

# 2016 Annual Report



Right: Members of Sherman Elementary's Green Team are key players in their school's recycling efforts.



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Right: A student at Catlin Elementary assists with recycling efforts as part of their Green Team's activities.





## Overall Impact

The objective of the Green Schools Initiative (GSI) is to improve the district's environmental impact while decreasing related costs. There are four noteworthy metrics that provide a clear indication of the impact the GSI has had on the district. They include financial, environmental, energy, and waste impacts.

**\$7.4 million**  
in cumulative cost reduction and avoidance

**74,000**  
metric tons of CO<sub>2</sub> emissions prevented cumulatively

**21.3**  
Energy Star rating points of improvement from baseline

**144%**  
increase in recycling volume in six years

### Financial

There are many distinguished achievements connected to the GSI, but the financial impact of the initiative stands out. The estimated financial benefits from the GSI to the district are approximately \$7.4 million dollars since its inception when considering savings from energy efficiency and waste reduction.

### Emissions

The environmental benefits are exceptional as well. Energy conservation in buildings kept the equivalent of 74,000 metric tons of carbon dioxide (CO<sub>2</sub>) out of the atmosphere, which is the equivalent of the emissions associated with 7,800 homes' annual energy use.

### Energy

The district's average ENERGY STAR rating for its 81\* schools that are eligible for an ENERGY STAR rating (an assessment of energy use intensity in buildings) now stands at 70.5, which is the highest ever achieved by the district and surpasses the district's goal to be at 70 by August 2019.

### Waste & Recycling

Omaha Public Schools is now recycling over 45,300 cubic yards in a 12-month period - a new high volume of recycling. Cumulatively, the district's volume of recycling is up 144% over the last five years.

\*Belle Ryan, Indian Hill, Ponca, and Franklin are not included due to bond work.

# Awards & Recognition



The Omaha Public Schools continues to receive Energy Star Awards and Green Ribbon Awards. Through the end of 2015, fourteen schools have earned Energy Star Awards. Testing for 2016 awards is underway.

OPS schools continue to win one of the country's most prestigious green schools awards: a Green Ribbon Award. The U.S. Department of Education's program acknowledges success in three pillars:

1. Reduced environmental impact and costs
2. Improved health and wellness of students and staff
3. Effective environmental and sustainability education

In April 2016, Alfonza W. Davis Middle School earned a U.S. Department of Education Green Ribbon Award. Prior winners included

## 2015

Gomez Heritage Elementary  
Wilson Focus

## 2014

District Award (one of nine national awards in 2014)  
Fontenelle Elementary

## 2013

King Science Technology & Magnet

## 2012

Miller Park Elementary  
Lothrop Science & Technology Magnet



Above: Representatives from Alfonza W. Davis Middle School accept their Green Ribbon Award in Washington, D.C.



# Green Schools Initiative Goals

There are many facets to being a green school, but the district is focused on achieving goals in the four specific categories listed below. Of particular note, the district achieved its goal of a district-wide average Energy Star rating of 70 three years ahead of schedule!

The success achieved in the Energy Star category has translated to significant gains in the district's greenhouse gas emissions as well. Most of the district's emissions are a result of energy consumption.

**IMPACT**

If the district were to meet all of the goals, it would have the following annual impact:

- The emissions reductions equivalent of removing 1,900 passenger cars from the road
- Saving 1.4 million gallons of water (over 2 olympic-sized swimming pools)
- Diverting 8,000 cubic yards of waste to recycling

GSI Goals	Status
<p><b>ENERGY STAR</b> Achieve a district-wide average rating of at least 70 by December 2019.</p>	<p><b>District-Wide Energy Star Rating</b> August 2009 Baseline: 49.2 May 2016 Actual: 70.5 (<b>Goal Achieved</b>)</p> <p><b>Estimated Savings:</b> <b>\$7.3 million from 2009-2010 average baseline</b></p>
<p><b>GREENHOUSE GAS EMISSIONS</b> Reduce emissions to 1.36 metric tons of CO<sub>2</sub> per occupant per year by September 2019.</p>	<p><b>Greenhouse Gas Emissions</b> September 2009 Baseline: 1.8 metric tons of CO<sub>2</sub> per occupant per year May 2016 Actual: 1.46 metric tons of CO<sub>2</sub> per occupant per year</p>
<p><b>WASTE &amp; RECYCLING</b> Increase the District recycling rate to 30% per year by December 2019</p>	<p><b>Waste &amp; Recycling</b> July 2010 Baseline: 11.7% recycling rate July 2016 Actual: 24.3% recycling rate</p> <p><b>Avoided Costs: \$80,000</b></p>
<p><b>WATER</b> Reduce water consumption to 2,400 gallons per occupant per year by December 2019.</p>	<p><b>Water</b> August 2009 Baseline: 2,670 gallons per occupant per year June 2016 Actual: 2,566 gallons per occupant per year</p> <p><b>Estimated Savings: None</b></p>
<b>TOTAL ESTIMATED SAVINGS: \$7.4 M since 2009–10 baseline</b>	

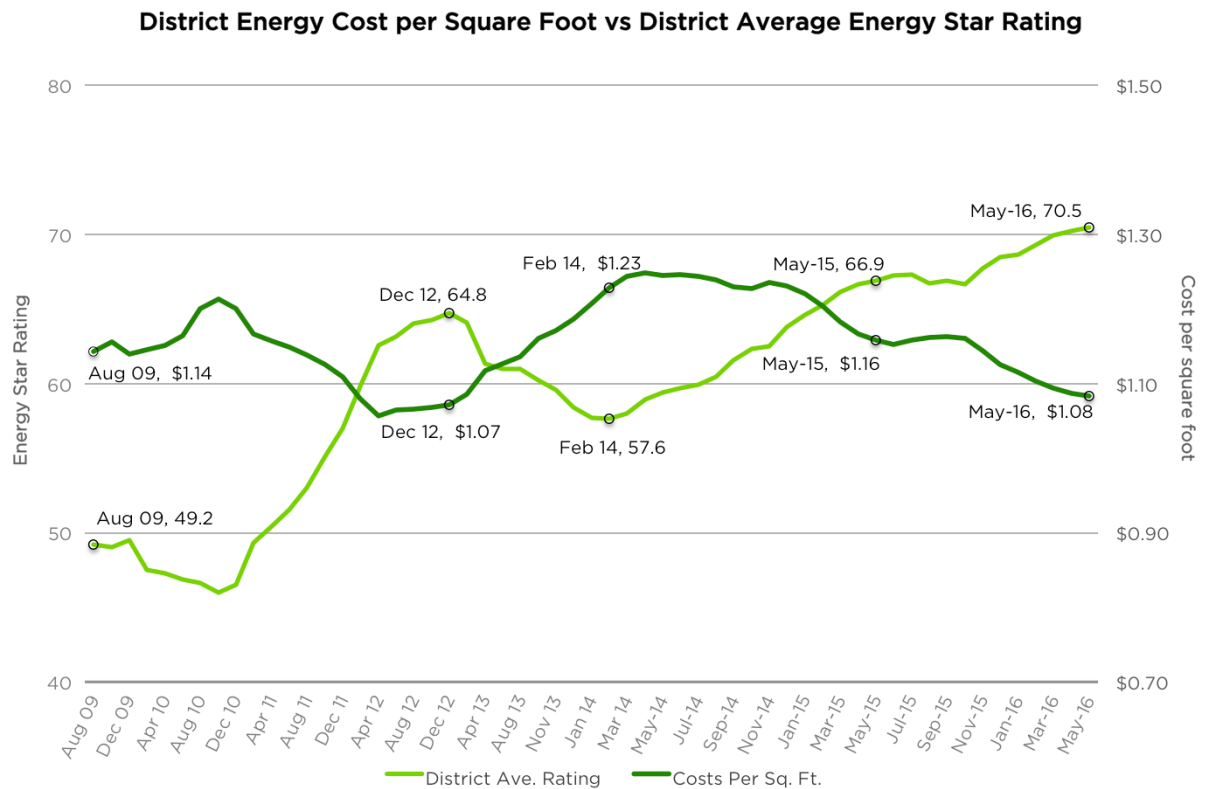
# Energy

The district has experienced a consistent improvement in its Energy Star rating since February 2014 and has surpassed its 2019 goal of a district-wide average Energy Star rating of 70 (currently 70.5). There are many efforts that have resulted in such an exceptional improvement, including but not limited to: good tracking of energy data, consistent analysis of energy trends, broad communication of energy-related opportunities and successes, and implementing new technologies that automate many of these efforts on a real-time basis. GSI staff also visits with each school to discuss their progress and plans for improvement.

Cumulatively, the district has achieved a rather noteworthy return on its energy efficiency and conservation efforts with \$7.3 million in savings and avoided costs when compared to the 2009–10 average baseline.

These energy efficiency measures have also resulted in avoiding 74,000 metric tons of carbon dioxide from entering the atmosphere. This is the emissions equivalent of removing over 15,600 passenger cars from the road.

Right: Historical Energy Star ratings and cost per square foot for the district. The district has experienced a rating increase since February 2014, which in turn decreased costs.





# School Highlight: Alfonza W. Davis Middle School

Alfonzo W. Davis Middle School earned the U.S. Department of Education Green Ribbon Award for the 2015-2016 school year.

Davis is a state-of-the art LEED Silver building, which was built in 2013. The first middle school in the region to be LEED certified, the building was designed and built to reduce environmental impact. Everything from the landscaping to the trash program to countertops were created with

sustainability in mind. Geothermal wells heat and cool the building, and two green roofs reduce the heating and cooling load by providing extra insulation. Native plantings and retention ponds are used to limit water irrigation needs and address water quality and runoff.

Eighty-eight percent of students ride fuel-efficient school buses, many of which use liquid propane instead of diesel. District pro-

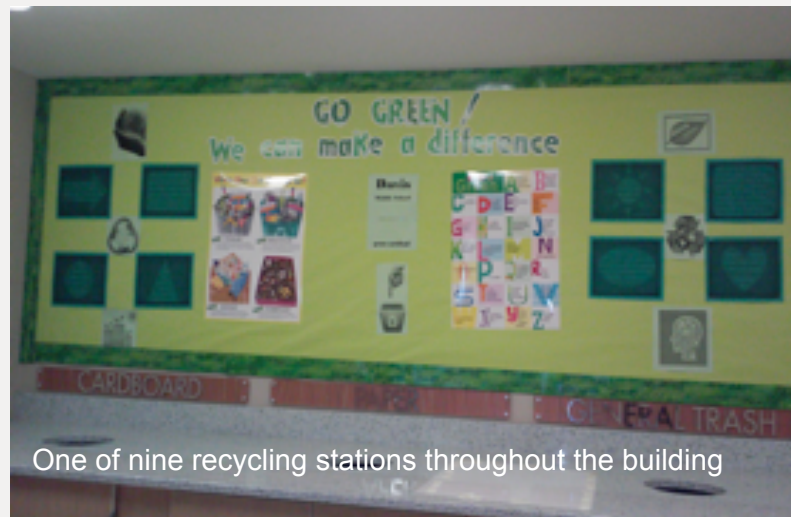
cedures and LEED building features ensure that best practices are in place regarding school environmental health. Natural light is featured in nearly every space in the building, even in basement rooms that traditionally would have no windows.

All teachers are able to spend time outdoors with their classes on the Davis campus. Staff and students, 46

percent of whom are eligible for free and reduced price lunch, focus on wellness each day through the use of outdoor spaces, good nutrition, and wellness activities. In classrooms, students receive education on concepts related to sustainability education, environmental education, and green career pathways in nearly every curricular area.



One of two green roofs



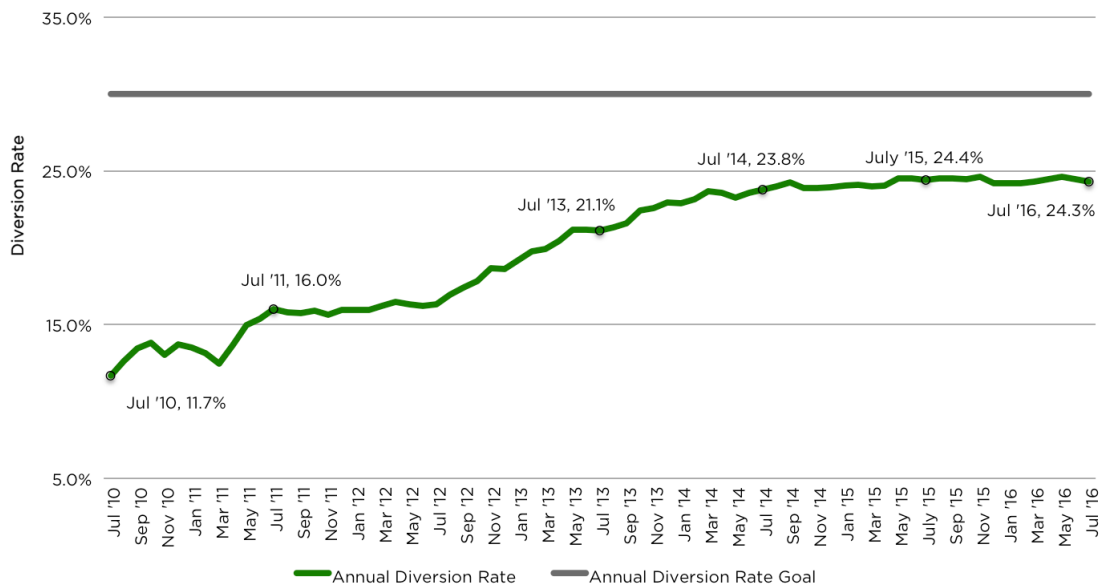
One of nine recycling stations throughout the building

# Waste & Recycling

Since the district started its single-stream recycling program in 2011, there has been a steady increase in the volume of recyclables diverted from the landfill. The 2015-2016 school year set another record for the amount of material recycled, with 43,900 cubic yards recycled from August 2015 to May 2016.

The district's diversion rate has been hovering around 24% for the last two years. Part of the reason for this plateau is an increase in the annual volume of landfill-bound waste primarily due to a steady increase in programming that occurs in each school. Nevertheless, there are opportunities to continue growing the diversion rate, and OPS is dedicated to achieving its goal of 30% diversion rate by 2019.

**District Diversion Rate**  
rolling 12 months total



Left: District recycling volume has increased 130% in five years while the waste volume has decreased 4%. Opportunities to reduce waste volume are often difficult given increases in enrollment, material-intensive programming and fluctuations in the recycling market.

Below: Skinner students help their classmates ensure that all appropriate lunch materials are recycled.

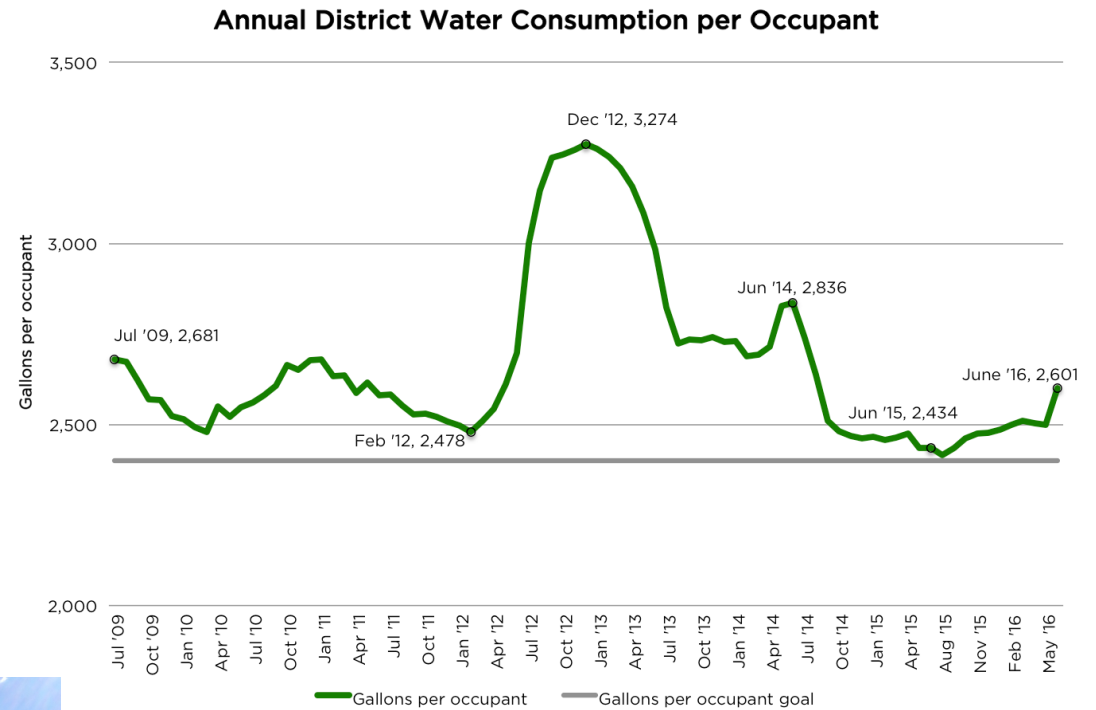




# Water

Irrigation and hot, humid summer weather are the major drivers of fluctuating water use at schools. After significant reductions in water consumption throughout 2013-2015, the district experienced an increase during the spring and summer months of 2016 due to less rainfall and very warm months.

Schools install native landscaping and rain barrels to reduce water use. Communicating and implementing effective and conservative watering practices is also essential to reducing water use, and the district's Energy & Water Management Team is heavily focused on monitoring water use and providing direction and solutions to schools for continued reduction.



Top: District water use per occupant spiked in 2012 due to a significant drought. It recovered nicely for the three years thereafter but has since risen in 2016.

Left: Native landscaping, such as that at Gateway, reduces the need for potable water to be used for irrigation purposes.

## Looking Ahead

The Green Schools Initiative enters into the next year with excellent momentum and opportunities for additional gains. Significant achievements have been made over the last six years - \$7.4 million in savings, Green Ribbon Awards, Energy Star Awards, recycling records - yet there are distinct opportunities to drive for more progress in other areas such as water and waste reduction.

The district remains dedicated to creating clean, healthy, and green learning environments for students. Studies show that the healthiness of the learning environment has a direct correlation to student performance. The Center for Green Schools notes that healthy indoor air quality (a requirement for Energy Star awards) will often improve both attendance and student performance. Other research shows that sustainability initiatives typically create a more engaged workforce, which in turn creates a more productive workforce.

OPS is incorporating some of the latest technologies and many best practices related to energy and water efficiency in the current round of bond construction and renovation projects. Measuring the success of these projects is a high priority for future planning and construction.

For more information, please visit [district.ops.org/gsi](http://district.ops.org/gsi) or contact Susan Colvin at (531) 299-9826.



Wilson Focus and Burke Senior students work on a new raised garden bed.