Dane County SMART Fund:
A Progress Report of Sustainability Achievements

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Dane County Board of Supervisors --Executive Committee meeting
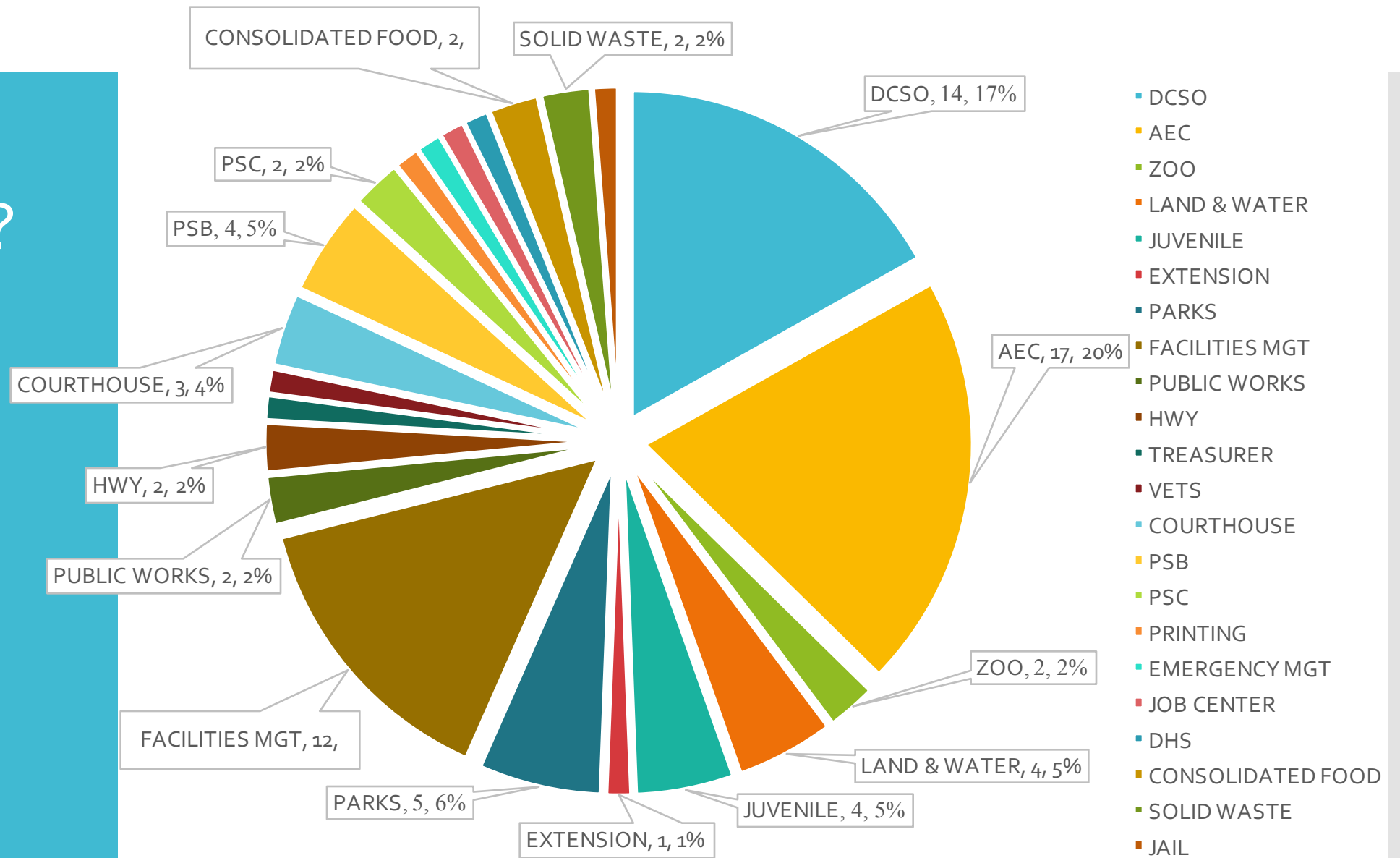June 18, 2020

SMART Fund Report

- SMART (Sustainable Management and Renewable Technologies) Fund Background

- Total of 88 projects awarded funding 2012 -2019

- Total funding provided $4.432 million to date*

- Total monetary savings estimated to date from 26 projects submitting data over ~$800,000

*through 2019 round 2
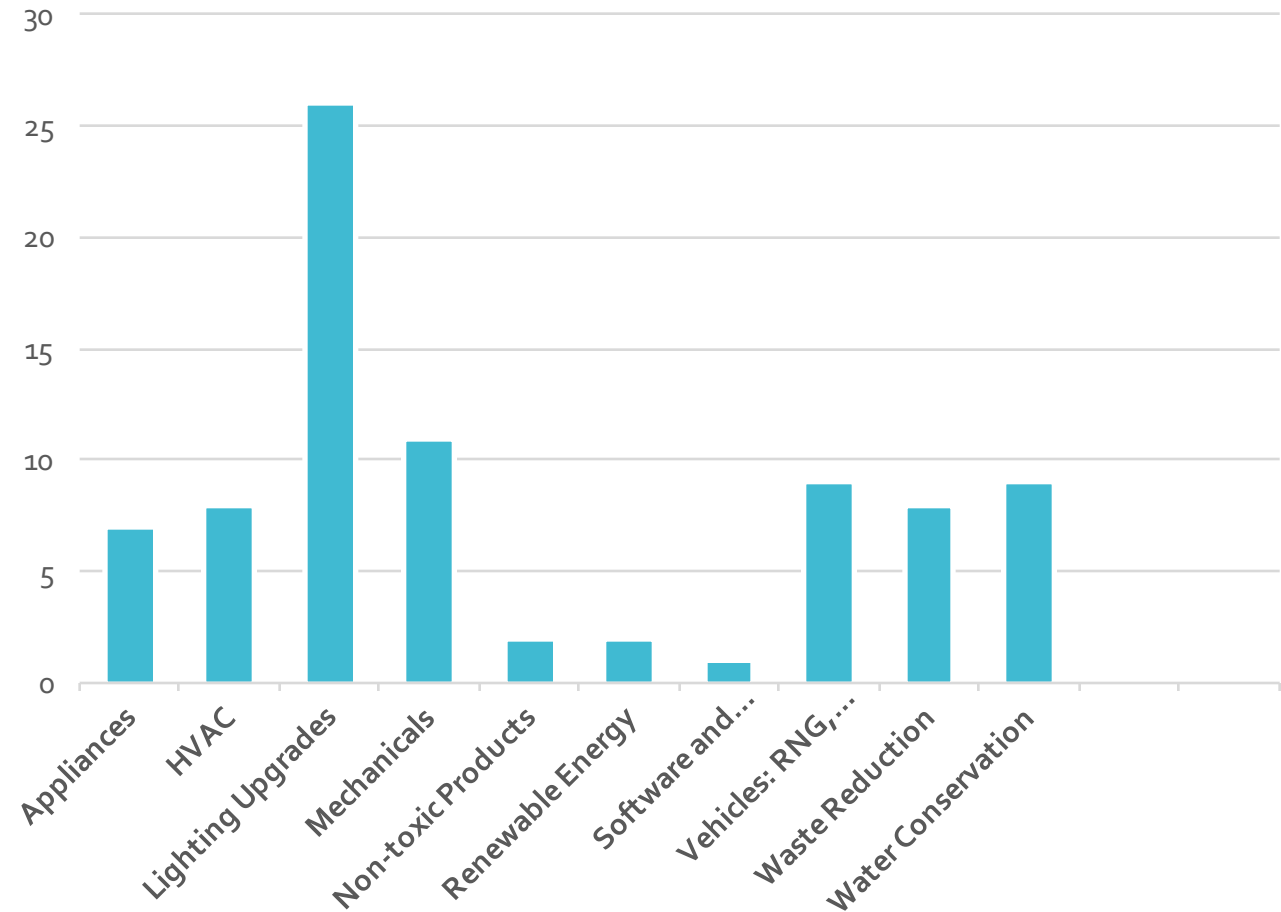
Who uses the SMART Fund?

Funds awarded to 13 different Dane County Departments and Offices and various divisions

CONSOLIDATED FOOD, 2,

SOLID WASTE, 2, 2%

DCSO, 14, 17%

PSC, 2, 2%

PSB, 4, 5%

AEC, 17, 20%

COURTHOUSE, 3, 4%

HWY, 2, 2%

ZOO, 2, 2%

PUBLIC WORKS, 2, 2%

FACILITIES MGT, 12,

LAND & WATER, 4, 5%

PARKS, 5, 6%

JUVENILE, 4, 5%

EXTENSION, 1, 1%

Legend:
- DCSO
- AEC
- ZOO
- LAND & WATER
- JUVENILE
- EXTENSION
- PARKS
- FACILITIES MGT
- PUBLIC WORKS
- HWY
- TREASURER
- VETS
- COURTHOUSE
- PSB
- PSC
- PRINTING
- EMERGENCY MGT
- JOB CENTER
- DHS
- CONSOLIDATED FOOD
- SOLID WASTE
- JAIL

HOW IS THE SMART FUND USED?

Types of projects:

Appliances – dishwasher
Fixtures – hand-dryers
HVAC
Lighting Upgrades – LED
Mechanicals
Non-toxic products
Renewable Energy – Solar
Software
Vehicles – CNG & electric
Vegetative Roof
Waste Reduction
Water Conservation

Tracking & Data-gathering Methodology

- Tracking (Project contacts, metering, measurements, and comparisons)
- Data Reporting Template (46 projects submitted)
- Sustainability Categories:

    a) Energy savings – electricity (kWh) & gas (therms)

    b) Carbon Dioxide emissions (CO_2) avoided

    c) Water savings (gallons)

    d) Solid waste reduction (paper, plastic, salt & brine)

    e) Maintenance reductions (labor)

    f) Other benefits (decrease in chemical usage, health and community benefits

Results

Totals:

Monetary Savings: $811,925.36*
.

Electricity Savings: 1,450, 133 kWh

Gas Savings: 15,267 therms

CO_2: 1046.44 metric tons

Water: 4 million gallons

Solid Waste: 21,000 lbs. of paper

Other Benefits:

- Reduction in maintenance and streamlined workflow
- Decrease in toxic chemical usage (cleaning & mercury)
- Increased community and staff wellbeing
- Access to and increased efficiency for court records
- Aesthetics and building preservation
- Safety
- Public educational elements

*From 26 projects having submitted monetary savings data

What worked well?

- Sustainability benefits are advancing Dane County Government's Sustainable Operations Plans
- Reductions in CO_2 emissions, fuel and energy usage, water use, solid waste, toxic chemicals
- Monetary savings will continue annually for the lifespan of projects, with no additional costs for some projects
- Smaller projects can = faster Return on Investment (ROI)
- Larger projects can = larger savings over time
- Projects provided multiple benefits

Projects that worked well

- Smaller projects can have faster Return on Investment (ROI)
  - Ex: Alliant Energy Center's main marquee LED lighting / 2013

  Awarded $17,128, savings to date of reporting $44,490
  - Ex: Juvenile Detention washer and dryer / 2013

  Awarded $6,050, annual savings $1,100 = total savings to date $7,700

- Larger projects can have larger savings over time
  - Ex: Consolidated Foods Dishwasher replacement / 2016

  Awarded $117,434, saves $10,000 annually, and has saved 635,980 gallons of water over 4 years

- Projects providing many/other benefits
  - Ex: Facilities Management vegetative roof – Improvement in aesthetics, protection of roof from UV ray damage, healthy & quiet space for staff, water runoff reduction

Other Successful Projects:

Henry Vilas Zoo: Solar PV Pathway Lighting (2014)

Henry Vilas Zoo uses solar energy to power 20 pathway lights around the Zoo grounds, reducing electric energy usage, otherwise coming from the grid

Public education elements - info signage on lights shares sustainability message with our more than 725,000 annual guests.

Lower maintenance and recyclable batteries

Lighting improves public, staff, and animal safety

$152,000 to $215,000 savings in electricity costs over lifecycle (likely more savings with recent extension of summer zoo hours)

DCSO: Freeway Service Team Vehicle CNG and LED Upgrades (2018)

- Converted to be fueled with RNG from county landfill

- Awarded $13,595, return on investment/savings to date of reporting $18,551

- 29% reduction in annual fuel costs (saves ~ $5,089 in mileage reduction & fuel annually)

- Equipped with "smart" LED emergency lighting/scene safety lighting to improve safety for operators and other drivers and reduce battery needs.

- Lower maintenance

"The FST Program is probably the most popular service we offer. Local businesses are supportive of the FST Program as they donated the funding to pay for the majority of the truck." — Dane County Sheriff's Office

What could be improved?

- Tracking responsibility of projects
- Information for project contacts on how best to measure savings
- Required annual data submissions
- Expanded knowledge-sharing for departments and offices

Questions?

- Feel free to contact me at mackinnon@countyofdane.com