

SMMUSD FY 2021-22 and Summer/Fall 2022 Sustainability Progress Report

With the full return of in-person learning in FY 2021-22, the District's top priority continued to be ensuring student and staff safety in the face of the COVID-19 pandemic. The report below is intended to provide updates, highlight specific sustainability initiatives and note progress made throughout FY 2021-22 and up to October 2022.

Districtwide Energy Usage

Districtwide energy consumption (gas + electricity) increased by approximately 17% in FY 2021-22 in comparison to our baseline year, FY 2017-18. While we exceeded the Sustainability Plan goal for 2020 by reducing energy use by more than 20% during FY 2020-21, the increase over this last year was anticipated for the following reasons. During FY 2021-22, new air conditioning systems were installed at five schools, including Lincoln Middle School. Also during FY 2021-22, the Samohi Discovery building and the John Adams Middle School Performing Arts Complex were in full operation for their first academic year. COVID-19 ventilation protocols were also in effect throughout the year, resulting in higher than average energy use to operate fans and HVAC systems with the windows and doors open. The addition of two significantly large new buildings, added air conditioning for five campuses, and increased operation of HVAC systems Districtwide have all contributed to the increase in energy use this last academic year.

While these major energy impact events occurred, energy conservation efforts continued in the form of operational facilities shutdowns, building HVAC system management, and staff training for behavioral modifications. Due to the large scale of the energy impacts, resultant energy savings have come in the form of avoided costs.

Note: Waiting on SoCal Edison for some missing electric use and cost data from FY 2021-22

Solar Energy

Over summer 2022, project teams for the Samohi Discovery building and Malibu High School A/B building received Permission to Operate from Southern California Edison for the new rooftop solar photovoltaic systems, which were brought online. Additionally, the District has continued to utilize solar generated energy from the Samohi Innovation building rooftop system and 7 elementary school rooftop systems. The solar panels on the former Juan Cabrillo Elementary roof were removed over the summer

of 2022 during the demolition of the campus, part of the larger Malibu High School campus project. The solar panels on the John Muir Elementary campus were also removed in 2021.

Currently, about 22% of the District's electricity is being generated by solar annually from the systems at these 9 sites. With additional solar systems planned for future school buildings, the District will be on track to meet the Sustainability Plan goal of generating 30% of the District's electrical need from solar by 2025. These new solar systems will continue to increase onsite energy generation, improve the District's energy resilience, offset peak demand billing charges and reduce the District's greenhouse gas emissions.

Utility Users Tax (UUT) Refunds and Avoided Utility Costs

UUT is a usage tax on telecommunication, electric, and gas charges billed to a service address. Both the City of Malibu and the City of Santa Monica levy UUT's on gas, electricity and telecommunications services. As a public agency, SMMUSD is exempt from paying this tax, but has still been charged. This year, Sustainability staff identified several District gas and electric accounts which have been charged the UUT but should have been exempt. **Sustainability staff worked to gain UUT exemption for these SMMUSD utilities accounts and received a total refund amount of \$20,710.93.**

Additionally, Sustainability staff identified multiple erroneous billing charges on a Southern California Edison (electricity) service account before they were paid. Once SCE applied the appropriate corrections, this utilities monitoring effort resulted in the **cost avoidance of \$235,329.88.**

Water Conservation – High-Efficiency Plumbing Fixtures

During the summer of 2022, new high-efficiency toilets, urinals and faucet aerators were installed at 4 different schools at no cost to the District. These water efficient fixtures and the installation were funded entirely by the City of Santa Monica's Water Neutrality Direct Install program. This program aims to achieve water self-sufficiency for the City through the installation of water-efficient fixtures and systems on-site.

A total of 40 toilets, 28 aerators and 1 urinal were installed at Santa Monica High School, Will Rogers Learning Academy, Olympic High School, and Washington West Preschool. The total cost of the fixtures and installation was equivalent to approximately **\$25,000.00**, a cost that the District avoided by taking advantage of the City's water conservation program. By converting to 1.28 gpf toilets, 1.0 GPM aerators, and .125 gpf urinals, the District is increasing water conservation efforts in its facilities.

Metro GoPass TAP Card Program Year 2 – Sustainable Transportation

Year 2 of the Metro GoPass program kicked off on July 1, 2022, and all SMMUSD K-12 students were provided TAP cards to ride local public transportation for free through June 30, 2023. As of November

2022, roughly 25% of SMMUSD students have registered a TAP card. Over 40,000 boardings on Metro, Santa Monica Big Blue Bus, and other transit agencies have been recorded. We are on track to exceed the amount of registered cards compared to Year 1 (FY 2021-22), which translates to an increase in the use of public transit and a decrease in vehicles on the road. There has been an especially noticeable increase in student ridership for Santa Monica High School and the Big Blue Bus system, with noticeable crowds at the bus stops around campus.

With more students taking advantage of free public transit via the Metro GoPass program, students, families, and the environment benefit. Students can engage with peers on public transit and get exercise walking to and from the bus stops, parents and guardians may be freed from driving to school, and less vehicular emissions from fewer cars on the road contributes to healthier local air quality.

Webster Elementary Garden Renovation

Webster Elementary received a major garden renovation over the summer of 2022. This project included new landscaping, a walking path, revitalized garden boxes, a new irrigation system, a compost bin, 2 fruit trees and a new outdoor learning space. Garden education classes are ongoing and thriving, where students have been enjoying growing their own food and learning to compost all of their food waste (along with school cafeteria food waste). The Boys & Girls Club of Malibu has been working with students in the new garden and have been maintaining the new space beautifully along with school staff.

Pre-Renovation



Post-Renovation





Franklin Elementary Garden Renovation

Over the summer of 2022, Franklin Elementary received a garden space renovation for their raised beds. The beds previously sat on top of the asphalt, which was not conducive to retaining moisture in the soil. Any rainwater would drain through the garden bed and wash away on the hard surface to the storm drain. The space was excavated, decomposed granite was installed and fresh, native soil was placed beneath the planter beds. Now, students are able to grow plants directly in the beds and those roots branch out into the underlying soil. Water can now infiltrate down into the subsoil where it is made available for root uptake, plant growth and makes a better habitat for soil organisms. The space has changed into a more natural gardening and learning space.

Pre-Renovation



Post-Renovation



Will Rogers Regenerative Farm Expansion

The farm at Will Rogers received an additional 2,300 square feet of decomposed granite space after removing a portion of the parking lot asphalt. This expansion also includes 2 new hose bib connections

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and a drinking fountain for the garden classes. The newly landscaped area provides additional growing space, and may eventually house chickens and a coop. This year, students continue to receive hands-on learning opportunities that tie into NGSS topics such as biodiversity, food systems, composting, and nutrition.

February 2021



October 2022







SaMoHi Discovery Building Rooftop – Hydroponics & Aquaponics Garden

In FY 2021-22, Sustainability staff and Samohi teaching staff developed a plan for aquaponics and hydroponics systems to be installed on the Discovery building rooftop. In June 2022, the Board of Education approved the budget for the plan. These systems will be the first of their kind in the District, and will be utilized by Samohi science classes and student clubs for unique and innovative project-based learning. Sustainability staff and Samohi teaching staff developed a plan for the systems to be built and installed by students, which include a hanging wall garden, standing tower gardens and rows of trays that hold plants. Students will be able to tap into the chemical, biological, and mechanical aspects of growing their own food sustainably and without soil.

A weather station is also being installed on the rooftop, which will allow for real-time monitoring and reporting of local air quality patterns, and allows students to submit data to international weather databases. These systems fit the model of SMMUSD's STEM and project-based learning, as well as our culture of sustainability.

Below is Samohi's Team Marine club assembling the first system to arrive in September 2022! This is the Juice Plus+ hydroponics garden tower system.





Bike It Walk It October 2022 – Sustainable Transportation

Franklin Elementary won the October 2022 Bike It! Walk It! Bus It! competition with 94.1% student participation! This is Franklin's first win in years, and they logged a record high participation percentage. The event promotes alternative, sustainable forms of transportation for getting to school, and encourages students to use their Metro GoPass TAP card and ride public transit whenever they can. Franklin will receive the Golden Sneaker trophy as well as a school-wide ice cream party for their victory!



E-Waste

All Districtwide electronic waste (e-waste) in FY 2021-22 was donated to Human-I-T, a local non-profit organization that refurbishes technology items for students, families and non-profits in need and responsibly recycles end-of-life items. SMMUSD continues to divert 100% of all electronic waste from landfills.

Total amount of E-waste donated from July 1, 2021 to June 30, 2022:

- **18,764 lbs.** of e-waste donated to human-I-T and diverted from the landfill

Environmental impact equivalent to the amount of e-waste diverted:

- ✓ 36 cars taken off of the road for one month
- ✓ 27 semi-truck tankers of chemicals left dry
- ✓ 625 home swimming pools water conserved
- ✓ 23,678 drums of oil saved

Our donation provided a combination of:

- 188 devices with one year of tech support for people in need
- 286 digital literacy learners
- 782 internet connections at high-speed and low or no-cost

Since 2018, SMMUSD has donated 54,636 lbs. of technology to Human-I-T. Diverting e-waste from landfills is a District Sustainability best practice because the heavy metals and toxic chemicals found in these items are harmful to the atmosphere, groundwater, and human health when not responsibly managed. Recycling e-waste also adds to avoided greenhouse gas emissions that would have come from the manufacturing of new devices.

Please email Austin Toyama, SMMUSD Sustainability Manager, at atoyama@smmusd.org with any questions.