

FINAL REPORT CARD

Sustainable Action Plan

for County Operations
FY 2014/2018





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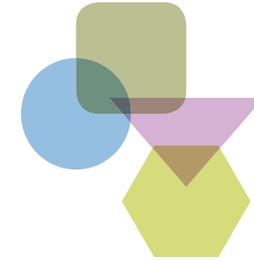


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FINAL REPORT CARD

Sustainable Action Plan for County Operations FY 2014/2018



On May 17, 2014, the Pima County Board of Supervisors adopted the 2014 Sustainable Action Plan for County Operations (SAPCO). This five-year plan seeks to achieve a “balance between economic development, social well-being and environmental protection to ensure the needs of current generations can be met without compromising the ability of future generations to meet their own needs.” Measuring progress is crucial to understanding the effectiveness of Pima County’s sustainability efforts. The purpose of this report card is to inform County decision makers and the broader community about Pima County’s progress toward meeting the goals and targets outlined in the Sustainable Action Plan. It is meant to highlight areas where the County is meeting its targets and to help identify areas needing additional attention.

In response to the directives outlined in Board Resolution 2017-51, Pima County updated its

More on the Paris Agreement and Pima County’s commitment

The Paris Agreement is a voluntary international agreement whereby nations identified and committed to reducing their carbon emissions to keep global temperature increases below 2°C (3.8° F). When the United States signed onto the Paris Agreement in 2015, the U.S. committed to reducing emissions 26% below its 2005 levels. However, when the U.S. rescinded its commitment in 2017, Pima County joined hundreds of local

governments who came out in support of maintaining a commitment to the Agreement. Climate Resolution 2017-39, adopted in June 2017, formalized the County’s pledge to uphold the carbon-cutting targets established by the United States in 2015. Resolution 2017-51, passed one month later, specified the climate mitigation and adaptation measures the County would undertake to meet this commitment.

Sustainable Action Plan one year early to reflect its alignment with the U.S. commitment to the Paris Climate Agreement. The new 2018 SAPCO is a seven-year plan that provides a practical and holistic framework that deepens Pima County’s commitment to sustainability by adopting rigorous greenhouse gas reduction targets and strengthening the County’s climate adaptation efforts. The new plan is broader in scope yet more streamlined and simplified than

previous iterations. It was passed and adopted by the Pima County Board of Supervisors in October, 2018 (Resolution 2018-66).

This is the final Sustainability Report Card for the 2014 Action Plan and covers both the County’s sustainability performance from FY 2017/18 and summarizes the County’s overall performance for the previous four years. Visit www.pima.gov to view the **2014 Sustainable Action Plan for County Operations**.

How to use this report

The nine chapters in this Report Card represent the nine focus areas of the Sustainable Action Plan. Data is collected annually to report on the progress of meeting the Plan’s goals and objectives. The following measures are discussed in each chapter:

TARGET/S:

A measurable milestone in pursuing the chapter Goal(s) meant to be achieved within the five-year timeframe of the Plan.

INDICATOR/S:

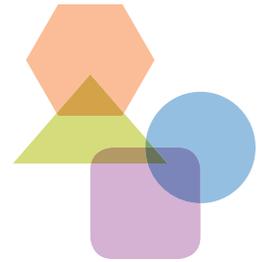
Quantitative or qualitative measures used to assess performance relative to a Target.

BASELINE/S:

A starting point or benchmark used to assess progress toward reaching a Target.



Noteworthy Accomplishments (2014–2018)



The Sustainable Action Plan for County Operations was made possible by the continuing support of the Pima County Board of Supervisors, County Administration, staff from multiple County departments, and external experts. It is through their ongoing work that Pima County has been able to achieve, surpass or make notable progress on many of the SAPCO objectives first formalized in Resolution 2007-84.

Minimizing the Carbon Footprint of County Government

- Avoided more than 64,000 MtCO_{2e} emissions
- Committed to achieving the goals outlined in the Paris Climate Accord

Renewable Energy and Energy Efficiency

- Installed more than 6 megawatts (MW) of renewable energy for use in County facilities expanding the County's renewable energy portfolio to more than 13 MW
- Developed a comprehensive energy management plan that outlines strategies to reduce County energy use and cost

Green Building

- 4 buildings have received LEED silver certification or higher. The highly efficient Fleet Services Building achieved LEED Gold Certification
- Began renovating the Pima County Historic Courthouse which includes updated energy and water efficient fixtures

Alternative Fuel Vehicles

- Developed an automated system to track when preventive maintenance is due for a vehicle, helping to improve vehicle fuel efficiency
- Began integrating electric vehicles into the fleet

Water Conservation & Management

- Improved the clarity and quality of treated effluent discharged to the Santa Cruz River; increased recharge to about 36,600 acre-feet per year
- Established or maintained nearly a thousand acres of natural habitat with County renewable water

Land Conservation and Management

- Completed restoration of the Fort Lowell Officers' Quarters and received the Governor's Heritage Preservation Award. This award recognizes people, organizations and projects that represent outstanding achievements in preserving Arizona's prehistoric and historical resources

- Documented the substantial improvement in wetland health of the effluent-dependent Santa Cruz River via the Living River series. This included an increase in biodiversity with 221 different bird species sightings. These improvements won the National Association Green Water Agencies' 2018 National Environmental Achievement Award

Waste Reduction

- Diverted more than 1,700 tons of solid waste from landfills
- Expanded County recycling services to include a recycle pickup location in Ajo

Green Purchasing

- Eliminated the use of styrofoam in the Regional Wastewater Reclamation Department
- Modified the County's office supply vendor website to highlight eco-friendly products to make finding and purchasing these products more effective and efficient

Health and Wellness

- Decreased the number of tobacco users (self-reported) by more than 40%
- Increased the percentage of eligible employees who participate in the Healthy Lifestyle Medical Premium Discount program by 25%

Education and Outreach

- Over the past four years, the Office of Sustainability and Conservation also scaled up its education programming through the delivery of regular columns for Pima County FYI, an external newsletter, and eScoop, a publication for staff; through launching an ongoing brownbag sustainability series; and through direct community outreach activities.

FINAL SUMMARY OF PROGRESS

Sustainable Action Plan for County Operations FY 2014/2018

The following summary highlights the County's sustainability performance between FY 2013/14 and FY 2017/18.



Performance improved for 16 targets

Target	Percent improvement (relative to baseline)
Minimizing the Carbon Footprint of County Government	
Target 1: Facility Operations	21%
Renewable Energy & Energy Efficiency	
Target 1: Renewable Energy	62%
Sub-Target 2: Solar	70%
Target 2: Energy Efficiency	20%
Green Building	
Target 2: Facility Construction	6%
Water Conservation & Management	
Target 1: Water Consumption in Facilities	14%
Target 2-1: Parks served by reclaimed water	27%
Target 2-2: Miles of trail served by reclaimed water	94%
Target 3: Establishing and Maintaining Natural Habitat	104%
Waste Reduction	
Target 1: Solid Waste Diversion	4%
Green Purchasing	
Target 3: Equipment Purchased	69%
Target 5-2: Printer Paper-30% recycled content paper	1%
Target 5-3: Printer Paper-Less than 30% recycled content paper	16%
Health & Wellness	
Target 1: Healthy Lifestyle Premium Discounts	25%
Target 3: Tobacco-free workforce	46%

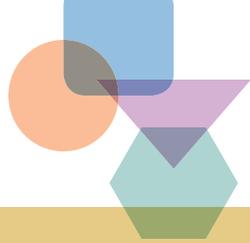


Performance declined for 5 targets

Target	Percent decline (relative to baseline)
Minimizing the Carbon Footprint of County Government	
Target 2: Wastewater Treatment	12%
Target 3: Fleet Operations	18%
Alternative-Fuel Vehicles	
Target 1: Greenhouse Gas Emissions	89%
Green Purchasing	
Target 4: Employee Training	100%
Target 5-1: Printer Paper-100% recycled content paper	38%



CHAPTER 1



Minimizing the Carbon Footprint of County Operations



Climate change is one of the greatest challenges facing society. It poses threats to infrastructure, food production, human health, the environment, and the economy.

Human activities that cause the release of greenhouse gases are driving this process at an unprecedented rate. Every individual, organization and community has a “carbon footprint,” which is the sum of all the greenhouse gases emitted as a result of the daily activities of that individual or entity. Pima County recognizes the importance of reducing greenhouse gas emissions resulting from its operations and has established targets to reduce these emissions.

The following section provides an overarching analysis of the County’s carbon footprint reduction performance over the past four years.

FY 2014/2018 Performance Overview

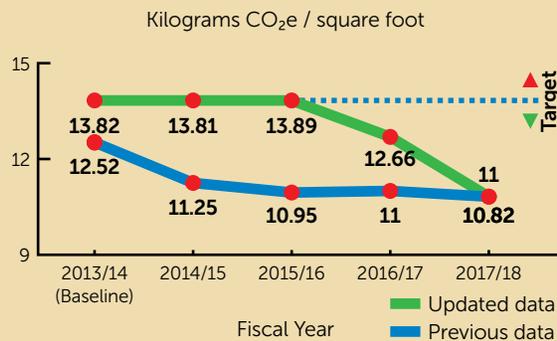
Target	Results	Analysis
<p>Target 1: By June 30, FY 2018/2019, the carbon intensity of County facility operations will not exceed the carbon intensity of County facility operations in FY 2013/2014</p>		<p>Over the past four years, the carbon intensity of County facility operations improved more than 20% compared to the baseline despite increases in overall electricity consumption. Some of the factors behind this improvement include energy efficiency measures and renewable energy expansion.</p>
<p>Target 2: By June 30, FY 2018/2019, the carbon intensity of County regional wastewater collection and treatment operations will not exceed the carbon intensity of County wastewater collection and treatment operations in FY 2013/2014.</p>		<p>The carbon intensity of County wastewater treatment operations increased slightly in year one and remained relatively steady in subsequent years. The moderate overall decline in performance is attributed to: 1.) The additional treatment of effluent to improve the quality of water discharged into the Santa Cruz River; and 2.) Expanding the treatment capacity to accommodate future growth.</p>
<p>Target 3: By June 30, FY 2018/2019, the carbon intensity of County fleet operations will not exceed the carbon intensity of County fleet operations in FY 2013/2014.</p>		<p>Despite efforts to improve the fuel efficiency of the County’s fleet, carbon intensity increased 18%, during the past four years. Performance improved significantly during the first two years before reversing sharply, resulting from the increased use of large vehicles, trucks SUVs, etc.</p>

TARGET 1

Facility Operations: By June 30, FY 2018/2019, the carbon intensity of County facility operations will not exceed the carbon intensity of County facility operations in FY 2013/2014.

INDICATOR: Carbon intensity of County facility operations measured in kilograms of CO₂e/square foot of building space.

BASELINE: 13.82 kilograms CO₂e/square foot.



Performance

11* kilograms of CO₂e/square foot of building space.



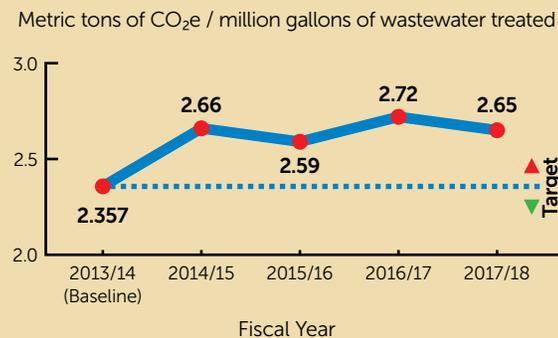
Improved: 20.5% relative to the baseline.

TARGET 2

Wastewater Treatment Operations: By June 30, FY 2018/2019, the carbon intensity of County regional wastewater collection and treatment operations will not exceed the carbon intensity of County wastewater collection and treatment operations in FY 2013/2014.

INDICATOR: Carbon intensity of County regional wastewater collection and treatment operations measured in metric tons of CO₂e/million gallons of water treated.

BASELINE: 2.357 metric tons of CO₂e/million gallons of water treated.



Performance

2.65 metric tons of CO₂e/million gallons of wastewater treated.



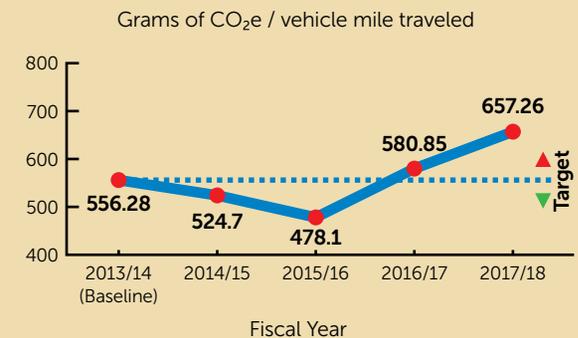
Declined: 12% relative to the baseline.

TARGET 3

Fleet Operations: By June 30, FY 2018/2019, the carbon intensity of County fleet operations will not exceed the carbon intensity of County fleet operations in FY 2013/2014.

INDICATOR: Carbon intensity of County fleet operations measured in grams of CO₂e/vehicle mile traveled.

BASELINE: 556.28 grams of CO₂e/vehicle mile traveled.



Performance

657.26 grams of CO₂e/vehicle mile traveled.



Declined: 18% relative to the baseline.

* This excludes emissions from Pima County wastewater treatment operations.

Over the course of this four-year plan, the County has continued to refine its methods for data collection and analysis. As a result, this Final Report Card provides a comparative overview of the historically recorded versus updated energy and water sustainability performance for the County since FY 2013/14.

The emissions factors used in the carbon intensity calculations are taken from the EPA's eGRID (Emissions & Generation Resource Integrated Database).

CHAPTER 2

Renewable Energy & Energy Efficiency



The consumption of traditional energy sources results in significant negative consequences for both environmental and human

health. Relying on these sources of energy is also growing increasingly expensive. Making a smooth transition to renewable energy sources, while increasing efficiency, will reduce long-term operating costs and increase energy security while protecting the environment and health of Pima County residents.

The following section provides an overarching analysis of the County's renewable energy and energy efficiency performances over the past four years.

FY 2014/2018 Performance Overview

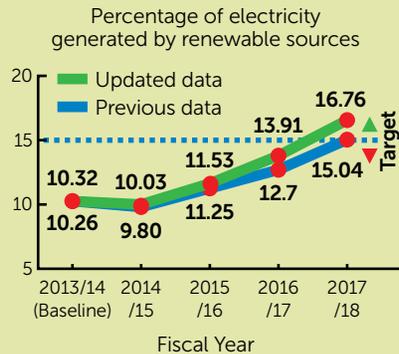
Target	Results	Analysis
Target 1: By 2025, at least 15% of the electricity consumed by County facilities will be generated or offset by renewable sources.		The percentage of electricity from renewable sources increased to about 17%, achieving the target. This success was made possible through efforts to expand the County's renewable energy portfolio, bringing on more than 6 MW of solar power generating capacity.
Sub-Target 1: Beneficially use 80% of biogas per year by June 30, FY 2018/2019.		Target not achieved but performance improving. While the target was not achieved the County did make substantial progress towards increasing the percentage of biogas beneficially used from 5% to 23%. Plans are also underway to enable the County to purify the gas and inject it into the natural gas pipeline while receiving credit to offset County natural gas consumption. When complete, the effort will reduce operating costs while reducing the carbon intensity of wastewater treatment operations.
Sub-Target 2: Increase the use of solar energy by 4 million kWh by June 30, FY 2018/2019.		The County significantly increased its solar portfolio, surpassing the target in 2015. Pursuing solar service agreements were vital in making this possible with no upfront cost to the County.
Target 2: Increase the overall energy efficiency of County facilities 10% by June 30, FY 2018/2019.		Energy efficiency has consistently improved, achieving the target in FY 2016/17. The County's decline in energy use intensity can be attributed to increasing lighting efficiency with LEDs, replacing HVAC units with more efficient models and upgrading building envelopes with increased insulation and better glazing, when available.

TARGET 1

Renewable Energy: By 2025, at least 15% of the electricity consumed by County facilities will be generated or offset by renewable sources.

INDICATOR: Percentage of electricity consumed by County facilities generated by renewable sources.

BASELINE: 10.26% was generated by renewable sources.



Performance

16.76% was generated by renewable sources.



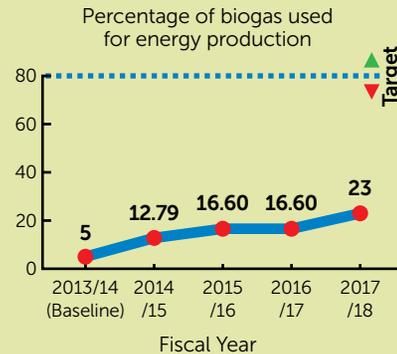
Improved: 62.4% relative to the baseline.

SUB-TARGET 1

Biogas : Beneficially use 80% per year by June 30, FY 2018/2019.

INDICATOR: Percentage of biogas used for energy production.

BASELINE: 5%



Performance

23% was beneficially used.



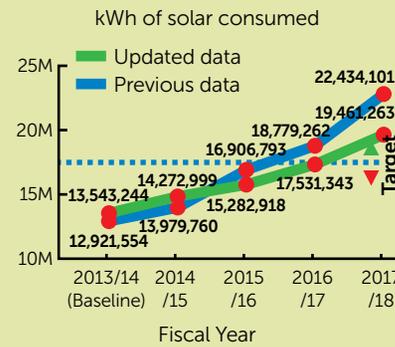
Improved: 368% relative to the baseline.

SUB-TARGET 2

Solar : Increase the use of solar energy by 4 million kWh by June 30, FY 2018/2019.

INDICATOR: kWh of solar consumed.

BASELINE: 13,543,244 kWh



Performance

23,080,529 kWh of solar consumed.



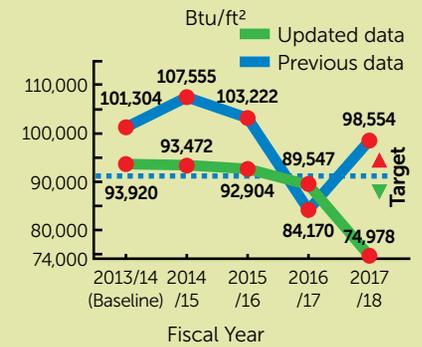
Improved: 70.4% relative to the baseline.

TARGET 2

Energy Efficiency: Increase the overall energy efficiency of County facilities 10% by June 30, FY 2018/2019.

INDICATOR: Energy use intensity of County facilities [Combined total Btu (electricity + natural gas) consumed by all County facilities]/Combined square footage of all County facilities.

BASELINE: 93,920 Btu/ft²



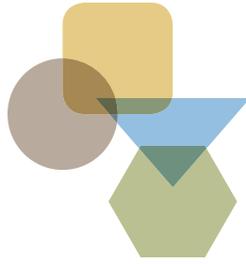
Performance

74,978 Btu of energy/ft²



Improved: 20.2% relative to the baseline.

* Over the course of this four-year plan, the County has continued to refine its methods for data collection and analysis. As a result, this Final Report Card provides a comparative overview of the historically recorded versus updated energy and water sustainability performance for the County since FY 2013/14.



CHAPTER 3

Green Building



The construction, operation and maintenance of buildings are significant sources of resource and energy consumption and thus constitute the largest

source of County energy consumption. Green buildings and infrastructure are more energy efficient, consume fewer natural resources and are generally less expensive to operate and maintain than non-green buildings. Additionally, green buildings improve occupant health, reduce absenteeism and increase productivity.

The following section provides an overarching analysis of the County's performance in green building design over the past four years.



FY 2014/2018 Performance Overview

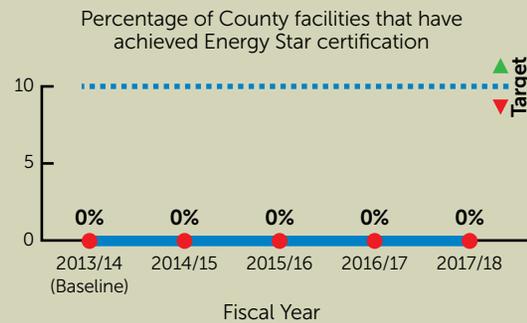
Target	Results	Analysis
<p>Target 1: By June 30, FY 2018/2019, at least 10% of County facilities will achieve Energy Star certification.</p>		<p>Technical difficulties prohibited Staff from collecting all of the data required to submit for Energy Star certification.</p>
<p>Target 2: 100% of all new County-funded buildings designed after June 30, 2008, and 100% of all building additions greater than 5,000 square feet to implement LEED elements sufficient to obtain 50 or more LEED points.</p>		<p>Target not achieved but performance improving. The County was unable to make this target. However during this plan, four buildings received LEED certification.</p>

TARGET 1

Energy Efficiency of Facilities: By June 30, FY 2018/2019, at least 10% of County facilities will achieve Energy Star certification.

INDICATOR: Percentage of County facilities that have achieved Energy Star certification.

BASELINE: 0% of County facilities.



Performance

0% of County facilities achieved Energy Star certification.

No change relative to the baseline.

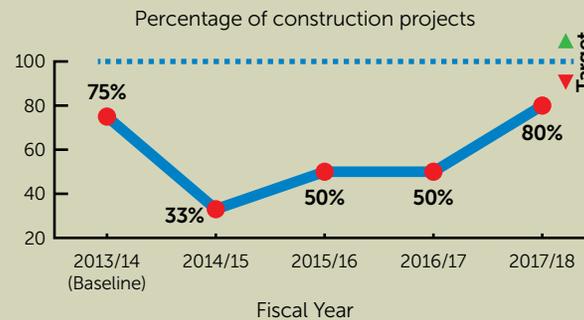
TARGET 2

Facility Construction: 100% of all new County-funded buildings designed after June 30, 2008, and 100% of all building additions greater than 5,000 square feet to implement LEED elements sufficient to obtain 50 or more LEED points.

INDICATOR: Percentage of ongoing and completed construction projects since July 1, 2014, that implement LEED elements sufficient to obtain 50 or more points.

BASELINE: Total number of projects: 4
Projects that meet the target: 3

75% of facility construction projects implement LEED elements sufficient to obtain 50 or more points.



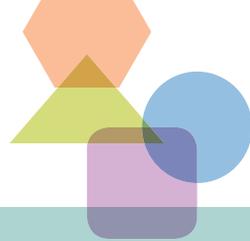
Performance

80% implement LEED elements sufficient to obtain 50 or more points.

 **Improved:** 6% relative to the baseline.



CHAPTER 4



Alternative-Fuel Vehicles

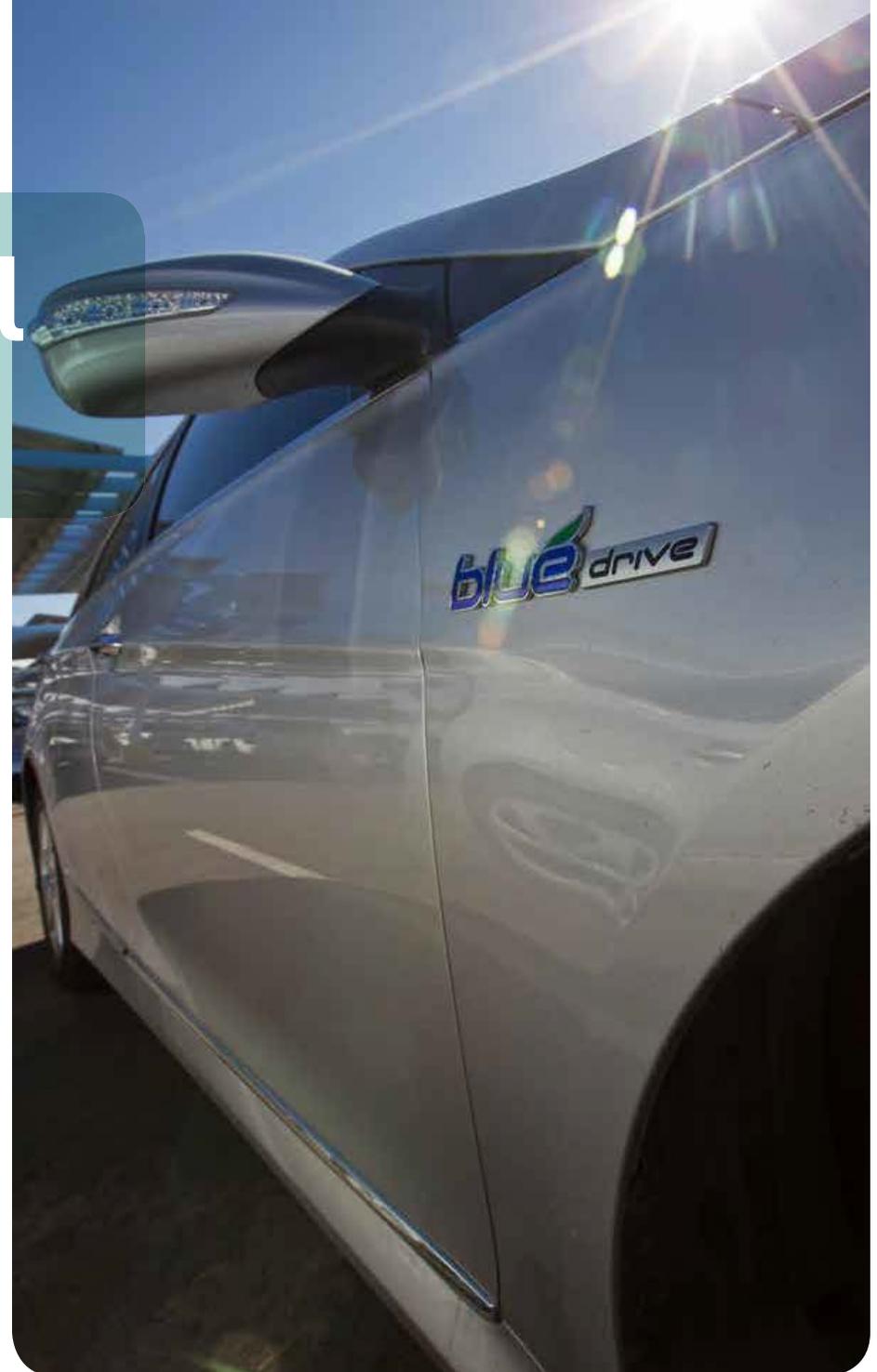


Motor vehicle emissions are the largest source of air pollution in Pima County. County government owns and operates a large fleet of vehicles and equipment that performs a range of vital services. The County has implemented a number of strategies to minimize the impact of its fleet activities.

The following section provides an overarching analysis of the County's carbon reduction performance in its transportation activities over the past four years.

FY 2014/2018 Performance Overview

Target	Results	Analysis
<p>Target 1: Reduce the ratio of carbon emissions produced by County transportation activities per service population (CO₂e/ Service Population) by June 30, FY 2018/2019, excluding Sheriff's vehicles, off-road vehicles, and heavy equipment (water trucks, dump trucks, etc.).</p>		<p>The County made significant efforts to improve the fuel efficiency of the fleet and reduce carbon emissions. Performance improved significantly during the first two years before reversing sharply, resulting in a significant decline in performance. This decline is a result of the increased use of large vehicles, trucks SUVs, etc.</p> <p>The County is working hard to reduce its fleet emissions by incorporating electric and hybrid fleet sedans, discouraging unnecessary use of large vehicles and taking a strong stance against idling.</p>



TARGET 1

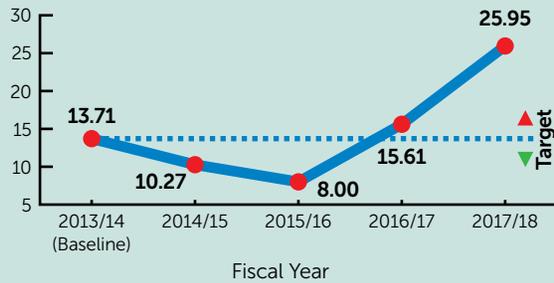
Greenhouse Gas Emissions: Reduce the ratio of carbon emissions produced by County transportation activities per service population (CO₂e/ Service Population) by June 30, FY 2018/2019, excluding Sheriff's vehicles, off-road vehicles, and heavy equipment (water trucks, dump trucks, etc.).

INDICATOR: Ratio of carbon emissions produced by County operations annually per service population (Quotient of a/b).

- a. Annual quantity and carbon intensity of fuel consumed
- b. Number of residents served by County operations

BASELINE: 13.71 kgCO₂e/resident served

Ratio of carbon emissions per service population (kgCO₂e/ resident served)



Performance

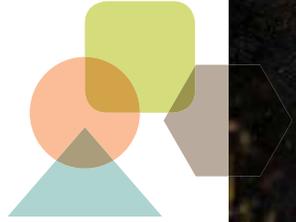
25.95 kgCO₂e/resident served by County operations*



Declined: 89% relative to the baseline.

*Based on July 1, 2017 Arizona Department of Administration Population Estimate for Unincorporated Pima County.





CHAPTER 5

Water Conservation & Management



Water is one of our most vital resources. It is essential to nearly every facet of life, from food cultivation to the generation of electricity; water is critical to our

very survival. Yet in the Sonoran Desert, water is one of our most limited resources. Ensuring an adequate, safe water supply for ecosystems and for current and future generations is essential to ensuring the sustainability of Pima County.

The following section provides an overarching analysis of the County's water conservation and management performance over the past four years.

FY 2014/2018 Performance Overview

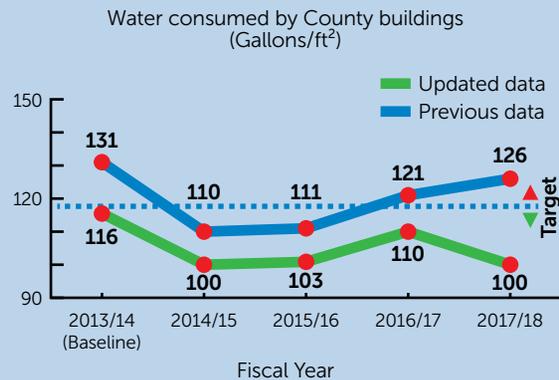
Target	Results	Analysis
Target 1: Reduce building water consumption intensity (gallons/ ft ²) by at least 10% by June 30, FY 2018/2019.		Water use intensity has varied over the course of this plan, with a 14% improvement in water efficiency in FY 2017/18 compared to the baseline. The variability seen may relate to hotter, drier years in which higher water use for irrigation was necessary, though the source of the problem has been difficult to isolate.
Target 2: Increase the number of County parks and miles of trail served by reclaimed water by 10% by June 30, FY 2018/2019		The number of parks and trails supported by reclaimed water both increased compared to the baseline, surpassing the targets.
Target 3: Expand the number of acres of natural habitat established or maintained by County renewable water sources by 5% by June 30, FY 2018/2019.		The County has surpassed this target, more than doubling the acreage of natural habitat established or maintained by County renewable water sources since FY 13/14.

TARGET 1

Water Consumption in Facilities: Reduce building water consumption intensity (gallons/ft²) by at least 10% by June 30, FY 2018/2019.

INDICATOR: Quantity of water consumed by County buildings per square-foot.

BASELINE: 116 gallons/ft²



Performance

100 gallons/ft² consumed by County buildings.

Improved: 14.3% relative to the baseline.

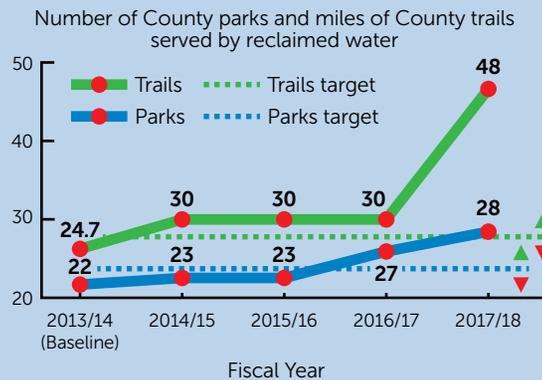
TARGET 2

Reclaimed Water at County Parks: Increase the number of County parks and miles of trail served by reclaimed water by 10% by June 30, FY 2018/2019.

INDICATOR: Number of County parks and number of miles of County trails served by reclaimed water.

BASELINE:

- 22 parks served by reclaimed water.
- 24.7 miles of trail served by reclaimed water.



Performance

28 parks served by reclaimed water.
Improved: 27% relative to the baseline.

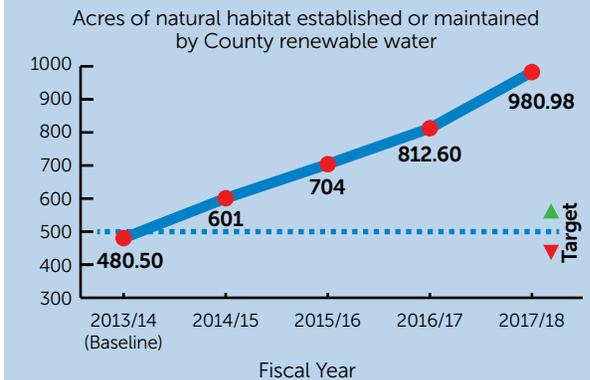
48 miles of trail served by reclaimed water.
Improved: 94% relative to the baseline.

TARGET 3

Establishing and Maintaining Natural Habitat: Expand the number of acres of natural habitat established or maintained by County renewable water sources by 5% by June 30, FY 2018/2019.

INDICATOR: Acres of natural habitat established or maintained by County renewable water as of June 30, FY 2013/2014.

BASELINE: 480.5 acres



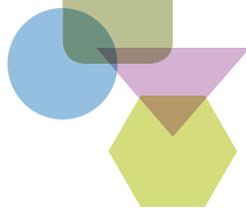
Performance

980.98 acres of natural habitat established or maintained by County renewable water.

Improved: 104% relative to the baseline.

Includes potable and reclaimed water

Over the course of this four-year plan, the County has continued to refine its methods for data collection and analysis. As a result, this Final Report Card provides a comparative overview of the historically recorded versus updated energy and water sustainability performance for the County since FY 2013/14.



CHAPTER 6

Land Conservation & Management



The protection of ecosystems is essential to ensuring long-term economic and ecological sustainability. Natural ecosystems play a crucial role in maintaining

water quality and reducing greenhouse gas emissions and are a significant economic driver within the region. These areas attract residents and visitors seeking a quality natural environment experience, the latter thereby enhancing the local economy through increased tourism.

Due to the unique nature of the County's land management program, which is dependent upon variable bond funding, this chapter does not have targets. Instead conservation activities are monitored for alignment with the cultural, ecological biological goals of the SAPCO.



TARGET 1

Cultural Resources: Conserve cultural resources and historic properties.

INDICATOR 1: Number and types of sites conserved.

BASELINE: Annual summary.

INDICATOR 2: Information yielded from sites.

BASELINE: Annual summary.

Performance

1. Cultural Resources Conserved (FY14-18)

- 27 SDCP Priority Cultural Resources conserved.
- 5,820 acres of County-owned conservation land with archaeological survey coverage.
- 156 known and recorded archeological sites conserved.
- 2 NRHP* properties conserved.
- 101 significant sites conserved via cultural resources compliance actions:
 - » 69 significant prehistoric archaeological sites conserved.
 - » 19 significant historic archaeological sites conserved.
 - » 12 significant multicomponent archaeological sites conserved.

2. Information Yielded From Sites

- 160 sites yielded information.
- 65 documented historic buildings.

* The National Register of Historic Places (NRHP) is the official list of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Park Service's National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources.

TARGET 2

Ecological and Biological Resources: Conserve ecological and biological resources.

INDICATOR 1: Number of acres conserved.

- a. Number of acres within the Conservation Lands System (CLS) acquired under fee title.
- b. Number of acres within the CLS placed under perpetual conservation easement.
- c. Number of conservation easement acres within the CLS acquired.
- d. Number of acres of private deed restrictions within the CLS.
- e. Number of acres of designated riparian habitat conserved.

BASELINE: Annual summary.

INDICATOR 2: Mitigation actions taken to reduce the impacts of County operations on ecological and biological resources.

BASELINE: Annual summary.

Performance

1. Number of acres conserved (FY14-18)

- a. 3,363 acres within the CLS acquired (held) under fee title.
- b. 91,436 acres within the CLS placed under perpetual conservation easement (includes restrictive covenants).
- c. 264 acres conservation easement acres within the CLS acquired.
- d. 3,170 acres of private deed restrictions within the CLS.
- e. 982 acres of designated (regulated) riparian habitat conserved.

2. Mitigation actions taken to reduce the impacts of County operations on ecological and biological resources (FY14-18)

- 4 mitigation actions completed for County Capital Improvement projects (CIP) that required Section-10 mitigation.
- 3 mitigation actions completed for County CIP projects that require In-Lieu Fee (ILF) mitigation.

TARGET 3

Enhancement Projects: Complete enhancement projects on County properties.

INDICATOR: Number of properties enhanced.

BASELINE: Annual summary.

Performance

Open Space Enhancements (FY14-18)

Number of properties enhanced:

- Infrastructure Improvements: 115
- Invasive Species Control: 61
- Trash Removal: 48
- Ecosystem or Species Restoration: 93

Cultural Resource Enhancements (FY14-18)

759 person-day visits by the site stewards. (FY14-18)

542 sites visited by the site stewards. (FY14-18)

34 buildings or structures rehabilitated.

(cumulative)

CHAPTER 7

Waste Reduction



Minimizing waste and overall consumption is an important, yet often overlooked, component of sustainability. Reducing consumption, reusing pre-owned products and recycling responsibly help minimize the County's ecological footprint while conserving resources and reducing operating costs.

The following section provides an overarching analysis of the County's waste reduction performance over the past four years.



FY 2014/2018 Performance Overview

Target	Results	Analysis
Target 1: Increase the quantity of recyclable materials diverted from landfills by 10% to 489.58 tons by June 30, FY 2018/2019.		Target not achieved but performance improving. The quantity of recyclable materials diverted has remained relatively unchanged since FY 2014. Though the County has made efforts to progress toward this target, the cost of recycling services, the inconsistent profitability of recycling and the lack of an ongoing engagement program were the primary obstacles to achieve the 10% diversion goal.

TARGET 1

Solid Waste Diversion: Increase the quantity of recyclable materials diverted from landfills by 10% to 489.58 tons by June 30, FY 2018/2019.

INDICATOR: Quantity of recyclable material diverted from landfills.

BASELINE: 445.07 tons diverted.



Performance

461 tons diverted from landfills.



Improved: 4% relative to the baseline.



CHAPTER 8

Green Purchasing

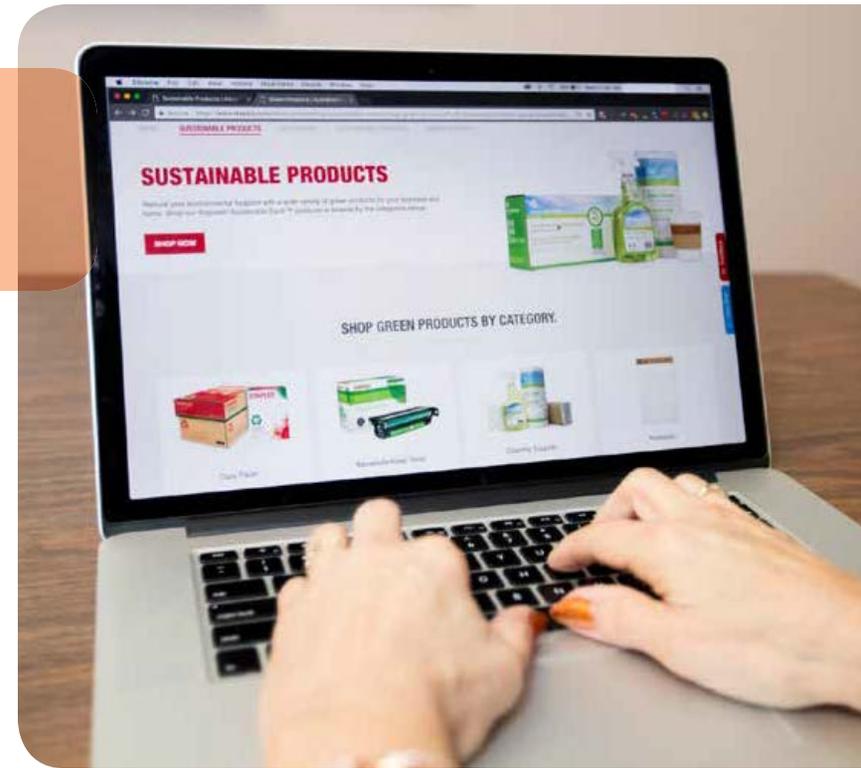


The manufacturing, use and disposal of consumer goods have a significant impact on the environment and our natural resources.

Purchasing decisions have a direct impact on the world around us and the world we leave for future generations. Like other local governments, Pima County purchases a large number of goods and services needed to conduct its daily operations.

Choosing environmentally-friendly products and services can significantly reduce the impact of these purchases, while reducing operating costs and preserving resources for future generations.

The following section provides an overarching analysis of the County's green purchasing performance over the past four years.



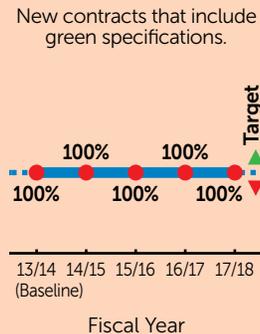
FY 2014/2018 Performance Overview

Target	Results	Analysis
Target 1: 100% of new contracts to include green specifications whenever applicable by June 30, 2019.		The Procurement department stipulates that all contracts must include green specifications. This component insured that the target was met.
Target 2: 100% of janitorial service contracts to be updated with nontoxic and eco-friendly product specifications by June 30, FY 2018/2019.		The Facilities Management stipulates that all janitorial service contracts must include nontoxic and eco-friendly product specifications. This component insured that the target was met.
Target 3: 100% of appliances and equipment purchased to be Energy Star qualified by June 30, FY 2018/2019.		Target not achieved but performance improving. The lack of an enforcement mechanism and awareness of the requirement to purchase Energy Star qualified products resulted in poor performance.
Target 4: Provide at least one training session per year for employees with purchasing responsibilities.		Trainings that cover green procurement have declined since FY16/17. This is due to the inadvertent omission of sustainability topics in the County's quarterly general procurement trainings. The training materials have since been updated to incorporate green purchasing practices again.
Target 5: By June 30, FY 2018/2019, at least 20% of printer, copier, and multi-purpose paper purchases will be 100% recycled content paper and 90% of all other printer, copier, and multi-purpose paper purchases will be 30% recycled content paper.		Target not achieved but performance improving for Indicator 2 and Indicator 3. Performance remained relatively consistent over the past four years with 90% of paper purchased containing at least 30% recycled content. Cost, accessibility and convenience were sighted as the main barrier to purchasing paper made from recycled content.

TARGET 1

Product Contracts: 100% of new contracts to include green specifications whenever applicable by June 30, 2019.

INDICATOR: Percentage of new contracts that include green specifications.
BASELINE: 100%



Performance

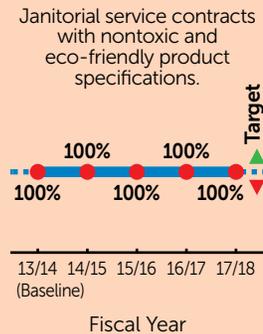
100% of new contracts that include green specifications.

Maintained target.

TARGET 2

Janitorial Contracts: 100% of janitorial service contracts to be updated with nontoxic and eco-friendly product specifications by June 30, FY 2018/2019.

INDICATOR: Percentage of janitorial service contracts with nontoxic and eco-friendly product specifications.
BASELINE: 100%



Performance

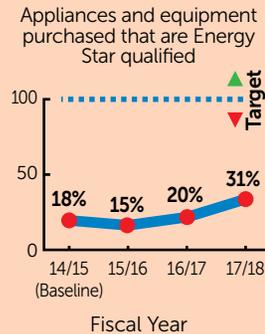
100% of janitorial service contracts include nontoxic and eco-friendly product specifications

Maintained target.

TARGET 3

Equipment Purchased: 100% of appliances and equipment purchased to be Energy Star qualified by June 30, FY 2018/2019.

INDICATOR: Percentage of appliances and equipment purchased that are Energy Star qualified.
BASELINE: 18%



Performance

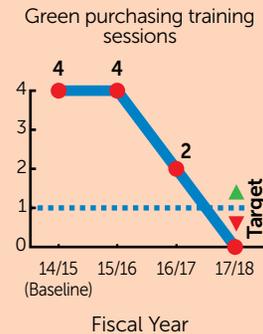
31% of appliances and equipment purchased are Energy Star qualified.

Improved: 69% relative to the baseline.

TARGET 4

Employee Training: Provide at least one training session per year for employees with purchasing responsibilities.

INDICATOR: Availability of green purchasing training opportunities for employees.
BASELINE: 4



Performance

0 training sessions.

Declined: 100% relative to the baseline.

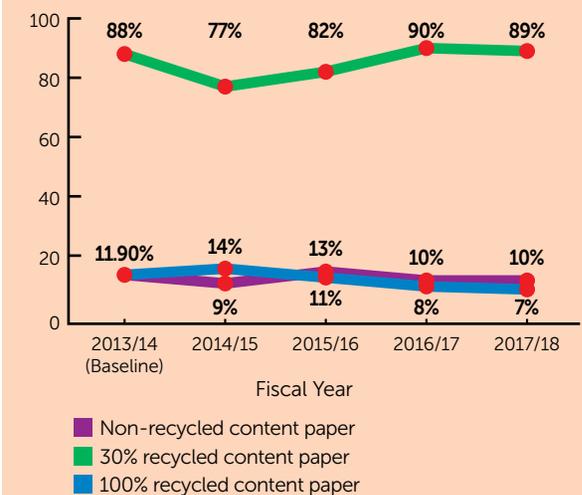
TARGET 5

Printer Paper: By June 30, FY 2018/2019, at least 20% of printer, copier, and multi-purpose paper purchases will be 100% recycled content paper and 90% of all other printer, copier, and multi-purpose paper purchases will be 30% recycled content paper.

INDICATOR 1: Percentage of printer, copier, and multi-purpose paper purchased that is 100% recycled content paper.
BASELINE: 11.54%

INDICATOR 2: Percentage of printer, copier, and multi-purpose paper purchased that is 30% recycled content paper.
BASELINE: 88%

INDICATOR 3: Percentage of printer, copier, and multi-purpose paper purchased that is neither 30% nor 100% recycled content paper.
BASELINE: 11.9%



Performance

1. **7%** of printer, copier, and multi-purpose paper purchased was 100% recycled content paper.

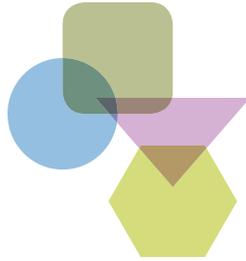
Declined: 38% relative to the baseline.

2. **89%** of all other printer, copier, and multi-purpose paper purchased was 30% recycled content paper.

Improved: 1% relative to the baseline.

3. **10%** of printer, copier, and multi-purpose paper purchased was neither 30% nor 100% recycled content paper.

Improved: 16% relative to the baseline.



CHAPTER 9

Health & Wellness



Employee health and wellness is an important component of the long-term sustainability of County operations. Promoting a culture of self-care and

awareness improves the overall health and productivity of employees, reducing absenteeism and promoting employee retention. The result is long-term cost savings for Pima County. The County has taken on a wide range of programs and activities aimed at strengthening existing programs and developing new opportunities to encourage employees to adopt healthy behaviors.

The following section provides an overarching analysis of the County's performance in health and wellness initiatives over the past four years.



FY 2014/2018 Performance Overview

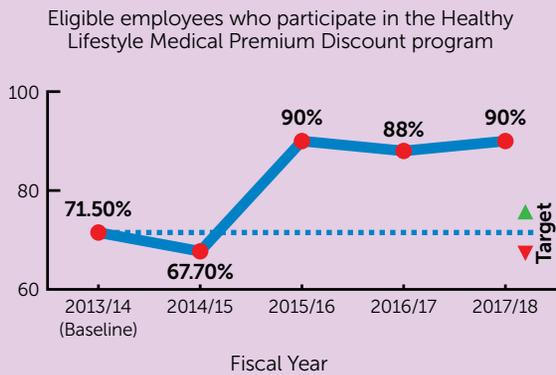
Target	Results	Analysis
<p>Target 1: By June 30, FY 2018/2019, increase the percentage of Pima County employees who are in eligibility compliance with the Healthy Lifestyle Premium Discounts.</p>		<p>This target was surpassed in FY 14/15 and maintained. This success is a result of improvements in education and outreach on how to receive premium discounts, an increase in the selection of eligible programs and activities, and an emphasis on participation being a direct monetary benefit to the employee.</p>
<p>Target 2: Administrative Procedures and Policies will be established or revised to support Wellness initiatives within the County.</p>		<p>The County met this target in FY 13/14 and remained at the threshold for the duration of the plan. This was achieved through the support of County leadership and the sound management of the Wellness Program.</p>
<p>Target 3: Pima County will decrease the number of self-reported tobacco users from 33% to less than 15%.</p>		<p>Target nearly achieved. The County has been very close to achieving this target since FY 15/16. The significant decrease in employee tobacco use is a result of offering a large premium discount to those who register as tobacco-free and improvements in education and outreach on how to be tobacco free and register as tobacco free. Identified obstacles include the difficulty of quitting tobacco products and ensuring all employees complete the tobacco use form.</p>

TARGET 1

Healthy Lifestyle Premium Discounts: By June 30, FY 2018/2019, increase the percentage of Pima County employees who are in eligibility compliance with the Healthy Lifestyle Premium Discounts.

INDICATOR: Percentage of eligible employees who participate in the Healthy Lifestyle Medical Premium Discount program.

BASELINE: 71.5%



Performance

90% of eligible employees participate in the Healthy Lifestyle Medical Premium Discount program.



Improved: 25% relative to the baseline.

TARGET 2

Policies and Procedures: By June 30, FY 2016-17, Administrative Procedures and Policies will be established or revised to support Wellness initiatives within the County.

INDICATOR: Number of Administrative Procedures and Policies relating to Wellness initiatives.

BASELINE: 2



Performance

2 procedures relate to Wellness initiatives.

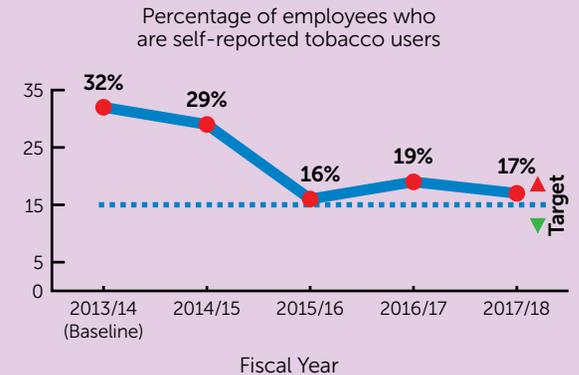
Maintained Target.

TARGET 3

Tobacco-free workforce: By January 2019, Pima County will decrease the number of self-reported tobacco users from 33% to less than 15%.

INDICATOR: The percentage of employees who are self-reported tobacco users.

BASELINE: 32%



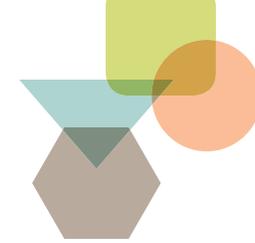
Performance

17% of employees are self-reported tobacco users.



Improved: 46% relative to the baseline.

Glossary



Alternative Modes of Transportation: Refers to transportation modes other than driving a single-occupant vehicle, such as carpooling, mass transit, biking and walking. Choosing alternative modes of transportation provides many benefits such as cost and time saving, improved air quality, reduced traffic congestion and less dependency on fossil fuels.

Alternative Fuel Vehicles: Vehicles that operate on fuels other than gasoline or diesel. Alternative fuel vehicles include those that operate using compressed natural gas (CNG), liquid natural gas (LNG), propane, electricity, hybrid of gasoline and electricity, and hydrogen.

Biogas: A mixture of methane and carbon dioxide produced by the bacterial decomposition of organic wastes and used as a fuel.

Beneficial Use of Biogas: Methane recovery and purification for use as a fuel source in power production or in vehicles as an alternative to natural gas.

British Thermal Unit (Btu): The amount of heat required to raise the temperature of one pound of water 1oF at sea level.

Carbon Dioxide Equivalent (CO₂e): A metric used to compare the emissions from various greenhouse gases based upon their global warming potential. Carbon dioxide equivalents are

commonly expressed as "metric tons of carbon dioxide equivalents" (MT CO₂e).

Carbon Footprint: The amount of carbon dioxide and other carbon compounds emitted due to the consumption of fossil fuels by a particular person, group, etc.

Carbon Intensity: The quantity of greenhouse gas emitted per square foot (CO₂e/sq ft).

Conservation Easement: A conservation easement is a voluntary, legally binding agreement that limits certain types of uses or prevents development from taking place on a piece of property, while protecting the property's ecological or open-space values.

Conservation Lands System (CLS): The Conservation Lands Systems Regional Plan Policy was adopted as part of the Environmental Element of the Pima County Comprehensive Plan Update in December 2001 and was updated June 21, 2005. The CLS categorizes and identifies locations of priority biological resources within Pima County and provides policy guidelines for the conservation of these resources. These guidelines are applied to certain types of land use changes requested of the Board of Supervisors.

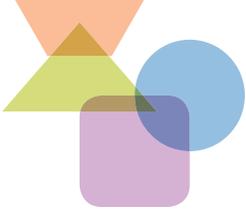
Designated Riparian Habitat: A regulated riparian habitat is defined by the riparian classification maps adopted by the Board of Supervisors. These habitats are generally characterized by vegetation

that is different in plant species composition or an increase in the size and/or density of vegetation as compared to upland areas and occur in association with regulatory floodplains through which waters flow at least periodically, as well as any spring, cienega, lake, watercourse, river, stream, creek, wash, arroyo, or other body of water. These ecological communities represent a continuum of plant species' response to available moisture, and can be subdivided into hydriparian, mesoriparian, and xeriparian classifications as well as identification as important riparian areas providing ecological connectivity and biological corridors.

Energy Efficiency: Using less energy while doing to same amount of work.

Environmentally-Friendly Products: Products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance or disposal of the product or service.

Energy Star Certified: An energy performance rating system for buildings administered by the U.S. government. The rating system provides buildings a score, on a scale of 1-100, relative to similar buildings throughout the nation. Buildings with a rating of 75 or higher may qualify for the Energy Star label.



Energy Star Qualified: An energy performance rating system administered by the U.S. government for consumer products. Devices carrying the Energy Star service mark generally use 20-30% less energy than required by federal standards.

Enhancement: The modification or manipulation of a site of ecological, historical or cultural significance to improve, sustain or restore its integrity and desired conditions.

Greenhouse Gas (GHG): Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydrochlorofluorocarbons, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.

In-Lieu-Fee (ILF): A fee collected as compensation for the disturbance of habitat requiring mitigation. Funds collected through ILF payments are used to implement off-site restoration or conservation projects that offset the disturbance.

Kilowatt-hour (kWh): A unit of measure for energy typically applied to electricity usage and equal to the amount of energy used at a rate of 1,000 watts over the course of one hour. One kWh is equivalent to 3,412 Btu or 3,600 kJ.

Leadership in Energy & Environmental Design (LEED): A third-party certification program

developed by the U.S. Green Building Council. It is the nationally accepted benchmark for the design, construction and operation of high performance green buildings. Certification provides independent, third-party verification that a building, home or community was designed and built using strategies aimed at achieving high performance in key areas of human and environmental health.

MtCO₂e: See "Carbon Dioxide Equivalent."

Private Deed Restriction: A clause written into the deed of a property which places restrictions on how the property can be used by the owner.

Reclaimed Water: Water that has been treated or processed by a wastewater treatment plant or an on-site wastewater treatment facility.

Renewable Energy: Any energy source that is replenished at least as fast as it is used.

Renewable Water: Renewable water sources are defined as effluent, reclaimed water, non-potable groundwater, storm water or harvested rainwater. Pumped groundwater or potable water are not considered renewable water sources.

Riparian Habitat: The community of plant and wildlife found along the banks of a river, stream, lake or other body of water. Riparian habitats are ecologically diverse and may be home to a wide range of plants and animals.

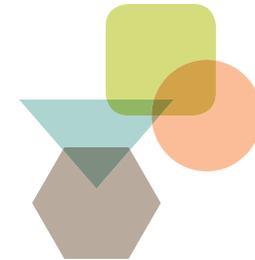
Section 10 Mitigation: Conservation measures implemented to avoid, minimize, and compensate (mitigate) for the incidental take of species protected under the Endangered Species Act.

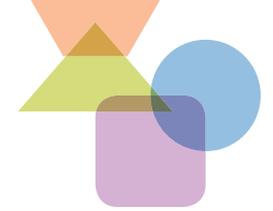
Sonoran Desert Conservation Plan (SDCP): Pima County's plan for balancing the conservation and protection of our cultural and natural resource heritage with our efforts to maintain an economically vigorous and fiscally responsible community. Broadly defined, the SDCP considers the following elements: critical habitats and biological corridors, riparian areas, mountain parks, historical and cultural preservation, and ranch conservation. All five elements, along with fiscal analysis, were critical in forming a viable land management plan for Pima County.

Vehicle Miles Traveled (VMT): One vehicle traveling one mile constitutes a vehicle mile traveled. VMT is primarily an indicator of automobile use. Increasing VMT typically corresponds with increases in traffic and vehicle-related pollution.

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Sustainability topic by chapter and the Sustainability (S) team leads

Chapter

Minimizing the Carbon Footprint of County Government
 Renewable Energy and Energy Efficiency
 Green Building
 Alternative Fuel Vehicles
 Water Conservation and Management
 Land Conservation and Management
 Waste Reduction
 Green Purchasing
 Health and Wellness

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 Economic Development & Tourism
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We want to hear from you

Do you have any thoughts or questions about this report? Please let us know by contacting the Pima County Office of Sustainability and Conservation at SustainabilityPrograms@pima.gov.



SUSTAINABILITY & CONSERVATION



Opened in 1983, Catalina State Park stands as a testament to Pima County's longtime commitment to conservation. Creation of the 5,500-acre park required a complicated series of land swaps between county, state and federal agencies - a precursor of the Sonoran Desert Conservation Plan, which seeks to balance development and conservation.



For more information about what Pima County is doing to make its operations more sustainable and what you can do to reduce the impact of your actions, please visit the Pima County Sustainability Programs Division webpage www.pima.gov.

Sustainability Success Story:



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