

Five Star Sustainable

Adams 12 Five Star Schools // Sustainability Report

2020-2021

Sustainability in the time of COVID-19

As the world at large, and Five Star community learn to cope with and pivot from the global pandemic, it's important to remember – sustainability isn't canceled. The sustainability team has been hard at work to develop the next Sustainability Management Plan (SMP), as the current SMP wrapped up at the end of the 2020 school year. Future goals might include expanding school-based green teams to every school, developing a student-led sustainability advisory council, converting more schools to LED lighting, and expanding cafeteria composting programs. Additionally, many staff from custodial and maintenance operations, to school staff and district leadership have worked to ensure our buildings are operating in a safe manner when staff and students are present, and are also not being wasteful when we've had to go to remote operations. Beginning in March 2020 when our first remote operations have been implemented through December 2020, the district has balanced increased ventilation needs with building shutdowns to save roughly \$45,000 in utility costs compared to those same months in 2019. We will continue to support our schools and community through this turbulent time, and are excited to look forward to future sustainability and resilient operations.



Have any great ideas for being more sustainable in the classroom or at home during the pandemic?

Please reach out to shannon.t.oliver@adams12.org so we can share those ideas.

IN THIS REPORT

- Sustainability in the time of COVID-19
- FY 2019-2020 Utilities Benchmark
- FY 2019-2020 Sustainability Management Plan Goals Progress
- The Sustainability Team

Energy and Sustainability is responsible for managing utility use and for promoting social, economic and environmental sustainability for the district. Efforts include installing more energy efficient equipment, managing our water consumption, tracking our bus fleet fuel use and engaging our students to be better stewards of the environment.

We're taking steps to "go green." That means our schools and district departments are working to be wise stewards of our resources. Learn how we are being sustainably smart – and how you can do your part.

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Adams 12 
Five Star Schools

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Fiscal Year 2019-2020 Utilities & Sustainability Benchmark

The process of benchmarking involves establishing a baseline for something you are interested in tracking over time and then comparing recent performance to that historic baseline. For the utilities and sustainability metrics established by the district, a three-year baseline was set for Fiscal Years (FY) 2014-2016. We are then able to compare our performance for each following fiscal year to that baseline period. A few exceptions to this exist:

- Total water use is compared on a calendar year basis, due to the watering season falling within fiscal years during the months of May-September. So while the baseline is still the three-year average, the current benchmark is for the 2019 calendar year.
- No historic data was available for student engagement or waste diversion rate during the three-year baseline period, so those baselines are a one-year period of FY 2016-2017. The current benchmark is the same as the other metrics, FY 2019-2020.

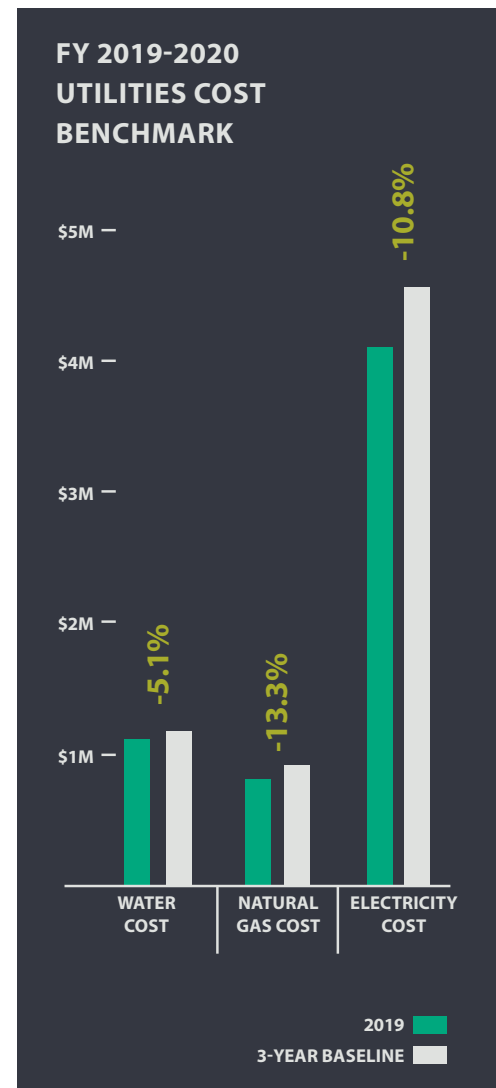
Below is the FY 2019-2020 benchmark data (2019 for total water use) on how the district performed, as well as the utilities cost benchmark for the same periods.

FY 2019-2020 UTILITIES PERFORMANCE BENCHMARK

Parameter	Period	Performance	% Change
 Electricity Use (kWh/yr)	3-Year Baseline FY 2019-2020	39,285,325 38,322,518	-2.51%
 Natural Gas Use (therm/yr)	3-Year Baseline FY 2019-2020	1,640,935 1,699,727	3.46%
 Energy Use Intensity (kBtu/sq. ft.) ¹	3-Year Baseline FY 2019-2020	66.1 66.3	0.27%
 Renewable Energy Offset (%)	3-Year Baseline FY 2019-2020	5.7% 7.3%	28.07%
 Bus Fleet Fuel Efficiency (gal/VMT)	3-Year Baseline FY 2019-2020	5.4 6.2	11.69%
 Indoor Water Use ² (kGal/yr)	3-Year Baseline 2019	53,874.1 44,038.3	-22.33%
 Total Water Use ² (kGal/yr)	3-Year Baseline 2019	187,714 153,443	-22.33%
 Student Engagement (# Green Teams)	FY 2016-2017 FY 2019-2020	29 25	-16.00%
 Waste Diversion Rate (%)	FY 2016-2017 FY 2019-2020	16.9% 17.2%	1.46%

¹ Energy Use Intensity (EUI) is a method for comparing different building types by standardizing their total energy use by square feet of building space and weather normalizing that information. A lower EUI is a more efficient building.

² Total Water Use Benchmark based on calendar year due to watering season.



Fiscal Year 2019-2020 Sustainability Management Plan Goals Progress

During the 2016-2017 Fiscal Year, a Sustainability Planning Committee was convened to produce the first sustainability plan for Adams 12 Five Star Schools. The outcome of this undertaking, the sustainability management plan (SMP), has guided the Five Star District’s development and integration of sustainable practices into the district’s culture through fiscal year 2020. Throughout each year, several goals are being pursued that will help the district have a smaller environmental footprint in our communities while also fostering greater engagement on sustainability topics from our students and staff. The beginning of each school year will be an opportunity to look back on the prior year and see how well we progressed toward those goals. Below is a table capturing our sustainability efforts through June 2020.

There were also two goals set for the past fiscal year for which we were not able to make any progress. These were identified as being either infeasible with current resources, of low priority based on cost/benefit analysis, or simply too complex to address in one fiscal year. While these goals remain as desired targets for the district, additional personnel and/or resources will be needed for success on these items.

	% COMPLETE	GOAL
MET OR EXCEEDED GOAL	100%	Electricity: Develop electricity challenge open to all schools, to occur once per school year beginning with the 2017-2018 school year through the 2019-2020 school year.
	100%	Engagement: Survey all schools once per year regarding green teams/environmental clubs from 2017 through 2020.
	100%	Transportation: Retire and replace three diesel buses with propane buses per year beginning fiscal year 2018 through fiscal year 2020.
	100%	Water: Convert two athletic fields or playfields per year from bluegrass to artificial turf, beginning June 2018 and continuing through June 2020.
IMPROVED, BUT STILL HAVE WORK TO DO	89%	Water: Reduce districtwide water use by 25 percent from July 2013-June 2016 baseline by end of October 2020.
	43%	Waste Management: Increase districtwide waste diversion rate to 40 percent by June 2020.
	41%	Energy Use Intensity: Reduce building specific Energy Use Intensity (EUI) from July 2013-June 2016 baseline by June 2020 for Elementary schools by 15 percent.
	40%	Engagement: Get at least ten schools to host a zero-waste lunch once per school year beginning fall 2017 and continuing through spring 2020.
	34%	Energy Use Intensity: Reduce building specific Energy Use Intensity (EUI) from July 2013-June 2016 baseline by June 2020 for Middle schools by 10 percent.
	29%	Renewable Energy: Offset 25 percent of districtwide electricity use (kWh/yr) with renewable energy by June 2020.
	17%	Electricity: Reduce district-wide electricity usage (kWh/yr) by 15 percent from the July 2013-July 2016 baseline by June 2020.
	15%	Energy Use Intensity: Reduce building specific Energy Use Intensity (EUI) from July 2013-June 2016 baseline by June 2020 for Alternative schools and Support Facilities by 15 percent.
DIDN'T MEET GOAL	0%	Energy Use Intensity: Reduce building specific Energy Use Intensity (EUI) from July 2013-June 2016 baseline by June 2020 for High schools by 10 percent.
	0%	Engagement: Create sustainability report cards on a school-by-school basis to include electricity use, natural gas use, water use, waste diversion and green team metrics. Report cards will be released early each school year, covering data for the previous school year, beginning with the 2017-2018 school year through the 2019-2020 school year.

The Sustainability Team



Chris Wilderman
Maintenance and Operations Director

Chris worked previously for Adams 12 Five Star Schools as the Security Manager before moving to Boulder Valley School District for five years as the Director of Operations, Security and Environmental Services. Eager to return to Five Star Schools, Chris took on the role of Maintenance and Operations Director in July 2017. He leads the sustainability team, facilities/maintenance, custodial operations, community use, and environmental health.



Shannon Oliver
Manager of Energy and Sustainability

Shannon began with Five Star Schools in February 2016, with a passion for minimizing the impact we all have on our surrounding environment and protecting our health from the potential negative impacts of a contaminated environment. He has a Bachelor of Science in Environmental Health from Colorado State University and a Master in Public Health—Global Environmental Health from Emory University. Shannon is excited to work with district students and personnel to achieve meaningful reductions in energy and water use, and help improve waste reduction efforts.



Ed Jolly
Energy Engineer

Ed began with Five Star Schools in July 2018 and entered the energy management and building operations industry in 2002. He has a Bachelor of Science in Mathematics from Metropolitan State University in Denver. Ed is excited to apply his knowledge and expertise to district operations for energy and cost savings.



Bret Lynch
Water Resource Specialist

Bret has been on the Grounds team for Five Star Schools since 2016, has two degrees in horticulture and business, and has been in the landscape industry for 25 years. He is excited to jump in and use his knowledge of botany and integrated pest management to continue making our landscapes more sustainable. The Water Resource Specialist role will continue as the point contact for irrigation programming, and will work with the irrigation techs and grounds team on repairs and other landscape maintenance projects to reduce the largest use area for our water resources. Welcome to the team Bret!