



Board of Commissioners
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Executive Director
 Stephen J. Norman

To: Board of Commissioners
From: Resource Conservation Team
Date: July 8, 2021
Re: **2017-2021 Environmental Sustainability Plan (ESP): 2020 Results**

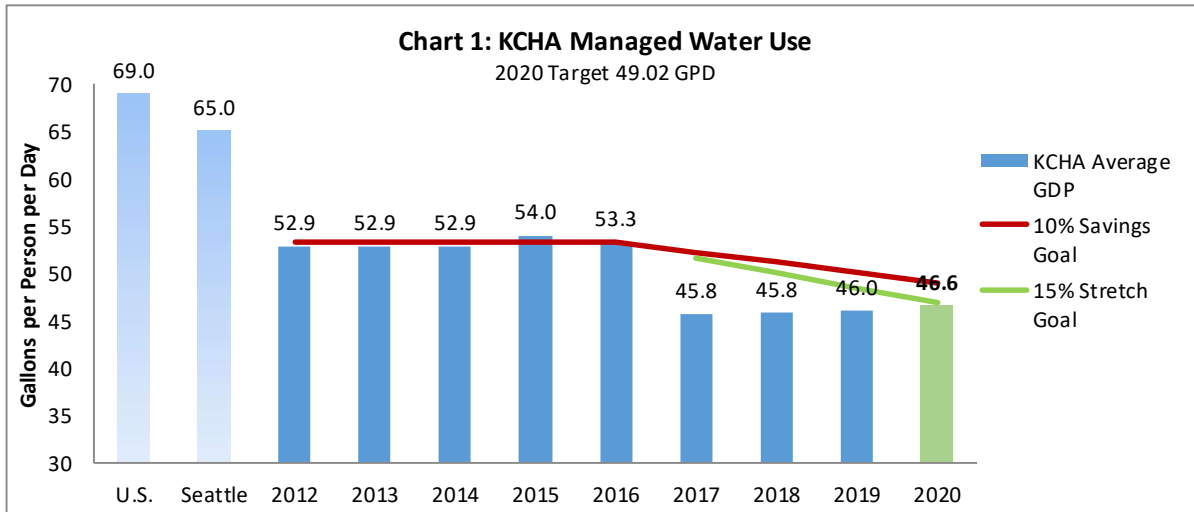
EXECUTIVE SUMMARY

The Resource Conservation Team is pleased to present the results of KCHA’s 2020 efforts to achieve the sustainability targets outlined in the 2017-2021 Environmental Sustainability Plan, adopted by the Board on November 21, 2016. Agency-wide sustainability efforts continued to make gains despite the COVID-19 pandemic which impacted staff’s field work abilities as well as water and energy savings as a significant percentage of residents stayed at home. This current year, 2021, marks the final year of the 2017-2021 Five Year Plan and the Resource Conservation Team will be presenting a new Resource Conservation Plan for Board consideration later on in the year.

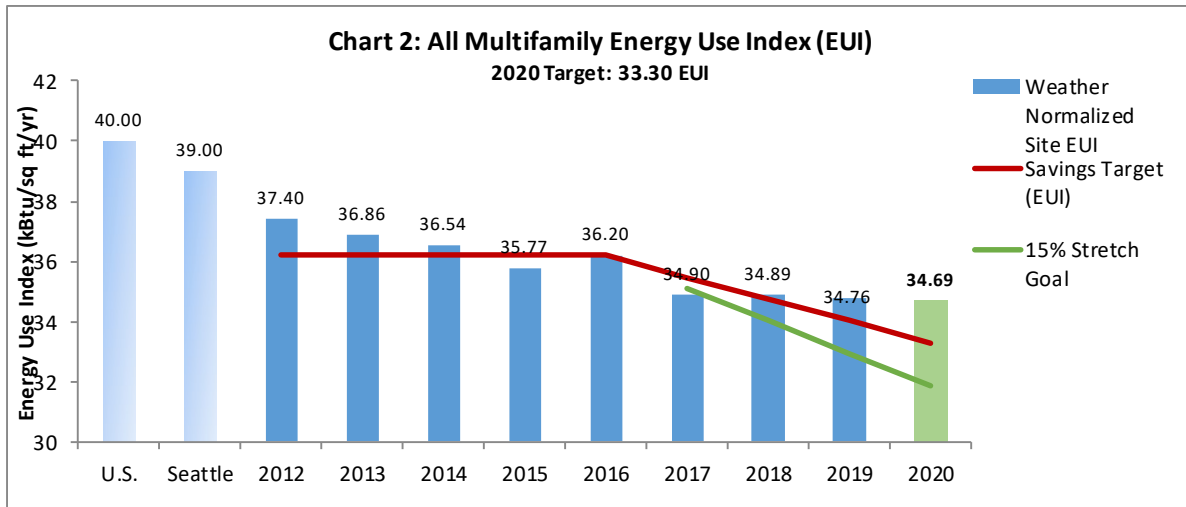
Sustainability Targets through 2021	2016 (baseline)	2020 Goal	2020 Actual	Goal Achieved
1) 10% Reduction in Multifamily Water Use: Gallons/ Person/Day (GPD)	53.28	49.0	46.6	Yes
2) 10% Reduction in Multifamily Energy Use (EUI - 1k British Thermal Units/Square Foot)	36.2	33.30	34.69	No
3) 5% Reduction in Multifamily Greenhouse Gas Intensity (Kg CO ₂ e/Square Foot)	3.92	3.76	3.309	Yes
4) 100% Increase in Kilowatts (KW) Solar Energy Capacity	99.73	195	234.53	Yes
5) Achieve a 55% Waste Diversion Rate	40%	52%	45.4%	No
6) 60% of KCHA properties are EnviroStars Certified	N/A	45%	42%	No
7) 25% of Fleet Alternative Fueled	8%	21%	22%	Yes

Performance in Each Sustainability Target Area

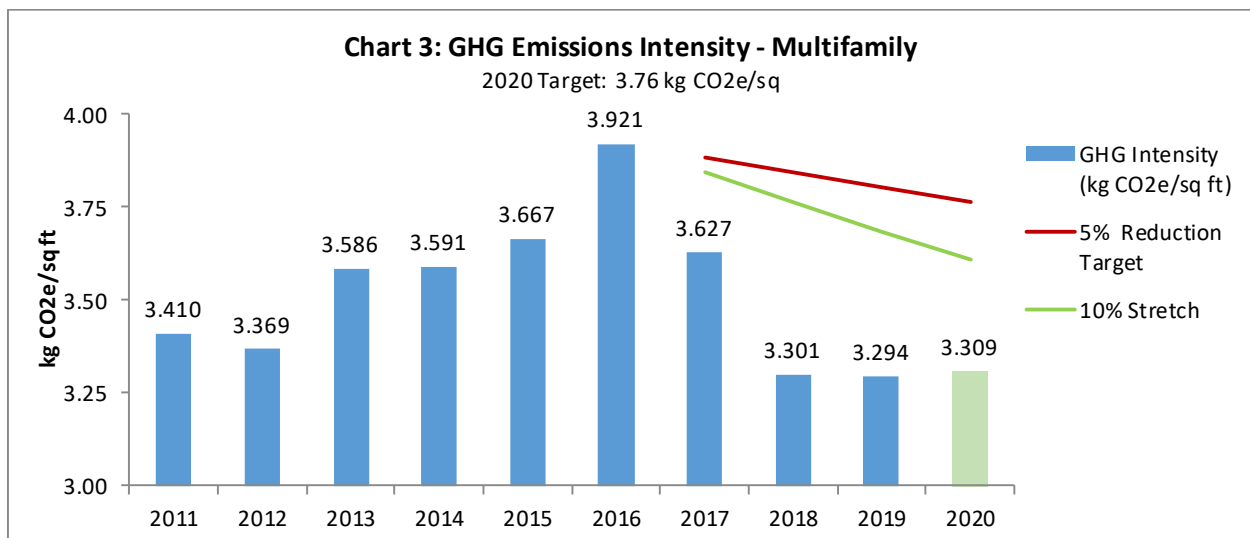
2020 Target 1: Water usage of 49.0 Gallons per person per day (GPD) or less at KCHA-managed properties. KCHA surpassed the water reduction goal for 2020 with a result of 46.6 GPD. Although 2020 consumption was slightly higher than seen in 2019, this was likely the result of the pandemic. In contrast, GPD for KCHA properties managed by private management firms was 53.7 in 2020. Landscape irrigation contributed to the higher combined annual water consumption for these properties.



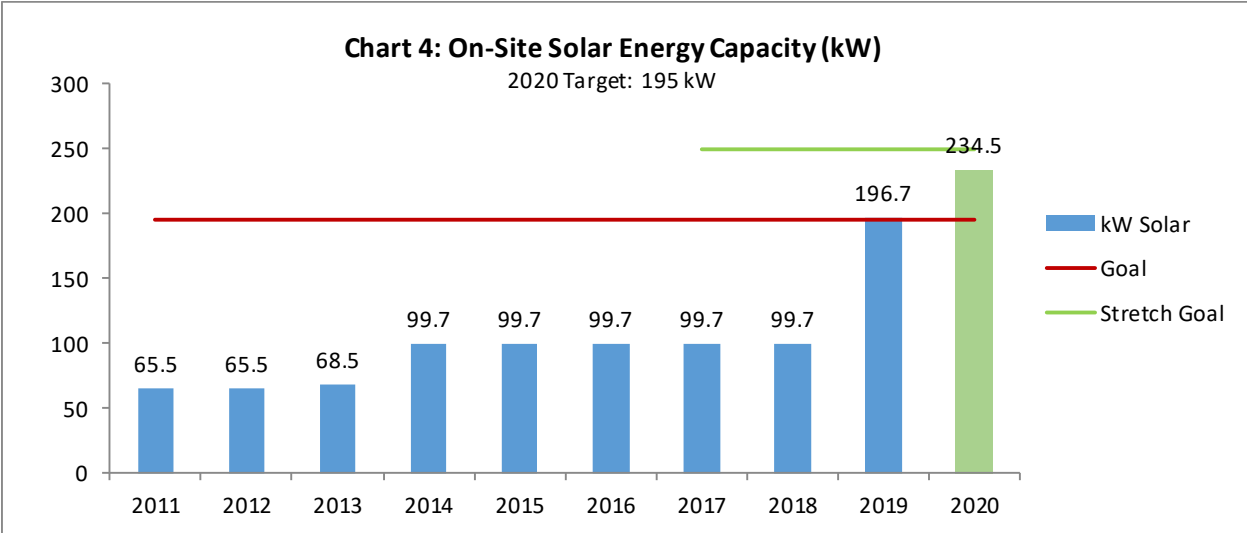
2020 Target 2: Whole Property Energy Use Index (EUI) of 33.3 kBtu per Square Foot or less for all multifamily properties (including whole building energy consumption at both KCHA-managed and Asset-Managed properties). Although KCHA fell 4% short of this goal with the 2020 result of 34.69 EUI, there was still a modest decline from 2019. It is believed that the pandemic's stay-at-home requirements impacted energy usage. Efficiency improvements funded through the Weatherization Program and substantial renovation projects are the major sources of energy savings.



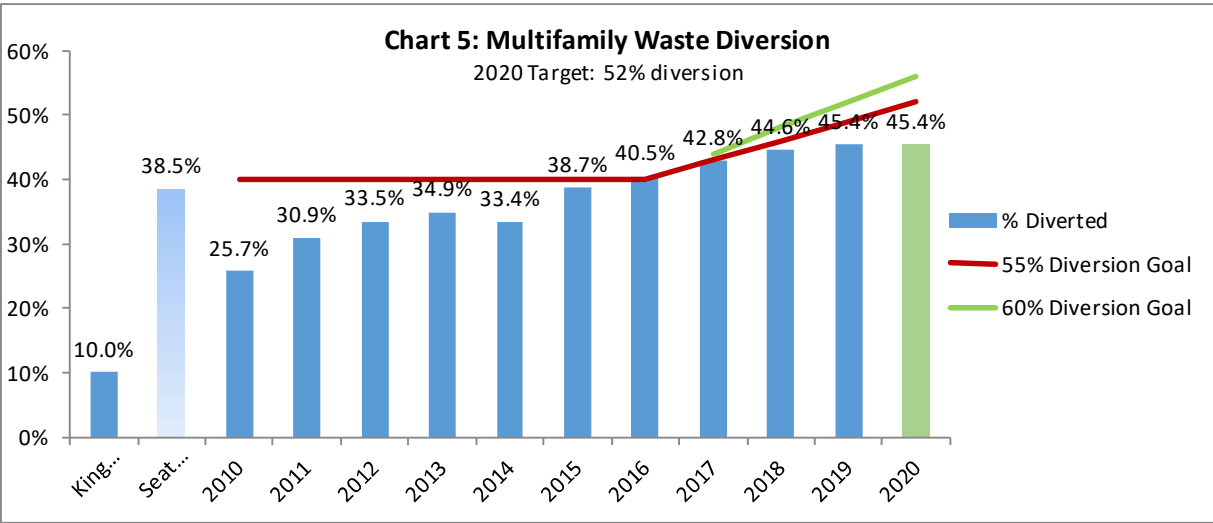
2020 Target 3: Whole property Greenhouse Gas (GHG) emission intensity of 3.75 kg CO₂e per square foot or less. KCHA surpassed its GHG reduction targets by 12%, finishing 2020 at 3.309 kg CO₂e. A comprehensive multi-sector GHG emissions report for the year will be available at the end of 2021. The relatively large decrease in GHG emissions intensity from the baseline year (2016) is attributed to electricity decarbonization at the Utility level, as well as fuel switching and energy efficiency gains at KCHA’s properties.



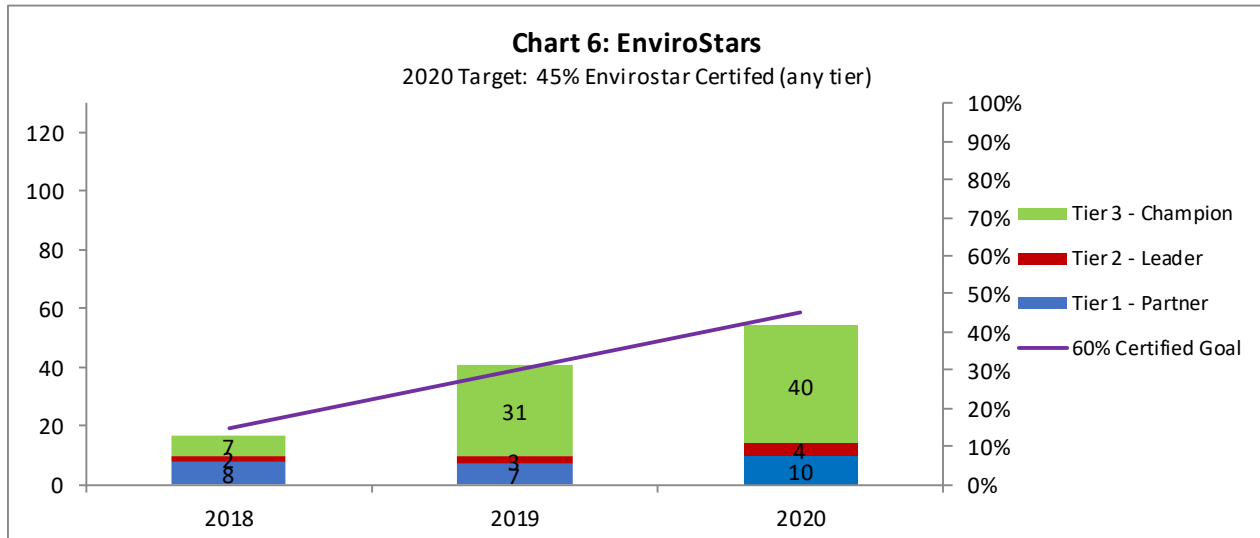
2020 Target 4: Solar energy capacity of 195 kilowatt hours (kW) or higher. Solar projects continued to pick up speed in 2020 as a 38 kW system was added at Meadows on Lea Hill bringing KCHA’s total capacity to 234.5 kW. In December of 2020, KCHA won another PSE solar grant which will cover a 50kW project at Vantage Point in 2021.



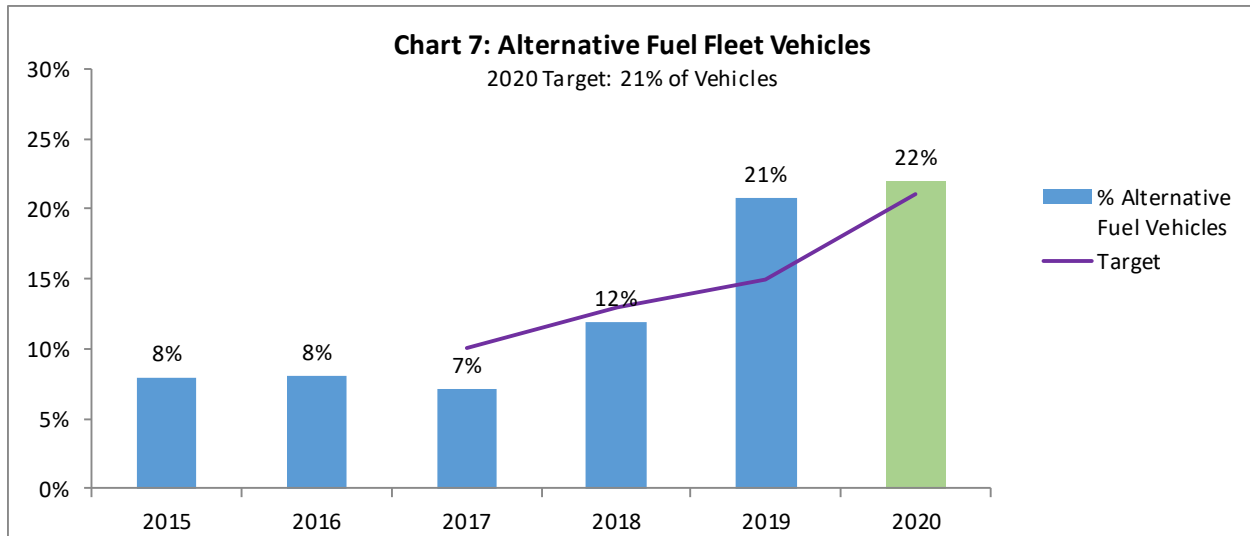
2020 Target 5: Diversion of 52% or more of waste generated at all multifamily properties away from landfills. 2020 saw a diversion rate of only 45.4%, although this rate held steady from 2019. Nationwide, diversion rates have been affected by China’s ban on accepting paper and plastic recyclables for processing. Waste hauling companies require cleaner recycling and in some cases have implemented contamination charges. Therefore, staff are focused on programs aimed at reducing contaminated recycling as opposed to increasing recycling. We will continue to evaluate opportunities to increase waste diversion and reduce material being sent to the landfill. Since 2015, overall solid waste costs have been cut by over \$160,000.



2020 Target 6: Achieve EnviroStars certification at 45% or more of KCHA properties. Although 2020 results fell short of the goal, 13 additional properties were certified during the year, bringing KCHA’s total to 54 properties, or 42% of the overall portfolio. Certification by King County’s EnviroStars program shows that KCHA is practicing a broad spectrum of sustainable property management practices for energy, water, pollution prevention, drainage, wastewater, and solid waste and reducing the environmental footprint of its properties. The program helps property managers implement the resource conservation practices that are engrained in KCHA standards.



2020 Target 7: 21% or more of KCHA vehicle fleet powered by alternative fuel sources. KCHA exceeded this target as 22% of its fleet is powered by alternative fuel sources which include vehicles powered partly or completely by non-gasoline and diesel fuels. These vehicles reduce CO₂ emissions and decrease air pollution. KCHA began buying traditional electric hybrids in 2003 and in 2018 began buying plug-in electric hybrids and propane fueled vans. Of note, electric vehicle charging stations encourages the use of alternative fuel vehicles by staff, residents, and the general public. KCHA has already installed 23 charging stations at 19 properties. Three stations are planned for installation in summer 2021.



Other 2020 Highlights and Current Year Initiatives:

- Weatherization Projects:** Last year, KCHA’s Weatherization program spent \$1.34 million in program funding to complete energy conservation measures in units at eight KCHA multifamily properties. Those measures included heating systems (ductless heat pumps and furnaces), insulation (walls, attic, and floor), air sealing, mechanical ventilation (bathroom fans and energy recovery ventilators), tank-less water heaters, and low cost items (LED bulbs, showerheads, and faucet aerators).
- Sustainable Landscape Initiatives:** Over the past several years, KCHA has assessed the water efficiency of the landscape irrigation systems at close to 20 properties. In 2019, KCHA began replacing irrigation controllers with “smart” controllers that automatically adjust watering schedules based on weather inputs. A pilot project at Ballinger Commons reduced water consumption by almost 20% and saved almost \$24,000 compared to previous years. In 2020, two more smart controllers were installed—one at Windsor Heights and one at the Riverstone Apartments.
- Solar Installations:** KCHA’s alternative energy efforts got a boost in December 2020. KCHA won a \$100,000 grant from Puget Sound Energy (PSE) to install solar at Vantage Point. In 2020, KCHA also registered the three 2019 solar projects with the State’s *Renewable Energy System Incentive for Community Solar & Shared Commercial Solar Projects* enabling KCHA to direct an estimated \$70,000 in renewable energy incentive payments over the next seven years to resident programs at Meadows on Lea Hill.
- King County Zero Waste of Resources Grant Projects:** With a \$36,000 grant from King County Solid Waste Division, Resource Conservation and Resident Services carried out a Green Gardening project at Seola Gardens and Greenbridge, an “Eco-living

Challenge” program for the Boys/Girls and Neighborhood House youth programs, and a waste reduction and recycling project at Greenbridge. Despite the pandemic, which vastly changed the original scope of work, the program engaged 80 gardeners, 100 youth, and 225 households and provided tools, live classes (outside), virtual trainings, and a Fall cleanup event dubbed “Cleanbridge”—all with a focus on hazardous chemical reduction, waste reduction and recycling, donation and reuse, safer cleaning methods, and community stewardship.

- **Juanita Creek Restoration:** The King Conservation District (KCD) awarded KCHA two grants for creek restoration projects at Juanita Court (\$12,000) and Casa Juanita (\$20,000), with KCHA contributing \$3,000 towards the two projects. KCD not only provided the funding and technical assistance, but also planted over 1,300 native plants and removed invasive, destructive plants along 25,000 square feet of Creekside land. KCD will maintain the area for the first 3 years.
- **Greenhouse Gas Reduction Initiatives:** It has become clear, at the State, Federal, and International level, that rising Greenhouse Gas emissions must be curbed and then reduced in order to avoid the worsening effects of global warming. Our next sustainability plan will prioritize carbon reduction and environmental justice initiatives to make sure we are not just mitigating but adapting to changing weather patterns, some of which we are already experiencing.

To carry this work out, in an effective and equitable manner, KCHA will be looking to multiple sources for guidance. Resources include the U.S. Department of Housing and Urban Development’s *Community Resilience Toolkit*, King County’s *2020 Strategic Climate Action Plan*, the State of Washington *Climate Commitment Act*, and KCHA’s very own Board of Commissioners Resolution No. 5005: *Commitment to Sustainable Communities Through Excellence in Environmental Stewardship*.