting bids. They plan to distribute the survey annually and use the results to benchmark suppliers.

OGS and DEC are working together to roll out a “GreenNY icon” to label green products that meet EO 4 approved specifications in the e-catalog. Initially, all products that are on 100% green contracts and preferred source offerings that meet EO 4 specification criteria will be labeled with the GreenNY icon. Eventually, the goal is to have all products that meet an EO 4 approved specification labeled with a GreenNY icon. The ultimate goal is to eliminate the identification of products that do not meet EO 4 specifications as “green” by vendors. Over time, this will significantly increase the ability of agencies to easily find EO 4 compliant green products, as well as help to reduce greenwashing.

Tracking Green Procurement

Few agencies have a system for tracking green purchases, and the Statewide Financial System (SFS) does not currently track them. Establishment of a new “GreenNY” icon for the e-catalog, as described above, will make it much easier for the State and individual agencies to track green products. Currently, the tracking system used by the **Development Authority of the North Country** system remains the best model for other agencies to follow.

Recycled Paper

OGS’ issuance of statewide contracts for 100% post-consumer recycled content copy paper and 100% janitorial paper has kept prices competitive, especially over the past four fiscal years, as documented by the data presented in this chapter. To take advantage of the best pricing opportunities, agencies are encouraged to shop around and provide as much lead time as possible, especially for large purchases.

New and Noteworthy Initiatives in FY 17-18

- As part of a restack, the Department of **Financial Services** worked with multiple dealers to purchase green furniture for its New York City offices.
- **NYSERDA** reduced paper purchased 27% by weight compared to FY 16-17 and spending 13%. Overall, they have reduced paper purchasing 46% since FY 09-10 and spending 31% since FY 10-11.
- **OPWDD** used the less-than-truck-load offerings on state contract to purchase 100% recycled copy paper at a competitive price. They also found non-bulk quantities of 100% on contract at a competitive price.
- **Financial Services** reduced their purchase of virgin copy paper to \$108 in FY 17-18 (compared to \$14,660 in 16-17) by prioritizing 30% recycled paper. It also reduced annual spending on copy paper by \$24,000 due to paper saving methods.
- **SUNY Cortland** enhanced its “Student Print Management Program” by contracting with “PrintReLeaf,” a service whose software platform, Print Relief Exchange (PRX), connects enterprise printer environments to a network of global reforestation projects. Through PRX, the college is achieving a paper-neutral footprint, reducing environmental impact, strengthening their commitment to sustainability, and marketing that commitment both internally and externally.
- **CUNY** campuses started a program to increase staff awareness of the benefits of green products and how to purchase them cost effectively.

Restricting the Use of Bottled Water



Parks has installed bottle refilling stations at multiple locations, including this one at Jones Beach State Park.

Background

EO 18 directed 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 within 180 days of May 5, 2009,” with each agency’s goal being “to eliminate such expenditure by May 1, 2010.” 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.”

Findings

Agency reports for FY 17-18 continue to indicate excellent compliance with the directives of EO 18. All 39 executive agencies required to comply with EO 18 report compliance. In addition, of the 30 authorities and other entities not covered by EO 18, 24 (80%) nonetheless adopted the goal of eliminating the purchase of bottled water and report compliance, a four percentage point increase from last year’s compliance rate of 76%.

Fifteen executive agencies covered by EO 18 and 14 entities not covered by EO 18 (but nonetheless in compliance) said they require exemptions to continue purchasing bottled water in one or more locations. Entities with large centralized offices served by reliable municipal water supplies generally reported no need for exemptions. Most documented exemptions were those that required emergency water supplies, bottled water for employees working in or traveling to remote locations where potable water is unavailable, or a lack of potable water in a building due to local infrastructure.

In brief, the report for FY 17-18 continues to document that the executive agencies covered by EO 18 have virtually eliminated the purchase of bottled water.

Savings and Costs

On average over the seven years since reporting began (between FYs 11-12 and 17-18), a significant number of agencies, authorities and other entities reported saving money by eliminating the purchase of bottled water, and most of the rest reported no change in costs. Only one agency, **NYPA**, reported an increase in costs, due to the installation of 50 new water coolers. For more details, see the chart on page v of this report and the GreenNY Fact Sheet on [“Saving Green.”](#)

Most agencies report that the bulk of their savings were realized in the first year of implementation, and that spending isn’t declining further because they are either spending no money or spending only on exempt uses, which don’t change significantly on an annual basis. **SUNY Buffalo**, however, reported that their efforts to reduce the use of bottled water saved \$9,000 this reporting year.

Although EO 18 does not require agencies to quantify their cost savings, entities are asked to report the amount they have spent on bottled water purchases over the past year. In FY 17-18, an estimated \$390,000 in State funds were reportedly spent on bottled water, an increase of \$241,000 over the \$149,000 in spending reported in FY 16-17.

A large portion of the increase is due to a medical center which had to spend approximately \$167,000 on bottled water in FY 17-18 compared to no spending the previous year. A Legionella outbreak compromised their drinking water supply and led to tap water restrictions, making the use of bottled water a necessity. A significant portion of the rest of the difference (\$30,000) is from more accurate reporting by agencies with longstanding exemptions and agencies that reported for the first time this year. The bulk of the remainder is from increases by four entities of \$24,000 or less.

Despite these increases, two agencies achieved significant reductions in spending—**NYPA** (\$18,000) and **Parks** (\$5,000)—through projects described further below.

Challenges and Success Stories

The biggest challenge faced by agencies is the unavailability of potable water. 16 entities (up from 12 in FY 16-17) said that potable water was unavailable at some of their facilities due to infrastructure issues, including **Parks**, the **Bridge Authority**, **Canal Corp**, and **CUNY**. Many are continuing to upgrade their water systems.

For agencies whose employees spend a lot of time in remote areas where potable water is unavailable, bottled water is a necessity. These include transportation authorities (**CDTA**, **MTA**, and **NFTA**), utilities (**NYPA**), and **Military Affairs**.

11 agencies continue to purchase bottled water for emergency preparedness. The Department of **Financial Services** only replaces the water bottles in their “emergency go bags” every two years. The Division of **Homeland Security and Emergency Services** purchases bottled water for the Disaster Stockpile program.

Five agencies purchase water to meet the special needs of clients. Examples include the **Office of Children and Family Services**, which provides water to detained youth during transport; as well as **OMH**, and **Erie County** and **Westchester County Medical Centers**, which provide bottled water to patients as prescribed by a doctor.

Only six entities not covered by EO 18 continue to purchase bottled water for uses not exempt under the Order, down from seven in FY 16-17. These concerns often stem from a lack of information – the more people know about the quality of the tap water available to them, the more likely they are to drink it. Filling stations with filters can address such concerns.

Another common non-exempt use is providing bottled water for events, meetings, and speakers. For example, the **United Nations Development Corporation** has eliminated most of its bottled water purchases, but still provides bottled water for meetings at its offices. They do, however, encourage guests to use tap water and water fountains.

While **SUNY** and **CUNY** are not required to comply with EO 18, many of their campuses have installed bottle filling stations to reduce the purchase of bottled water by students. These efforts go well beyond the mandate of EO 4 and a number are highly innovative:

- **SUNY New Paltz** has ended the sale of bottled water in their dining facilities.
- **SUNY Stony Brook** implemented a Fill it Forward program in 2018 in partnership with Cupanion® that has already prevented the landfilling of 566,426 disposable water containers, given 2.7 million cups of water to those in need, and avoided 2,000 pounds of plastic pollution in the ocean.
- **CUNY Queen's College** will not open any new accounts for bottled water, and **Medgar Evers College** plans to eliminate bottled water use by 2020. **Hunter College** installed Quench coolers to mitigate bottled water use.

Lead by Example Highlight:

Water Coolers

***NYPA** installed 50 bottle-less water coolers attached directly to the water line at four different sites. Educational flyers about their benefits were distributed to staff, and feedback has been positive. In 2019, NYPA plans to install additional coolers at visitor centers and other facilities without potable water units.*

New and Noteworthy Initiatives in FY 17-18

- **NYPA** installed bottle-less water coolers to reduce the use of bottled water. See Lead by Example Highlight, above.
- **Parks** installed new hydration stations for the public at multiple parks, including Niagara Falls, Riverbank, Caumsett and Buffalo Harbor.
- **MTA** has replaced bottled water coolers with in-line, filtered water dispensers at the Graybar building in Manhattan during recent renovations. Dispensers were also installed in Metro North staff offices.
- The **SUNY Farmingdale** Sustainability Committee has been tasked with developing a campus wide bottled water policy in hopes to reduce the College's bottled water usage.
- **NYSERDA** installed in-line water filtration with hot/cold dispensers.
- **ORDA** installed drinking fountains that allow for the refilling of water bottles at most of their facilities.

Conclusion

The agency reports compiled and summarized for FY 17-18 demonstrate continued and encouraging progress toward the adoption of sustainable practices and purchasing by New York State government. Through the leadership of Governor Cuomo, agencies continue to reduce energy use, paper use, ic chemical use, and waste. Recycling remains high, and model agencies are leading the way by generating on-site renewable energy, capturing rainwater, and managing storm water sustainably. Practices are also being adopted to protect pollinators. Through a sharpened focus on the goals of sustainability and green procurement, State agencies are continuing to innovate and achieve success.



Office of
General Services

Department of
Environmental
Conservation