



National Archives and Records Administration (NARA)

Sustainability Report and Implementation Plan 2019

National Archives and Records Administration
2019 Sustainability Report and Implementation Plan



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Table of Contents

Executive Summary	1
Implementation Summary: Facility Management.....	3
1. FACILITY ENERGY EFFICIENCY.....	3
2. EFFICIENCY MEASURES, INVESTMENT, AND PERFORMANCE CONTRACTING	3
3. RENEWABLE ENERGY	5
4. WATER EFFICIENCY	6
5. HIGH PERFORMANCE SUSTAINABLE BUILDINGS	7
6. WASTE MANAGEMENT AND DIVERSION	8
Implementation Summary: Fleet Management	9
1. TRANSPORTATION / FLEET MANAGEMENT	9
Implementation Summary: Cross-Cutting Operations	10
1. SUSTAINABLE ACQUISITION / PROCUREMENT	10
2. ELECTRONICS STEWARDSHIP	10
3. GREENHOUSE GAS EMISSIONS.....	11
Agency Priorities and Highlights	12
Agency Identified Priorities	12
Notable Projects and Highlights	12

National Archives and Records Administration 2019 Sustainability Report and Implementation Plan

Executive Summary

The National Archives and Records Administration (NARA) safeguards and preserves Government records and artifacts, so citizens can discover, use, and learn from our heritage. Our mission supports democracy, promotes civic education, and facilitates the historical understanding of our nation. NARA owns and operates many facilities across the United States. These facilities are open to the public, and include: Archives locations, and Presidential Libraries and Museums. Additionally, NARA leases space at other locations: Federal Record Centers, Military Records Centers, etc., containing prior years' taxes, and other important records. In all, NARA maintains these government records in >4M square feet of space.

NARA's documents and artifacts are maintained in the "stack space", a tightly-controlled environment (temperature, humidity and air quality), 24 hours per day, 365 days per year. Due to strict archival storage and display requirements (found in 36CFR, Chapter XII, Part 1234), NARA facilities are excluded from energy reduction requirements of the National Energy Conservation Policy Act, and Energy Policy Act (EPACT) of 2005; However, NARA does make a concerted effort to meet or exceed EPACT requirements. Since conventional performance measures are superseded by the NARA mission to preserve and protect important artifacts and documents the process-dedicated energy required for NARA "stack space", which represents most of the Agency's gross square footage, NARA has adopted common sense and some less common measures to sharply reduce energy, water, and GHG emissions from its buildings, thus promoting sustainability, and allowing NARA's participation in the Energy Policy Act 1992 (EPACT).

Although we are a limited-resource, small agency, with an energy intensive mission, senior management understands, and promotes the need for reducing energy, water, GHG, and are determined to meet sustainability challenges. NARA sustainability and resiliency goals are measured by requirements of Executive Order 13834, EPACT, Energy Independence and Security Act 2007 (EISA), agency standards, and LEED, and NARA has made exceptional progress to date. By meeting all of these standards early, NARA focuses on future challenges and is positioned to take advantage of new technologies and opportunities. NARA is ahead of schedule to meet its own sustainability, energy, GHG, and water reduction goals. The sustainable practices used at NARA also save millions of tax payer dollars each year, as evidenced by decreased energy, waste, and water costs. The NARA team is moving beyond energy and water reduction, and now exceeds its own waste reduction goals by implementing an on-site compost system, complementing our aggressive recycling, and acquisition strategies. Compost system compost is used on site, thus reducing the need for purchasing mulch and hauling a large portion of solid waste offsite.

Between FY 2006 and FY 2018, NARA invested ~35 million dollars in energy efficiency projects via Energy Savings Performance Contracts (ESPCs) and direct appropriations. Two early, successful projects were the \$5.7M ESPC project at Archives II and the \$5.8M ESPC project at Archives I. NARA worked directly with the Energy Services Company to develop and implement energy conservation measures at each facility. These successes led to other ESPC projects for remaining NARA-owned facilities, such as a \$7.3M (A2 Phase 2), \$4.3M (Presidential Libraries Group 1 for Eisenhower, Truman, and Carter Libraries, Ford Museum and Archives at Atlanta), \$6.8M (Presidential Libraries Group2 for Clinton, Hoover, Bush, Kennedy, Johnson, Nixon, and Reagan Libraries), and \$3M (Solar Project for Archives at Atlanta, Carter Library and Ford Museum). These projects resulted in major energy and water efficiency, GHG emissions reductions, and better sustainability summarized below.

NARA consistently demonstrates long-range sustainable strategies through FY 2018; producing significant energy (42.8%), water (37.5%), and GHG (48.9%) reductions. These aggressive efforts resulted in Federal awards in 2008, 2010, 2013, and 2015, for water, energy and GHG reduction leadership among Federal agencies. NARA uses new technologies whenever practical, and increases renewable energy use at every feasible opportunity.

NARA has maximized using onsite-generated energy. Photovoltaic systems at Clinton Library, Carter Library, Ford Museum, G. W. Bush Library, Archives I, Archives II, and Atlanta Archives now produce 2% of all energy used by NARA. Additionally, NARA purchased renewable energy credits, so 23.5% of total energy used in FY 2018, was from renewable energy sources.

National Archives and Records Administration 2019 Sustainability Report and Implementation Plan

As part of the EISA section 432 requirements, NARA performs energy audits and building condition reports at NARA-owned facilities. The audits identify many low cost/no cost Operations and Maintenance problems, and recommends cost effective infrastructure improvements to be incorporated into future renovation or capital improvement projects. Many low cost/no cost measures e.g. “sequence of operation” errors are identified and corrected immediately by on-site personnel. Other measures are incorporated into additional ESPC projects at all remaining NARA owned facilities. Most NARA-owned facilities now have up-to-date or adequate HVAC equipment. Additional ECMs may be implemented as technology advances, and needs arise to achieve greater energy and water reductions in the future. However, NARA still keeps an eye on return on investment as a big part of economic feasibility, another aspect of sustainability.

Since NARA has made significant progress in energy, GHG and water reduction goals using common sense, high ROI strategies, NARA will continue implementing the same Agency top three measures for FY2019 and FY2020:

- Continue working with our maintenance contractors to improve energy and water conservation at all facilities, based on lessons learned and latest technologies.
- Expand on-site renewable energy generation when funding is available.
- Improve internal energy audit procedures and continue exploring potential ECMs to address Agency sustainability goals.

These measures demonstrate sustained commitment by NARA, and reflect the dedication of significant staff time. These investments will help NARA meet the intent of Executive Order 13834, save taxpayer dollars, and improve our carbon footprint, further strengthening NARA’s reputation as a sustainability leader.

National Archives and Records Administration
2019 Sustainability Report and Implementation Plan

Implementation Summary: Facility Management

1. FACILITY ENERGY EFFICIENCY

FY18 Energy Intensity Progress (Btu/GSF):

42.8% reduction from FY03

3.7% reduction from FY17

FY19-FY20 Plan:

3.0% reduction in FY19 from FY18

3.0% reduction in FY20 from FY19

Implementation Status:

Between fiscal years 2006 and 2018, NARA invested ~35 million dollars in energy efficiency projects. NARA worked directly with the Energy Services Companies (ESCO) to develop and implement the following energy conservation measures (ECM) at multiple facilities. As a result, NARA was recognized with the following awards and certification: 2008 Presidential award, 2010 Presidential award, 2013 EPA Energy Star award, 2015 DOE Federal Energy and Water Management award, 2015 LEED Gold certification for Archives II building, and LEED Platinum certification/recertification at Bush Presidential Library, and Clinton Presidential Library.

Priority Strategies & Planned Actions

- Continuously monitor industry advances and incorporate whenever practical (SEL and LED lighting, etc.).
- Regularly work with CFM contractors to improve building O&M practices for emission generation and energy consuming equipment at all NARA's facilities.
- Continually monitor and fine tune building load operations and participate in utility company annual demand response programs and energy curtailment programs.

National Archives and Records Administration
2019 Sustainability Report and Implementation Plan

2. CONTINUALLY MEET OR EXCEED ENERGY INTENSITY REDUCTION GOALS TO SAVE TAX PAYER DOLLARS.EFFICIENCY MEASURES, INVESTMENT, AND PERFORMANCE CONTRACTING

FY18 Performance Contracting – Investment value and number of new projects awarded:

0/0 in FY18

FY19-FY20 Plan:

0/0 in FY19

0/0 in FY20

Implementation Status

NARA **exceeded** Agency goals in performance contracting investments. Within the last five years, (2013 to 2018), NARA invested \$21.4M in ESPC projects, which is 214% of the Agency's current annual utility costs (~\$10.0M). Based on current available technology applicable to NARA facilities, no economically feasible ECMs for near future ESPC projects are planned. As new technologies emerge, applicable ECMs will be considered.

Priority Strategies & Planned Actions

NARA has implemented ESPC projects for all agency-owned facilities. We will continue ongoing commissioning processes and closely monitor M&V procedures, and invest possible year end operating expenses funds on identified ECM's. Therefore, the agency has no commitment for the next two fiscal years.

National Archives and Records Administration
2019 Sustainability Report and Implementation Plan

3. RENEWABLE ENERGY

FY18 Renewable Electricity Use:

23.5% of total electricity in FY18

FY19-FY20 Plan:

25.0% of total electricity in FY19

25.0% of total electricity in FY20

Implementation Status

In 2015, NARA installed 335 KW additional solar/PV at Archives II - College Park Maryland, via an ESPC project. In 2017, NARA installed solar/PV at three additional locations: 502 KW at Archives at Atlanta - Morrow Georgia. 112 KW at Carter Library - Atlanta Georgia, 248 KW at Ford Museum - Grand Rapids Michigan using ESPC projects. Also in 2017, NARA installed 48 KW solar/PV at Archives I, Washington D.C., via the Capital Solar Challenge Project.

Priority Strategies & Planned Actions

- NARA will continue installing on-site renewable energy systems at all NARA sites as ROI makes it feasible and funds are available.
- NARA has been purchasing renewable energy for many years now, as well as, installing renewable energy systems on site at many locations. In FY 2018, NARA purchased 11,687,436 KWH of renewable energy credits of wind power through the GSA area-wide (REC) contract, and used a total of **23.5%** from renewable energy sources. The Agency will continue purchasing renewable-sourced energy via GSA contract in FY 2019. This strategy of purchasing renewable energy and installing new renewable energy systems will continue as opportunities arise.
- NARA will incrementally increase renewable energy purchases/consumption each year. Relying on a singular source for energy supply is not in step with long term sustainability. Installing on site renewable energy systems and purchasing renewable energy helps diversify facility energy sources, thus helping the Agency become more sustainable in the future.

National Archives and Records Administration
2019 Sustainability Report and Implementation Plan

4. WATER EFFICIENCY

FY18 Water Intensity Progress (Gal/GSF):

-37.5% from FY07

-9.5% from FY17

FY19-FY20 Plan:

-5.0% in FY19 from FY18

-5.0% in FY20 from FY 19

Implementation Status

NARA has been utilizing agency-funded and ESPC projects to reduce water consumption and ensure all ESPC projects incorporate water saving ECMs such as: retrofitting restroom and kitchen fixtures, reduced demand for cooling tower water, and upgrading landscaping water and control system at most facilities. The National Archives at College Park, Maryland has a small green roof, and a 6000-gallon storage tank to catch rain water from the roof for irrigation system. Better water efficiency in FY2018 is mainly attributed to implemented ESPC ECMs and maintenance improvements to existing systems.

Priority Strategies & Planned Actions

- Continue to install water efficient technologies and fixtures via agency-funded and /or ESPC contracts as opportunities arise. Continue using water sub meter data to analyze and identify new opportunities to incorporate new technologies and products, make repairs to leaks and inefficiencies of existing systems, and to improve overall water efficiency (e.g. Archives II location, close monitoring of high tech irrigation system). At the Reagan Presidential Library, strong water conservation measures were taken to reduce landscape water use. At the George W Bush Presidential Library, the site is designed to use minimal water by using natural plantings and Buffalo turf grass to minimize water use.
- Install appropriate green infrastructure features throughout NARA owned facilities when funds become available, and via ESPC projects. These strategies are part of the Agency's forward thinking and close adherence to LEED strategies at many LEED certified locations. Using ESPC and LEED strategies, the Agency continually monitors and evaluates water and energy use, via audits and other tools to focus on future plans and strategies for improvement. LEED certification and recertification are part of the ongoing strategies for maintaining sustainability. Any new construction or major renovation of NARA facilities requires LEED certification as part of the construction process. As new technologies and products become available, NARA staff evaluate whether the products are viable for use at NARA facilities.
- Going forward, the Agency goal is to plant locally adapted plants in landscape design, and use xeriscaping where appropriate (e.g. G. W. Bush Library). Improved efficiency at the Reagan Library is being realized by reduced water use for irrigation of landscape plants needed via less area watered and using better suited, adaptive plants.

National Archives and Records Administration
2019 Sustainability Report and Implementation Plan

5. HIGH PERFORMANCE SUSTAINABLE BUILDINGS

FY18 Sustainable Buildings Progress:

3 sustainable Federal buildings
15.8% of buildings / 47.1% of gross square footage (GSF)

FY19-FY20 Plan:

47.1% of GSF in FY19
47.1% of GSF in FY20

Implementation Status

NARA continually updates policies to include climate resilient design and management into the operation, repair, renovation, and design of new buildings. NARA currently requires new buildings to be designed for LEED Platinum, and major renovation projects of existing buildings to be certified LEED Silver. Currently, Archives II, Clinton Library, and G.W. Bush Library, are LEED certified. Archives at Atlanta is exploring LEED certification as well. The newly-leased Federal Records Center in St. Louis, MO is also a LEED certified building. The storage facility in Lenexa, KS, although not LEED certified, is a low energy use facility as it is located underground.

In the future NARA has no plans to build new Presidential Libraries, as future presidencies (Obama and beyond) are to be digital legacies. The foundation for each presidency will be responsible for any building design, construction and operation. NARA staff will only be responsible for government-owned holdings on any new Presidential Libraries.

Priority Strategies & Planned Actions

- Continue updating the Presidential Library Design Guide which incorporates the guiding principles for older libraries, museums, and archives. From 2018 on, new presidential libraries will be digital, and not under NARA control. Instead, new presidential libraries will be under the auspices of each respective presidential foundation.
- NARA still requires that all major renovations of previously built presidential libraries and museums must be designed to at least LEED Silver. LEED is still the benchmark for most sustainable buildings to date, and NARA continues to use LEED to verify sustainability, while improving processes and reduce costs by using verification of energy and water consumption by sub metering and building commissioning strategies.
- NARA will continuously incorporate green building requirements into all new construction and major renovation projects for at least the next five years

National Archives and Records Administration
2019 Sustainability Report and Implementation Plan

6. WASTE MANAGEMENT AND DIVERSION

FY18 Non-hazardous Waste Management and Diversion:

348.1 metric tons of non-hazardous solid waste generated*

<50% (estimated) sent to treatment and disposal facilities; most solid waste is sent for recycling and compost.

*not including construction and demolition waste

Implementation Status

NARA requires all O&M contractors to submit monthly reports that include all chemicals used and waste generated. Agency continually monitors recycling and when feasible, replaces toxic chemicals, when a viable, environmentally friendly alternative exists. The Agency has changed many processes in the last few years to include: near elimination of photographic developing, disposed of older chemicals no longer used at the facilities, and reclassification of facility wastewater permitting. Recycling and waste disposal, and energy and water efficiency are included in all facility maintenance contracts. Nearly 100% of construction and demolition waste is now recycled. Additionally, NARA recycles all small and medium sized batteries, including personal batteries acquired from employees.

Priority Strategies & Planned Actions

- NARA will continuously reduce waste generation through elimination, source reduction, and recycling. Recycling is required in all O&M contracts. In addition, NARA purchases items with minimal packing material, and items that are designed to be recycled at end of life. Thus reducing front end and back end waste from purchased goods.
- NARA requires all contractors to establish a tracking and reporting system for construction and demolition debris elimination. Nearly 100% of left over and salvageable materials are used or reused. Remaining C&D waste is recycled. This information is verified by weight receipts from accepting sources (landfills and reused materials).

National Archives and Records Administration
2019 Sustainability Report and Implementation Plan

Implementation Summary: Fleet Management

1. TRANSPORTATION / FLEET MANAGEMENT

FY18 Petroleum Reduction Progress (Gal):

-46.5% in petroleum fuel since 2005

-15.5% in petroleum fuel since FY17

FY19-FY20 Plan:

-10.0% in FY19 from FY18

-10.0% in FY20 from FY19

Implementation Status

Since 2009, NARA has been increasing agency alternative fuel use and reduced the fleet by greater than 40%. Agency optimizes and right-size fleet composition, by reducing vehicle size, eliminating underutilized vehicles, and acquiring and locating vehicles to match local fuel infrastructure. However, NARA is dependent on GSA Lease Program for type and availability of vehicles. Alternative energy utility vehicles are particularly in short supply.

Priority Strategies & Planned Actions

- NARA's fleet is currently 59 vehicles. NARA collects and utilizes agency fleet operational data through vehicle telematics. Agency uses GSA GPS tracking systems to track fuel use and driving habits. NARA's Fleet Manager sends out monthly reports to encourage better driving habits and reduce idle times, thus maximizing mpg.
- An ever increasing problem is with availability of E85 at a location that is a reasonable distance from NARA facilities. Often the stations are out of fuel, thus compounding fueling with E85 for these vehicles.
- As soon as battery electric utility vehicles are available (hopefully FY 2020-2021), NARA will be incorporating those vehicles into the Agency Fleet. The most likely candidates for use will be in the National Capital Area, and at the underground storage locations. Additional locations will be assessed as driving distance between charges improves.

National Archives and Records Administration
2019 Sustainability Report and Implementation Plan

Implementation Summary: Cross-Cutting Operations

1. SUSTAINABLE ACQUISITION / PROCUREMENT

FY18 Sustainable Acquisition Progress:

1.2% of contract actions and -1.2% of obligations (in dollars), for a total of \$13.9M (100% compliance) in contract actions with statutory environmental requirements.

Implementation Status

NARA has been implementing all mandated sustainable products in its revision to the procurement guide. Agency has met 100% compliance. NARA utilizes federal strategic sourcing initiatives to improve sustainable acquisition requirements. NARA is 100% compliant on contract actions, but due to budget cuts, dollars spent are less than the prior FY, so obligation percentage is negative.

Priority Strategies & Planned Actions

- NARA will continue to include and mandate contract sustainability requirements and monitor contractor performance and reporting per recommendations of the Sustainable Acquisitions and Material Management (SAMM) working group.
- NARA will continue to ensure contractors submit timely annual reports of their Bio-preferred and Bio-based purchases when performing work on NARA's behalf per current SAMM recommendations .
- Agency will continue to maintain 100% compliance. However, NARA cannot control allocated funding, so in spite of 100% compliance on contract actions and contracts awarded, dollar amounts will fluctuate between years.

2. ELECTRONICS STEWARDSHIP

FY18 Electronics Stewardship Progress:

100.0% of newly purchased or leased equipment met energy efficiency requirements

100.0% of equipment with power management enabled*

100.0% of electronic equipment disposed using environmentally sound methods

**excluding exempted equipment*

Implementation Status

NARA has been implementing all mandated sustainable products in its revision to the procurement guide. Agency has met 100% compliance. NARA utilizes federal strategic sourcing initiatives to improve sustainable acquisition requirements. NARA utilizes the GSA electronics stewardship program for disposal of all waste electronic equipment (e.g. printers, monitors, CPUs, scanners, phones, iPads, etc.).

Priority Strategies & Planned Actions

National Archives and Records Administration
2019 Sustainability Report and Implementation Plan

- NARA will continue to include and mandate contract sustainability requirements as well as monitoring contractor performances and reports.
- NARA will continue to dispose of all electronic equipment in an environmentally responsible manner, utilizing several of the authorized R2 recyclers.
- NARA is mandated by an internal process of request and approval (for each purchase) to meet 100% compliance with Energy Star and EPEAT requirements.
- Currently, NARA uses a software that shuts down computers at night when not in use. Patches and updates occur immediately prior to next business day, to reduce energy use.

3. GREENHOUSE GAS EMISSIONS

FY18 Scope 1&2 Greenhouse Gas (GHG) Emissions:

-48.9% from FY 2008

-15.1% from FY 2017

Implementation Status

NARA exceeded all prior Agency energy and GHG reduction targets from previous administrations. Practices and operations for NARA facility and energy managers have not changed as NARA conducts energy and sustainability training annually. In addition, O&M best practices are included in all NARA's contracts.

Priority Strategies & Planned Actions

- Regularly work with the contractors in each facility to improve building O&M practices.
- NARA's new travel policy requires employee business travel to be approved by senior management on a case by case basis.
- Supervisors encourage and approve (based on feasibility) employee telework agreements and AWS. NARA's Telework and AWS participation has increased

National Archives and Records Administration
2019 Sustainability Report and Implementation Plan

Agency Priorities and Highlights

AGENCY IDENTIFIED PRIORITIES

NARA intends to continue seeking opportunities to lower energy consumption and greenhouse gas emissions, while maintaining archival storage standards. One of our key priorities is to continue seeking and maintaining LEED certification at several of our newer facilities, thus ensuring best practices are followed, cost efficient improvements are made, and early detection and correction of systems losing efficiency.

NOTABLE PROJECTS AND HIGHLIGHTS

NARA was one of the first federal agencies to incorporate an in-vessel composter system into agency operations to reduce waste going to the landfill. Several agencies have expressed interest in the system and have visited our facility to observe operations. The Smithsonian Institution just installed two similar systems at the National Zoo.

We recently completed a large solar PV project at our Atlanta facility which is already producing an average of 51,000 Kwh per month. We have also recently installed smaller solar PV systems at the Ford Museum and the Carter Library and will continue to seek other opportunities as funding permits.