2019-2021
Climate Action Plan Progress Report

A glance at our progress towards carbon neutrality

CITY OF CUPERTINO

City of Cupertino
Committed to Sustainability

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Awards

The City of Cupertino earned the Platinum Level Award in 2020 from the Institute for Local Government (ILG) for climate leadership. This award is a monumental achievement and publicly acknowledges the leadership and efforts taken by the City to reduce greenhouse gas emissions.

Introduction

This report, prepared by the Sustainability Division within the Office of the City Manager, summarizes progress toward implementation priorities related to energy, waste, transportation, water, adaptation and climate resiliency measures set forth in the Climate Action Plan (CAP).

In January 2015, the Cupertino City Council adopted their first Climate Action Plan (CAP) to address climate change challenges. The goal is to reduce total greenhouse gas (GHG) emissions consistent with California Senate Bill (SB) 32. The CAP identifies emissions reduction strategies that are informed by goals, values, and priorities of the Cupertino community.

Based on our 2020 check-in, the City continues to make significant progress on GHG reduction. The City met its 2020 GHG reduction goal of 15% below 2010 levels, two years ahead of schedule, even with population and economic growth. Since we met our 2020 targets, the City Council authorized the creation of our CAP 2.0, which we hope to adopt in the summer of 2022. The following report describes an overview of our progress during the calendar years 2019, 2020, and 2021. Then, we identify key actionable items in each sector that has led to great impacts towards our GHG reduction from 2010 to 2021. Lastly, we offer a list of active and upcoming projects.

HIGHLIGHTS 2019 THROUGH 2021

Community Resilience Grant Received

Reach Codes Adopted

Single Use Plastics Ordinance Project

Climate Action Plan Update Project

Launch of Via-Cupertino

Green Stormwater Infrastructure Plan

Launch of Climate Victory Gardens

Expanded Work From Home

Greenhouse Gas Emissions

2018 Emissions 15% Below 2010 Levels

The City measures its progress in reducing greenhouse gas (GHG) emissions by comparing new emissions data with those from previous years. Cupertino reduced community-wide emissions from the energy, solid waste, transportation, and wastewater sectors.

By achieving 15% reduction in GHG emissions, the City reached its 2020 GHG target ahead of schedule.

2010

408,176 Metric Tons CO2e

2018

346,998 Metric Tons CO2e

The GHG inventory totals in this report differs from previously reported emissions. As part of the CAP update project, the City revised its inventory calculation methodology to align with more current transportation modeling. Our methods are detailed on our CAP 2.0 website.

Q: Of all the 40+ measures in the CAP, what was the most impactful for emissions reduction?

A: The launch of Silicon Valley Clean Energy (SVCE) and switch to carbon-free electricity for the whole community. This was the driving factor of us achieving a reduction of carbon emissions and increasing community benefits.

In 2020, the City of Cupertino was recognized by the Global Covenant of Mayors for Climate & Energy for its action on climate mitigation and adaptation as well as earning the 'Compliant' badge for leadership at the forefront of climate action.

globalcovenantofmayors.org/cities/cupertino-ca/

Mitigation Badge

Adaptation Badge

Energy Efficiency

Energy usage in Cupertino comes primarily from natural gas, transportation, electricity, off-road sources, solid waste, and wastewater. In 2016, the City of Cupertino, along with 13 other Silicon Valley agencies signed the 'Joint Powers Agreement.' By signing the agreement these agencies agree to switch to carbon-free electricity, which remains to be the single most impactful measure in the years since the CAP of 2015.

Carbon-Free Energy Supply

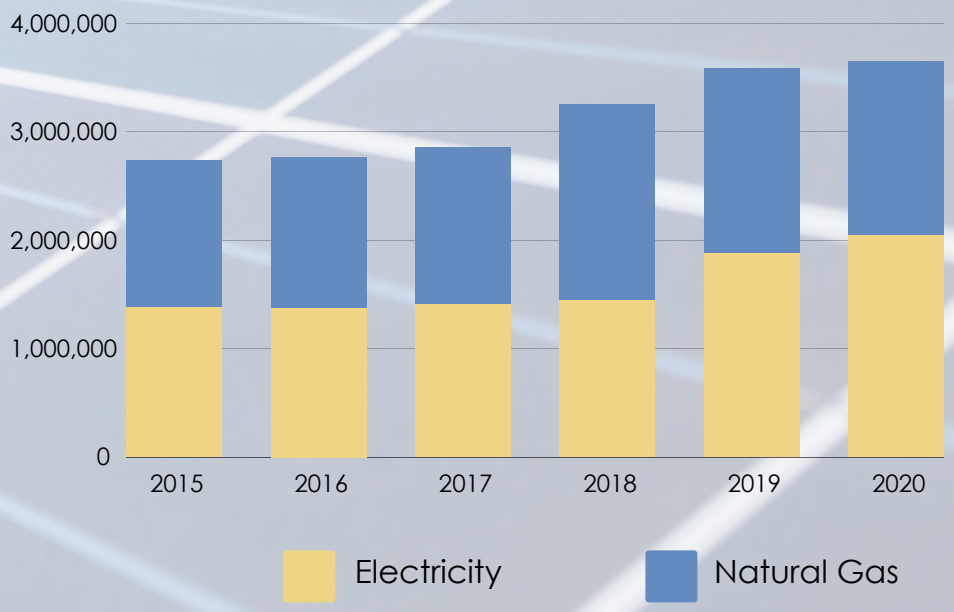
- Immediate GHG benefits
- Ripple effects as Community Choice Aggregation (CCA) matures and expands electrification and grid stability programs
- SolSmart Gold Award
- Municipal facilities run on 100% renewable electricity from SVCE GreenPrime
- Even while energy use increases, emissions are reducing over time

All Electric Reach Code

- Beginning in 2020, this action, while not affecting our current emissions, will keep GHG emissions low while the city continues to grow
- All electric reach code keeps cost low, prevents pollution, and uses clean energy from the grid

Community-Wide Energy Usage

in Million British Thermal Units (MMBtu)



Solid Waste Reduction

Solid waste, such as food scraps, yard trimmings, paper, and carboard release greenhouse gas methane when disposed in landfills. As a direct response, the City continues to work on reducing organic waste sent to landfills by recycling organic waste into new products (e.g., compost, mulch, biofuel, electricity) and paper products that are recyclable and contain postconsumer recycled content.

Expansion of Composting Program

The City's Environmental Programs team has expanded their composting program by implementing:

- curbside composting for residents
- backyard or worm composting education
- food waste prevention strategies
- offering two bulk compost sites for residents

2017

- Reduce communitywide landfilled organics and inorganics
- Reduce overall waste generated per capita.

2020

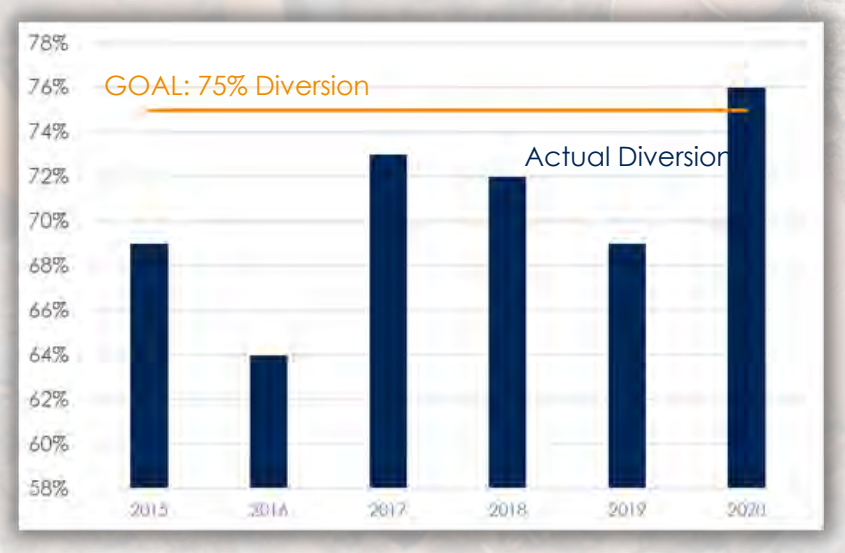
Diversion Goal: 75%

Diversion Achieved: 76%

Zero Waste Goal

- Cupertino has reached its goal of 75% solid waste diversion
- The City continues to develop waste prevention strategies to continue this upward trend of solid waste diverted away from landfills

Community Solid Waste Diversion Rate



Alternative Transportation

The City envisions an inviting, safe, and multi-modal transportation network that promotes active living and healthy transportation choices to further enhance the quality of life for all residents and visitors.

Class IV bike lanes are on-street bicycle facilities that separate cyclists from vehicle traffic by some form of physical protection such as a curb, on-street parking, flexible bollards, or concrete planters.

Bicycle Plan

Class IV Separated Bike Lanes

COMPLETED

2.75 roadway miles

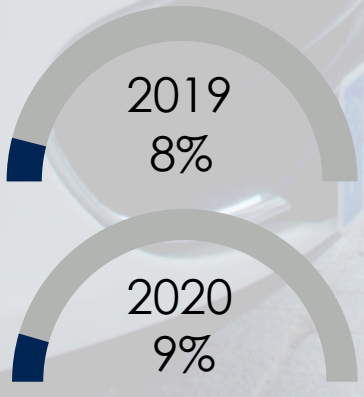
DESIGN PHASE

1.9 roadway miles

Electric Vehicle Adoption

Cupertino has one of the highest EV adoption rate compared to other Bay Area zip codes. Switching from dirty fuels to clean electric cars reduces pollution now and supports the market development for the future.

Battery Electric Vehicle and Plug-In Hybrid Electric Vehicle Total Ownership



Cupertino VIA Launch

Launched in 2019, the success of this pilot, connecting people to public transit, has shown us the potential to reduce traffic congestion and pollution

cupertino.org/shuttle

Water Conservation and Stewardship of Natural Resources

California is in a drought emergency and in response, the City has developed a goal of at least 20% water usage reduction per capita to promote water conservation. Cupertino continues to meet the 20% and has stayed consistently above the goal. The following action items are a few additional highlights.

Valley Water Cost-Share Agreement

- Investments made in response to drought emergency in 2016 to match Valley Water Rebates for water conservation
- Expanded programs to include Climate Victory Gardens in 2020
- Cost share funds contributed by the City to Valley Water rebate programs are $2,993 in 2019, $20,094 in 2020, and $31,249 in 2021

2019 Stormwater Protection Plan

- Approved by City Council in September 2019

Urban Forest Protection and Expansion

- Tree Plotter Online Inventory

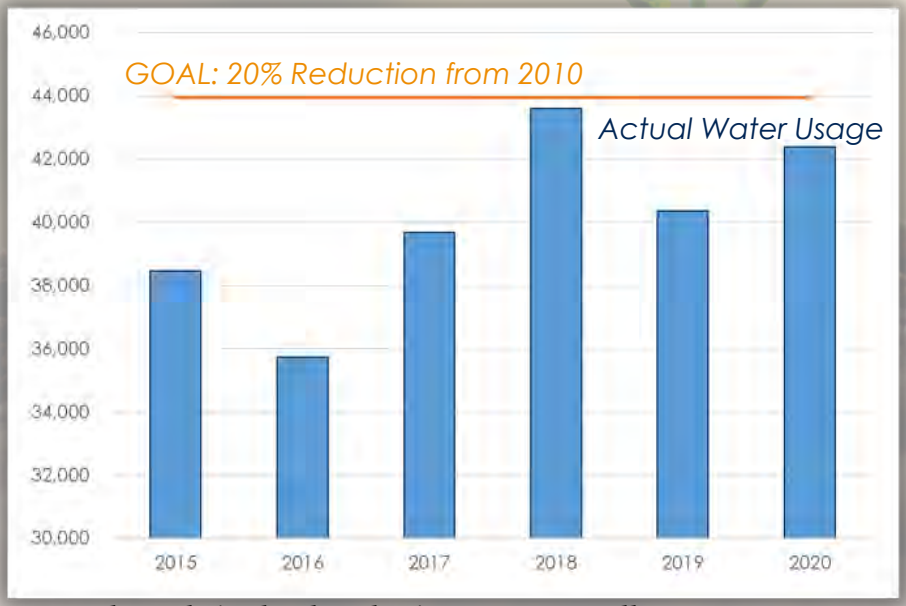
2010

Goal: 43,944 gallons per person or less water usage

2020

Achieved: 42,397 gallons per person water usage

Water Usage Per Capita (Per Person)



Note: The scale in the chart begins at 30,000 gallons

Total Community-Wide Water Usage

2013

3,349,637,500 gallons per year

2020

2,692,814,197 gallons per year

Adaptation and Community Resiliency

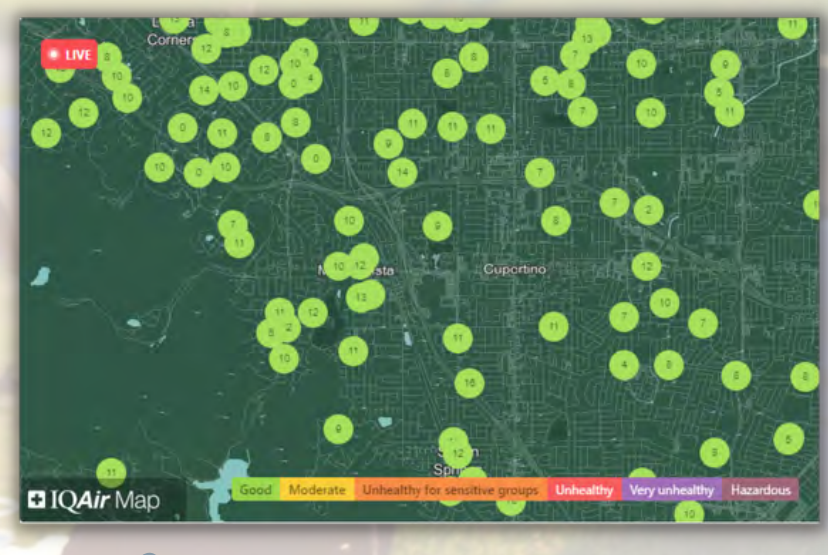
By establishing climate adaptation measures such as green infrastructure and biodiversity protection, we continue to build adaptation and community resiliency. Cupertino has developed multiple on-going projects to support residents during climate unpredictability. In 2020, the City received grant funding from SVCE's Community Resilience Program to address power outages and build upon capital projects.

Community Resilience Grant

Climate Victory Gardens (CVG) 2020

cupertino.org/climategarden

Real Time Air Quality Monitoring Pilot Program



iqair.com/us/usa/california/cupertino

Active and Upcoming Projects

Climate Action Plan 2.0

Cupertino Climate Challenge

Create your own personal climate action plan by taking the Cupertino Climate Challenge

Silicon Valley Youth Climate Action (SVYCA) CREST Award 2021

Single Use Foodware Ordinance Project

2022 Earth Day and Arbor Day Festival

Highlight on Sustainability Division Interns and Fellows

Vanessa Shin

Originally from Honolulu, Hawaii, Vanessa graduated from Santa Clara University with a degree in Environmental Science. After joining Cupertino as a Fellow, she developed an energy use database, and supported the response to COVID and the wildfires in the summer of 2020. Vanessa now works as community outreach specialist for Peninsula Clean Energy.

Brendan Norton

Brendan served as CivicSpark Fellow in Cupertino in 2020 and created original research on equity and the environment, electric vehicle charging. After his fellowship in Cupertino, Brendan secured a job working with a land use consulting firm.

Ritu Atreyas

Ritu joined Cupertino as an intern while she was finishing her senior year at Monta Vista High in 2021. Ritu supported the 2021 Virtual Earth Day event, and helped the team to coordinate with local high schools on environmental education.

Manpreet Chandok

As an intern, Manpreet worked on a field project surveying the use, distribution, and sale of plastic grocery bags, single-use food service-ware products, and polystyrene food service-ware products. She will graduate from San Jose State University in 2022 with a bachelor of science in environmental studies and a minor in sustainable energy.

Karen Chen

As the 2022 CivicSpark Fellow, Karen has developed the City's first climate hazards assessment. She also managed over 60 volunteers for our Earth and Arbor Day Festival and is creating a climate resilience training program with the Office of Emergency Management.

Rina Horie

Rina Horie joined the team in March 2022 as the most recent intern for the Sustainability Division. She will be assisting with reporting our greenhouse gas emissions inventory for 2022 and will be reaching out to the community and small businesses to support the ongoing Climate Action Plan 2.0 implementation programs and projects.

Thank you!