



2020 ANNUAL
BUY GREEN
REPORT
FOR SAN FRANCISCO
CITY DEPARTMENTS

Prepared by the San Francisco Department of the Environment (SFE) Green Purchasing Program
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I. Executive Summary

Several San Francisco City ordinances, most notably the [Environmentally Preferable Purchasing Ordinance](#) (EPPO), require that City departments purchase only green products under certain circumstances. The EPPO requires that the San Francisco Department of the Environment (SFE) implement the ordinances' mandates, which include filing this annual report.

The COVID-19 pandemic, deployments of staff for disaster service work, and global supply chain disruptions posed special challenges to green purchasing efforts in 2020. SFE staff pursued the following projects during this period:

- New projects:
 - List of safer consumer and institutional disinfectants for COVID-19
 - Green purchasing regulations for nine product categories, three of them new
 - Online green purchasing training
 - Refrigerants
 - Solar panels (modules) and chargers (inverters)
- Ongoing projects:
 - Research an updated set of recommendations for treated wood
 - Citywide contracts for ergonomic furniture and janitorial cleaners
 - Participation in development process for Cradle-to-Cradle Ver. 4, a leading third-party environmental product certification
 - Convening the City Sustainable Purchasing Committee
 - Revising the Citywide information technology purchasing policy
 - Blocking noncompliant office and industrial supplies in online stores
 - Promoting green purchasing via the Financial Systems Project (FSP)
 - Finalization of the City Department Directors' Green Purchasing Dashboard
 - Presentations and trainings to City staff and beyond

Each year, we conduct an in-depth analysis of certain products the City purchases. For 2020, we analyzed purchases of copy paper and lighting products. Sales reports show that the percentage of compliant copy paper stayed steady between 2017 and 2020, but the total amount purchased decreased dramatically during the pandemic, from \$746,649.45 in 2017 to \$440,532.05 in 2020. In addition, there was a significant improvement in the compliance rate for lighting from 43% in 2015 to 68% in 2020, despite stricter requirements.

II. Background

History and mandate

Environmentally preferable or "green" products are less toxic, more energy efficient, more recyclable and/or compostable, have higher levels of recycled content, and have less impact on climate change than comparable alternative products. The EPPO, also known as the Precautionary Purchasing Ordinance (Environment Code, Chapter 2), was passed in 2005 and is the umbrella ordinance governing City government procurement of green products. Additionally, the Resource Conservation Ordinance (Env. Code, Chapter 5) mandates that departments maximize purchases of recycled products and the Green Building Ordinance (Env. Code, Chapter 7) mandates green purchasing requirements for interior finishes of City construction projects, including furniture, carpets, and paints. SFE leads the implementation of these mandates through its Green Purchasing Program, in collaboration with the Office of Contract Administration (OCA) and other City departments.

How green product specifications are developed

SFE works with OCA and other City departments to develop environmental requirements for targeted City commodity and service contracts. These requirements range from purchasing products that meet existing standards, certifications, or ecolabels, such as Energy Star or Green Seal, to more detailed, independently developed technical specifications. In keeping with the Precautionary Principle Ordinance (Environment Code, Chapter 1), SFE seeks to prevent harm from certain products; conduct assessments of safest alternatives available to fulfill the same product function; and take a full-cost, life-cycle view of product costs and impacts.

The Green Purchasing Program seeks to develop purchasing criteria that satisfy three goals:

- Performance. Do compliant products work well? Are they durable and efficient? (Primarily addressed by product users)
- Impact. Do the products minimize impacts on worker health, public health, and the environment?
- Cost. Are compliant products cost-effective, including production, use, and disposal phases? (Primarily addressed by OCA)

Where City staff can find green products & specifications

SFE maintains the [SFApproved.org](https://www.sfapproved.org) website as a clearinghouse for compliant green products, health and environmental purchasing criteria, specifications, and other green purchasing information. Product categories in SFApproved.org are classified as either of the following:

✓ Required

For [Required product categories](#), City staff may only purchase products that meet Required specifications. Listed products meet all three goals above and usually have discounts on citywide term contracts. There are currently 34 product categories that are Required.

✓ Suggested

In product categories for which we do not yet have requirements for City purchases, SFE encourages City staff to buy products that meet Suggested environmental specifications and rate them at SFApproved.org. Ratings from City staff help determine which products should be included in future contracts. Although SFE has researched environmental impacts of these products, more work may be needed to assess product cost and/or performance. There are currently 54 Suggested product categories.

III. Buy Green Leaders Award

This year's Buy Green Leaders are staff from the Bureau of Building Repairs' Operations Yard, Maintenance Manager Scott Barlow and Floor Shop Supervisor Kevin Bird, and management and staff of the Office of Contract Administration, represented by Acting Director and Purchaser Sailaja Kurella and Assistant Director Taraneh Moayed.



Kevin Bird, BBR



Scott Barlow, BBR



Sailaja Kurella, OCA



Taraneh Moayed, OCA

Bureau of Building Repairs' Operations Yard

In 2020, Scott and Kevin helped the City push the envelope in green purchasing by participating in developing Citywide environmental requirements for resilient flooring and paints. They have been great thought partners, collaborated closely with the Green Purchasing Team, and went above and beyond to ensure that building products meet the City's environmentally preferable criteria. Scott has shown exemplary dedication and curiosity to finding healthier alternatives to traditional building products. His leadership in this space ranges broadly from flooring to roofing, and anywhere else his colleagues' health might be impacted. Recently he spearheaded the demonstration of a novel green flooring product, liquid linoleum. Kevin's exceptional leadership in flooring ensures that City staff, residents, and the environment are protected from harmful chemicals and emissions often found in these products. His partnership with the Green Purchasing Team and

collaboration with other City departments has given the Team unique insight into Departmental purchasing challenges as well as areas of growth and opportunity for the City.

Office of Contract Administration

The Office of Contract Administration has been an outstanding partner in strengthening and enforcing the City's green purchasing requirements. Through their leadership, Acting Director Sailaja Kurella and Assistant Director Taraneh Moayed have taken multiple steps to integrate green purchasing into the culture of OCA, such as:

- 1) Increased routine communication on the topic with OCA staff;
- 2) Ensuring Purchase Orders issued against catalogue-style Term Contracts automatically include language advising City staff and suppliers about SFE's program requirements with respect to specific product categories; and
- 3) Incorporating SFE's [Green Purchasing Requirements](#) into OCA's new citywide solicitation templates, including Requests for Proposals and Invitations for Bids. Furthermore,

We appreciate the Buy Green leaders' efforts to strengthen and support the green purchasing programs in their departments and citywide, and their dedication to continuous improvement.

IV. New Projects

List of safer disinfectants for COVID-19, with local suppliers

Most common disinfectants contain chemicals that can cause asthma. The US Environmental Protection Agency's (EPA) Design for Environment (DfE) is the only program that systematically reviews disinfectant ingredients for health and environmental impacts. Currently there are relatively few DfE registered disinfectants, especially for the consumer market.

Recognizing the immediate demand for safer disinfectants, SFE created its own resource. First staff devised a simple [hazard screening approach](#). SFE then knit together data from the US EPA "List N" of disinfectants approved for COVID-19 with lists of product names available in California per Department of Pesticide Regulation databases. Next, SFE researched product ingredients from manufacturer websites. Finally, [SFE shared safer disinfectants, cleaning tips and suppliers for consumers and custodians](#) on a dedicated web page. In addition, SFE plans to update its 2013 report, "[Safer Products and Practices for Disinfecting and Sanitizing Surfaces](#)," in the upcoming year.

Green purchasing regulations

In 2020, SFE led an effort to update and expand its [green purchasing regulations](#). About 80 City staff from a dozen departments and several nonprofits participated in the revisions, which resulted in new or updated requirements for nine product categories. These new regulations include three new categories:

- **Latex paints and primers** that emit little to no volatile organic compounds (VOC) and do not contain chemicals of concern.
- **Resilient flooring** that is less-toxic and does not require toxic cleaners like strippers, sealants, or floor finishes.
- **Upholstered seating** that does not contain five "hazardous handful" toxic chemicals: antimicrobials, flame retardants, formaldehyde and other VOCs, polyvinyl chloride (PVC), and poly- and per-fluorinated alkyl substances (PFAS).

SFE convened multiple meetings of City staff "Green Teams" to review the draft regulations. These meetings involved discussions of performance, aesthetics, and cost issues, and were intended to determine whether the compliant products meet the needs of City users.

We also revised the following six 2013 regulations to reflect updates in ecolabels and standards:

- Cleaners (dish soaps, floor finishes and strippers, furniture polish, general purpose cleaners, hand soaps, odor control, other cleaners, toilet deodorizers (hangers, pucks)
- Compostable plastic bags
- Electronics (computers and monitors, imaging equipment, servers, televisions and large digital displays)
- Janitorial papers (facial tissue, paper towels, toilet seat covers, toilet tissue)
- Lighting equipment (including fixtures, ballasts and lamps)
- Office supplies (white copy paper and other paper: adding machine tape, binders, calendars, colored copy paper, envelopes, file folders)

Refrigerants

Addressing refrigerants is in the top 10 list of climate solutions by Project Drawdown, a nonprofit resource for climate issues. Hydrofluorocarbon refrigerants (HFCs) are greenhouse gases (GHGs) with global warming potentials that can be thousands of times higher than carbon dioxide. Most GHG emissions happen during maintenance and disposal of appliances, which include refrigerators, air conditioning, vending machines and water coolers.

In 2020, SFE was one of the first organizations in the US to sign the Climate-Friendly Cooling [pledge](#), which is a project of the Sustainable Purchasing Leadership Council and Institute for Governance and Sustainable Development. The pledge was announced at the United Nations Meeting of the Parties to the Montreal Protocol. SFE pledged to buy and promote products that don't contain high global warming potential chemicals and provide resources, such as lists of preferable options, to City departments, green businesses, and others. SFE is also promoting climate-friendlier refrigerant products by adding goals to San Francisco's Climate Action Plan (CAP) and Green Business checklist for grocers.

Solar panels (modules) and chargers (inverters)

Anything with solar panels, such as phone chargers, lamps, and panels can have toxic materials like lead, cadmium telluride (CdTe), or copper indium gallium selenide (CIGS). Following up on its participation in the development of the first international standard solar photovoltaics standard (NSF/ANSI 457-2019) in 2019, SFE created a page for [solar panels \(modules\) and chargers \(inverters\)](#) that are less-toxic, more energy-efficient, longer-lasting and recyclable. The page provides information on devices that meet the EPEAT solar photovoltaics standard, Cradle-to-Cradle certification, and Silicon Valley Toxics Coalition Solar Scorecard.

Online green purchasing training

Recognizing the ongoing need for training of City staff, SFE created an online training video on green purchasing in 2020. The video will be distributed as a required training to specific groups of City staff via the SFLearn system. SFE is currently working with the Controller's Office to finalize distribution of the training in 2021.

V. Ongoing Projects

Convening the City Sustainable Purchasing Committee

The Green Purchasing Program continued convening this interdepartmental working group to work on citywide sustainable purchasing priorities, initiatives, process improvements, and communications. SFE hosted two meetings in 2020. In Spring 2020, SFE prioritized asking how to help City staff during the pandemic and sharing safer disinfectants and suppliers for COVID-19. In the Fall of 2020, SFE featured talks on limiting exposure to toxics in City offices by Micki Callahan, former Director of the Department of Human Resources, taking action against PFAS and flame retardant chemicals, new green purchasing regulations, and climate-friendly refrigerant products.

Creating a Directors' Buy Green Performance Dashboard

An independent review of the Green Purchasing Program conducted in 2018 recommended the creation of an annual progress report or dashboard for City department directors. SFE collaborated with the City Sustainable Purchasing Committee in 2019 to lay the groundwork for this project, and in late 2020 was able to begin creating this dashboard using Microsoft PowerBI. The purpose is to facilitate departments' progress in green purchasing by providing metrics on green product purchases to department directors. We anticipate rolling out the dashboards in mid-2021.

Researching ergonomic furniture, janitorial cleaners

SFE has supported OCA and other City departments in identifying [compliant ergonomic furniture](#) on the existing citywide contract. SFE and OCA also worked with City custodians to update health and environmental requirements for a new janitorial cleaning product contract; this contract is still pending release.

Updating the City Green Technology Purchasing Policy

In 2008, San Francisco became the first City in the nation to require EPEAT-Gold registration for all of its computer purchases. The EPEAT registry, managed by the Global Electronics Council, lists products that are less-toxic, more efficient

and more recyclable. In 2019, SFE worked with the SF Committee on Information Technology (COIT) to update the Citywide IT purchasing requirements for servers, computers and monitors, imaging equipment, televisions, and large digital displays. The 2019 policy required adherence to a new EPEAT standard for computers and monitors (IEEE 1680.1-2019) that is substantially more rigorous than the previous EPEAT standard. Relatively few EPEAT-Gold products were available initially, so SFE and COIT lowered the City's 2019 computer purchasing requirements to EPEAT-Bronze while manufacturers rolled out new products meeting the more rigorous requirements. By late 2020 there were significantly more EPEAT-Gold registered products; SFE surveyed City IT managers asking whether the expanded offerings EPEAT-Gold level products met their needs. The response was positive, allowing SFE to recommend bumping the City's purchasing requirement back up to EPEAT-Gold.

In response to City staff requests, SFE also compared another third-party ecolabel, called TCO Certified, to the EPEAT standards, and found the two to be substantially equivalent. As a result, SFE recommended in 2020 that TCO-certified computers and displays also qualify for City purchases. Finally, in response to COIT inquiries, SFE researched the availability of more sustainable packaging options for IT equipment, and used its findings to recommend a new sustainable packaging policy. The revised policy – including EPEAT-Gold, TCO, and the packaging policy - was passed by COIT in early 2021.

Blocking noncompliant office supplies in online stores

One of the most efficient and effective ways to steer City staff to buy green is for suppliers to block noncompliant products in online stores used by City departments. Using this approach, City purchasers are not burdened with checking purchasing requirements and effectively only see compliant products. SFE has used this approach for [office supplies](#) and industrial supplies on a small scale for many years, but since 2016 has worked extensively with OCA and the current office supplies supplier to limit SFE's role to spot-checking key product categories to ensure that the supplier blocked noncompliant items. The results have been inconsistent; SFE continues to work with the supplier to improve their system for meeting their contract obligation, including in-app outreach to City purchasers.

Supporting pilot projects at the Airport

In 2020, SFE started using lessons learned in its office supplies efforts to work with the City's industrial supplies vendor on a similar effort at San Francisco International Airport. The current goal is to efficiently block noncompliant products from the online catalog. With SFE support, the Airport is also pursuing an expansion of rechargeable battery use and trials with safer floor finishes.

Updating treated wood requirements

SF's Arsenic Treated Wood Ordinance (Env. Code Chapt. 13) requires SFE to create a list of safer alternatives to preservative-treated wood containing arsenic, such as ones for institutional uses (beams and timbers (glue laminate), building construction material, decking, fences, highway material, marine lumber and timbers, piles, and utility poles. SFE began researching new technologies in 2020 to update the (outdated) 2003 list. This project will be completed in 2021.

Working to strengthen the Cradle to Cradle certification

Most ecolabel organizations publish a list of products certified as meeting their requirements, making it easier for purchasers to evaluate vendors' compliance with bid requirements. When no existing ecolabels meet San Francisco's environmental or health goals, purchasers or SFE must verify compliance ourselves, and/or create lists of compliant products; these activities are highly time- and resource-intensive. SFE's carpet requirements are an example; though based on the Cradle to Cradle (C2C) version 3 ecolabel, San Francisco's additional requirements (for example, the prohibition on fluorinated chemicals) make independent verification necessary. For these reasons, in 2020, SFE provided public comments on C2C's draft version 4, suggesting a stricter future standard. The final C2C version 4 was published in April 2021, and incorporates many of SFE's key requests.

Steering City staff to buy green via the Financial Systems Project (FSP)

FSP is the City's comprehensive, citywide accounting, purchasing, and budgeting system that launched in 2018. SFE continues working with the Controller's Office to steer City staff to buy green through FSP and generate detailed reports of products purchased. This effort is fundamental to integrating green purchasing into all aspects of City purchasing. These efforts have been slowed by the extensive and often urgent competing priorities faced by FSP administrators, especially

during the pandemic. We continue to collaborate with the Controller’s Office and OCA to find opportunities to advance this work.

Delivering trainings and presentations

SFE gave nine presentations to about 200 City staff and the public on the Green Purchasing Program and its mandates, how to find compliant products, and how SFE can make it easier for them to buy green.

VI. City Green Purchasing Trends: Copy Paper & Lighting

In 2020, the Green Purchasing Team collected sales reports on City purchases of copy paper and lighting from vendors. Due to time and resource requirements, the Team generally rotates its analyses each year between different product categories.

Copy paper: Citywide compliant purchases

The City’s largest purchases of paper products consist of multipurpose copy paper (called “cut-sheet office paper”), used in printers and copy machines. The City currently purchases its copy paper from one vendor, Staples. SFE’s primary strategy for promoting purchases of compliant papers (and other office supplies) has been to block non-compliant products from the vendor website. The success of this approach has been inconsistent over the years; changes in product offerings or contracts have sometimes resulted in incorrect or incomplete product blocking. For this reason, SFE chose to measure the percentage compliance for this product category in 2020.

Citywide, 100% of colored paper and 92% of white paper complied with green purchasing regulations, which require that colored paper contain at least 30% post-consumer recycled content and white paper to contain 100% post-consumer recycled content. 91% and 87% of the paper purchased in 2017 and 2013, respectively, complied with green purchasing regulations.

In 2020, City departments purchased \$440,532 of copy paper (Figure 1). Two departments – Police and Human Services – accounted for 40% of this total, with \$87,999 and \$87,053 of purchases, respectively (Figure 2). Both of these departments performed remarkably well in purchasing papers that comply with the City’s requirements, meeting overall compliance rates of 96% (Human Services) and 99% (Police). It is also notable that the biggest paper users in normal years, such as the Department of Public Health, had much lower consumption during this pandemic year.

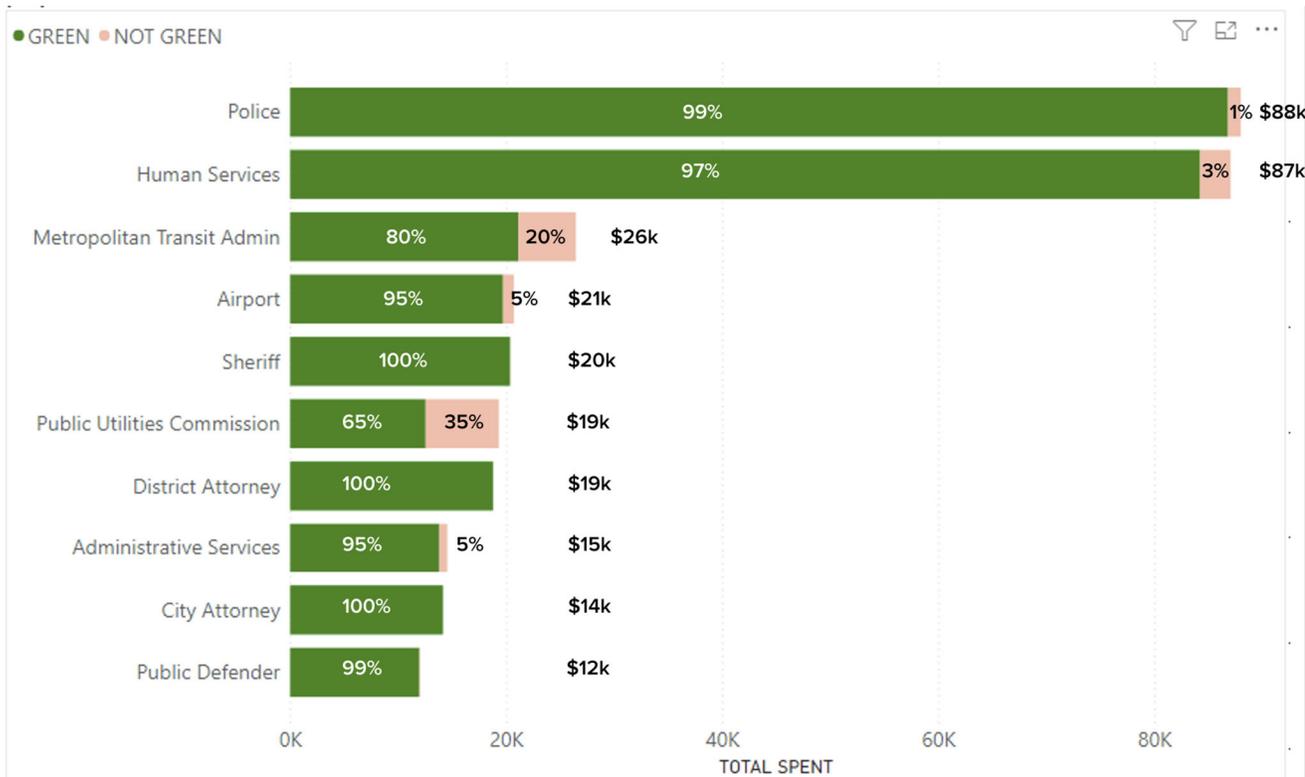
The reduction in paper consumption was significant. The City purchased \$440,530 in office papers in 2020, compared to \$746,649 in 2017¹ and \$1,062,134 in 2013. In other words, the City purchased only 60% as much paper in 2020 as in 2017 (\$306,119 less). This steep decline is certainly due to most City staff working from home during the coronavirus pandemic and the resulting need to digitize documents and processes. The overall trend since 2013 has been a steady decline in total copy paper purchasing and a slight increase in the compliance rate.

¹ Data was not recorded for colored copy paper in 2017.

Figure 1. Copy paper sales volume and green purchasing compliance, Citywide by year



Figure 2. Copy paper green purchasing compliance and volume, for the top 10 departments in 2020 (by sales volume)



Lighting: Citywide compliant purchases

As of 2020, “Green” lighting is simply defined as LED lighting. In past years, the requirements were a complex set of specifications that included low-mercury, energy-efficient, and long-life fluorescent lamps. SFE changed the requirements for a number of reasons; LED lighting 1) is significantly more energy efficient than any fluorescent lighting, 2) lasts longer than fluorescent lighting, 3) does not contain mercury, and 4) is now much more cost-effective than in the past. Evaluating “green” purchases under the previous requirements was prohibitively time- and resource-intensive. The new requirements are much simpler while setting a higher bar for performance. Because of this change, comparisons of green purchasing performance between years require some caution.

Four vendors – Buckles-Smith, Maltby, Omega Pacific Electrical Supply, Inc. and Westlite – sold lighting products to the City in 2020. Contract language requires these vendors to restrict sales of non-green products, and to submit sales data to the City. Historically, vendor-provided data has been difficult to obtain and is sometimes incomplete and/or inaccurate. This year, however, data was provided by all vendors.

In 2020, the City spent a total of \$288,540 on lighting products, which included lamps, ballasts and fixtures (Figure 3). The top two biggest-spending Departments – the Public Utilities Commission (PUC) and the Department of Public Health – accounted for 59% of this total spend, or \$169,528 (Figure 4). Of this, 88% of the Public Utilities Commission’s purchases and 6% of the Department of Public Health’s purchases were green. In 2020, the Department of Public Health purchased large amounts of non-compliant purchases of fluorescent (\$30,335.6) and HID (\$5,465.42) lamps, and a small amount of green LED’s (\$2,359.92). It’s important to recognize, however, that the Department of Public Health was disproportionately burdened by the coronavirus pandemic in 2020; the last time data was collected in 2015, the Department of Public Health purchased 69% compliant lighting products. Overall, 68% of lighting purchases made by City Departments (or \$195,770) complied with the City’s green purchasing requirements. This is a significant improvement from the City’s last reporting in 2015, which showed that only 43% of lighting purchases (or \$293,102) were compliant.

It’s important to note, however, that compliance rates differed between product subcategories (Figure 5). In 2020, 0% of the ballasts (i.e., \$28,973), 43% of lamps (i.e., \$148,278), and 100% of the fixtures (i.e., \$47,492) were compliant. Compare this to 78% of ballasts (i.e., \$72,291), 38% of lamps (i.e., \$212,976), and 34% of fixtures (i.e., \$7,834) that were compliant in 2015. Interpreting these data requires some context. Because the type of fixture installed portends the type of lighting purchases for many years to come, it is certainly good news that no non-complaint fixtures were purchased in 2020, as opposed to 2015. The low compliance in ballasts and lamps purchases is an artifact of departments working with existing fluorescent fixtures that were installed before the new requirements went into effect. Ballasts, in fact, are now noncompliant by definition, because they are only used with fluorescent lamps (thus the 0% 2020 compliance).

The bottom line: City departments bought significantly more green lighting in 2020, despite a more rigorous requirement. In coming years, SFE will focus on promoting these LED retrofits to departments still lagging in purchases of compliant lamps.

Figure 3. Lighting green purchasing compliance and sales volume, Citywide by year

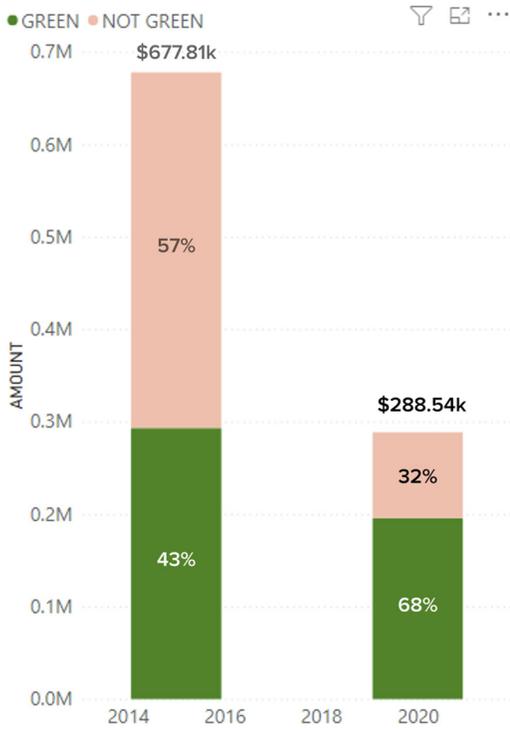


Figure 4. Lighting green purchasing compliance and volume, for the top 10 departments (by sales volume)

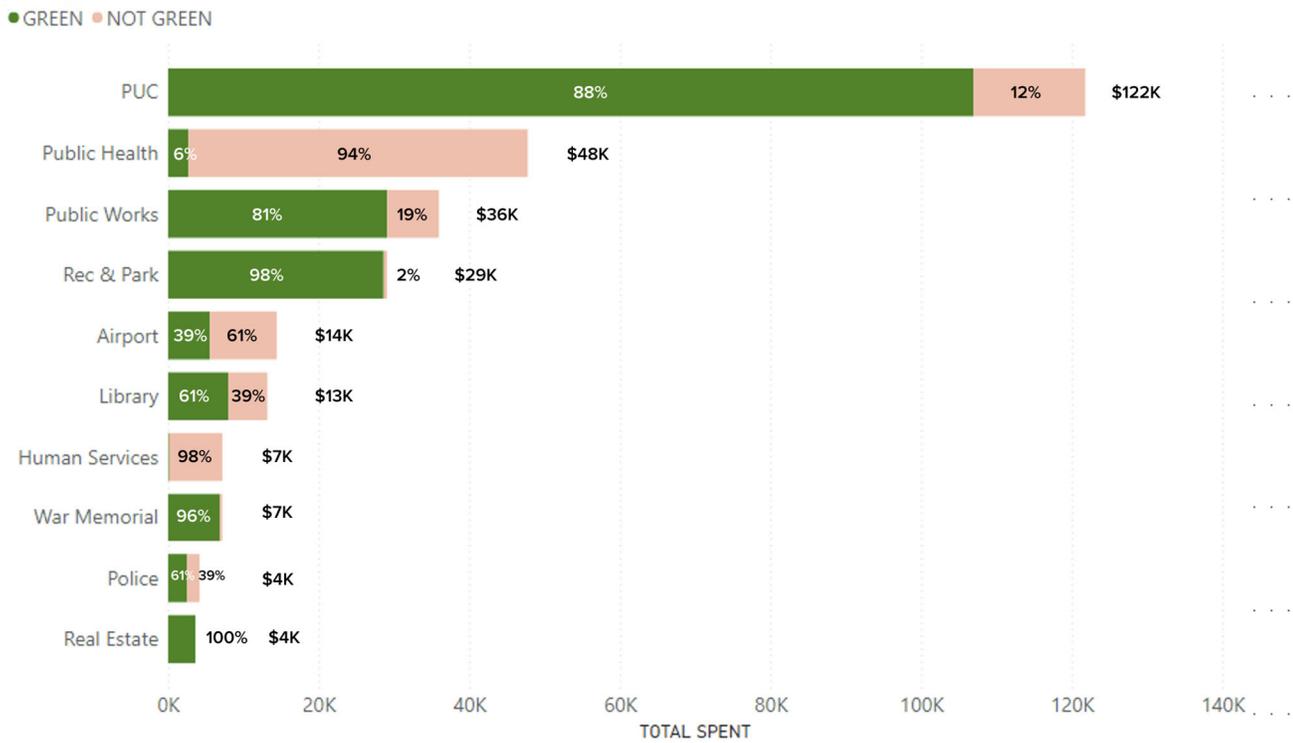
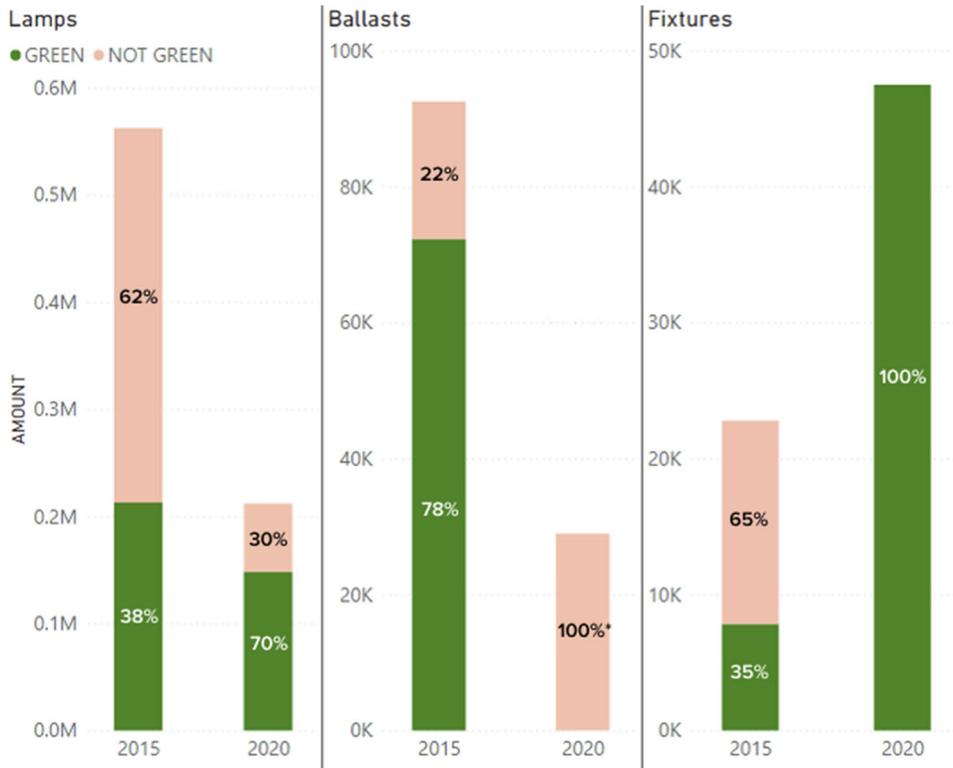


Figure 5. Lighting green purchasing compliance and sales volume, by subcategory



*As of 2020, all ballasts are considered “not green” by definition.

VII. Next steps

In the coming year, SFE’s Green Purchasing Program will focus on the following activities:

1. Update the existing purchasing requirements for carpet
2. Finalize distribution of the Directors’ Performance Dashboard
3. Update SFE’s 2013 disinfectant report to reflect new active ingredients, products, and techniques
4. Convene an “Action Team” process through the Sustainable Purchasing Leadership Council in order to promote standard specifications for office supply contracts across many collaborating agencies.
5. Continue expanding work on an industrial supplies contract, both with the Airport and Citywide
6. Continue to explore ways to guide refrigerant purchases toward products with lower greenhouse gas impacts
7. Complete new recommendations for treated wood alternatives
8. Conduct another annual revision of the Green Technology Purchasing Policy
9. Follow up on the adoption of the new resilient flooring, paint, and furniture regulations