

# 5



## CHAPTER 5 CLIMATE ACTION: WHAT'S MY ROLE?

This chapter describes the myriad ways in which Cupertino's residents can take action to begin implementing the emissions-reducing concepts described throughout this CAP. It presents these opportunities within the framework of a Learn, Leverage, Lead approach to engagement, and provides examples of immediate action opportunities related to the City's Green@Home, Green@Work, and Green@School programs. Cupertino cannot achieve its ambitious emissions reduction targets without the support and enthusiasm of its residents and businesses. This chapter provides direction to the tools and resources available to take action today!

Unmitigated climate change poses great risks to both Cupertino and our entire globe. It jeopardizes extensive, and often costly, efforts to enable food access and security, protect public health and safety, promote economic development and stability, and safeguard natural resources upon which our prosperity depends. Local changes in precipitation and temperatures will awaken new vulnerabilities for our residents and businesses. To abate these anticipated climate risks, predicted to intensify in the coming decades, requires initiative, imagination and ingenuity. It requires confident leadership and common-sense, crowd-sourced solutions. Most importantly, it requires collective action.

This Plan focuses primarily on the emissions over which your City government has direct control and the greatest influence, whether through education and outreach channels, infrastructure projects, community programs, or codes and ordinances. At workshops held to collaboratively develop this CAP with the community, the City received feedback that many residents were not aware of City programs and services already available to assist them in growing greener; this chapter is included here to address that gap. Moreover, it seeks to emphasize that everyday choices we make matter. Actions each of us takes at home, at work, at school, and in our community will not only help reduce our community's total emissions, but also make Cupertino a healthier, more resilient place to live, work, and play for current and future generations. This section shares a variety of ways you, as both a global and Cupertino citizen, can individually take climate action. The more we do as individuals, the greater our collective emissions reductions will be, and the stronger our community will be in the face of climate change.

*"Since mitigation reduces the rate as well as the magnitude of warming, it also increases the time available for adaptation to a particular level of climate change, potentially by several decades. Delaying mitigation actions may reduce options for climate-resilient pathways in the future."*

– Intergovernmental Panel on Climate Change Working Group 2, 2014 Report

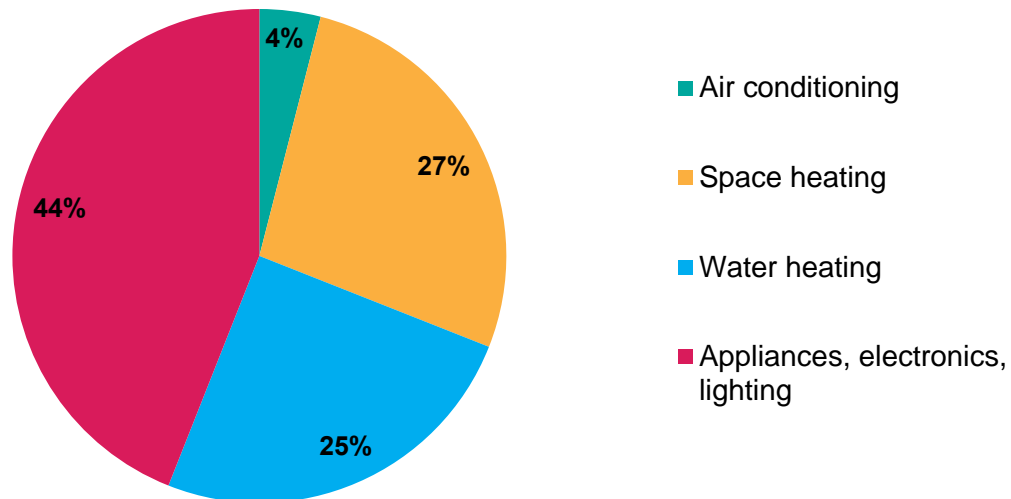
## How Do I Contribute?

Before introducing a sampling of direct climate actions each of us can take to support our shared environment, let's learn which of our daily activities have associated greenhouse gas emissions, and so, have a climate impact. Any time we use electricity or fuel for an activity, we are creating greenhouse gases. Driving to work or school, watching TV, charging a cell phone, powering a refrigerator or air conditioner, or taking a hot shower, are just a few of the countless things we do that support our lives, and all result in emissions. As you've learned in previous chapters, we even produce emissions indirectly as a result of waste disposal (through collection and landfill gas), water use (through pumping and treatment), and purchasing choices (through production, shipping, and disposal). We can reduce these emissions by thinking about how we get where we need to go, how well our homes and facilities function, and what kinds of goods and services we purchase.

For example, take a look at the typical household energy expenditure in California (see Figure 5.1) – this can give us an idea of areas of opportunity to reduce energy consumption,

and thus greenhouse gas emissions. (Note: household energy use varies greatly by a number of factors, including geographic location, home size and age, and number and habits of family members).

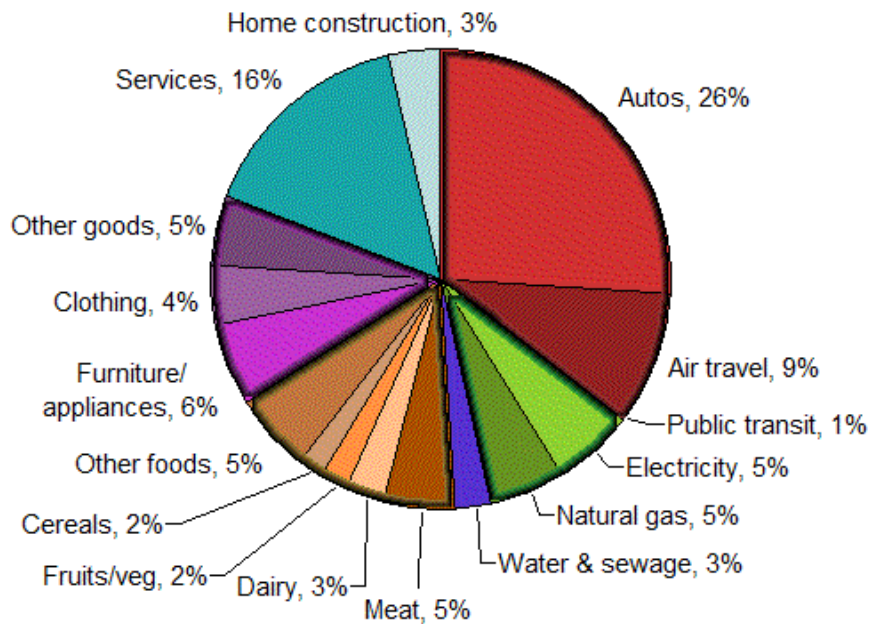
**Figure 5.1 – Energy Consumption in California Homes**



Source: EIA, 2009

In California, we have a milder climate than in other parts of the country, so we expend less energy on heating and cooling than homes elsewhere in the US (*lucky us!*). So comparatively, the largest portion of our energy use goes toward electricity use for appliances, electronics, and lighting. This indicates that reducing plug load in our homes by installing efficient lighting, buying energy efficient appliances, turning off electronics and appliances when not in use, and other actions can especially reduce our home’s emissions. This picture does not capture, however, energy use and emissions associated with personal transportation, waste we create, and items we buy. Figure 5.2 (on the following page) seeks to shift the conversation to also include the impacts of our daily choices, activities, and habits. To get a more complete estimate of your own personal emissions, and to see where the most important areas for action are, check out the [CoolCalifornia Carbon Footprint Calculator](#).

Figure 5.2 – Average California Household GHG Emissions (CO<sub>2</sub>e)



Source: CoolCalifornia

## What Can I Do to Help?

Given that each of our daily activities result in emissions (i.e., *the average emissions of a Cupertino resident is 5.27 MT CO<sub>2</sub>e/yr*), the City needs your help to meet its climate action goals. There are innumerable actions small and large that

you can take to help our community become more resilient and reduce emissions. This section provides resources to **Learn** more about climate change, shares a few recommended actions to **Leverage** in your own life to help, and connects you to tools to help you **Lead** by example to inspire others to act. Take a look below and decide which actions are feasible for you or your family to take. Remember this is just a sampling of the many things you can do. It is okay to start small: pick one action to take today, two to prioritize next year, and/or a suite of actions to make happen five years from now, and create your own personal climate action plan!



## Learn

The following list of resources can help you to become a climate change guru! Arm yourself with background knowledge on the causes of changes to our climate, the potential risks to our planet and people, and additional tips you can share with family and neighbors.

- [ICLEI, Local Governments for Sustainability](#)
- [Get Involved](#)
- [Intergovernmental Panel on Climate Change \(IPCC\)](#)
- [United Nations Framework Convention on Climate Change](#)
- [NASA](#)
- [United States Environmental Protection Agency](#)
- [California Climate Change Portal](#)
- [Union of Concerned Scientists](#)
- [Actions to Adapt](#)
- [Solutions](#)
- [What You Can Do](#)
- [Sustainable Steps](#)
- [Action Center](#)



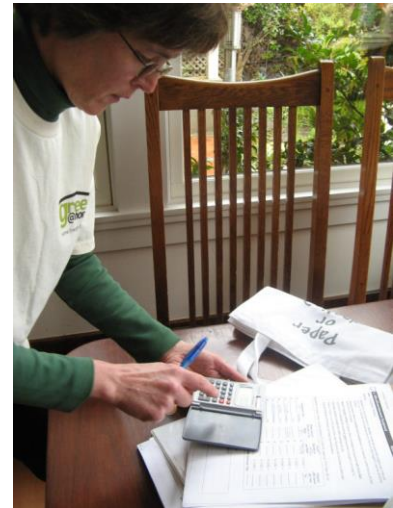
## Leverage

Take advantage of the City's existing programs designed to ensure our community is a sustainable place to live, learn, work, and play by providing tools to encourage action among all of our residents! This section presents information on the City's **Green@Home**, **Green@Work**, and **Green@School** programs. Learn more about our environmental work, or source additional ideas for small changes that make a big difference, by visiting [www.cupertino.org/green](http://www.cupertino.org/green).

*"Treat the Earth well. It is not inherited from your parents; it is borrowed from your children."*

– Kenyan proverb

## Green@Home



Source: Cupertino Patch, 2013

## Save Energy!

- Go [Green@Home](#)** – check out a Do-It-Yourself home energy efficiency and water conservation Toolkit at the Cupertino Library or build your own (see Appendix E).
- [Grow Greener Blocks](#)** – schedule a neighborhood energy sweep and/or a presentation by the City's Sustainability Office at your next block party.
- [Energy Upgrade!](#)** Source experts to help expand your home's efficiency, cost savings, and comfort. Get started with PG&E's income-qualified [Energy Saving Assistance Program](#) or the [Rebate/Incentive Finder](#).
- Check your Thermo...STAT!** Install a programmable thermostat. Set it no lower than 76°F for cooling. No higher than 68°F for heating (sweaters work wonders in the winter!).
- Ward off Vampires** – Control [phantom plug loads](#) (*appliances/electronics that use energy when "off" but still plugged in*) by unplugging chargers, microwaves, computers and other electronics that are not in use. Use a smart power strip to help control plug loads.
- Low Lights** – Turn off lights when not needed. Consider task lights vs. overhead lights.

- Freezer Burn** – Unplug or get rid of an extra refrigerator or freezer if you don't really need the extra storage space. Plug it in only when you need the overflow space.
- Turn *down* the heat** – Set hot water heater no higher than 120°F and insulate the hot water tank and pipes (*be mindful of insulating gas water heaters*).
- Out with the Old...** Replace incandescent light bulbs CFLs or LEDs.
- Lucky Stars** – Purchase [ENERGY STAR®](#) rated appliances and save loads of energy on washer, dryer, TV and other appliance use. If your refrigerator is more than 10 years old, it's time to replace it with an ENERGY STAR model.
- Remodeling?** Make sure you're up to speed with the City's [Green Building Ordinance](#). Use blinds and shades to let the sun's heat in or to keep it out to help heat or cool your home without changing your thermostat. Access [PG&E Rebates](#) to offset your cost!
- Cool Suds** – Avoid hot water use by purchasing cold water detergent. Wash only full loads, and wear clothes more than once. Replace furnace filter regularly.
- Seal it Up** – Air seal gaps, cracks, ducts in unconditioned spaces.
- Soak Up the Rays** – Heat your water using a [solar water heater](#) instead of gas.
- Air it Out** – Air dry your laundry on a clothes line instead of using a dryer (*how eco-retro!*).
- Sun Power!** Assess the potential for solar energy at your home & [pursue PVs](#) (after ensuring your home is as energy efficient as possible, so you can “right size” your system!). Learn more about Cupertino's solar efforts by visiting our [Solar Roadmap](#).

## Transform Transportation!

- Bike Cupertino** – Use Cupertino's [Bikeways Map](#) to safely bike around town via dedicated bike lanes vs. driving.
- Travel Light** – Walk, [take public transit](#), or ride a bike instead of driving a car whenever feasible.
- Trip Link** – Consolidate errands to make fewer car trips, saving time AND gas!
- Car-free Challenge!** Challenge yourself to one car-free day each week, or to take an alternative form of transportation for any destination one mile or less away.
- Together is Better** – [Carpool](#) to work or school to save money on gas and reduce your driving. Purchase a more fuel-efficient or electric vehicle.
- Travel Light** – Hotels use a lot of water, energy, and resources. Consider traveling lighter with Air B&B or other homestay networks or share your own home.
- What's Our WalkScore** – Cupertino has a vast network of bike lanes, bike racks, sidewalks, and alternative transportation options to encourage car-free trips (read more [here](#)). Where can we expand these tools? Check out our [walkscore](#) or conduct your own [neighborhood walkability assessment](#). Share your findings: [sustainability@cupertino.org](mailto:sustainability@cupertino.org).

## Get Water Wise!

- Get Water-Wise!** Receive a free [WaterWise House Call](#) from the Santa Clara Valley Water District to help identify new ways to save water in your home with great rebates.
- Slow Your Flow** – Install low-flow water fixtures (faucets, toilets, shower heads, etc.).
- Five-Minute Limit** – Take shorter showers. Use a shower timer (*your teen will thank you*).
- Smart Water** – Install a weather-based irrigation controller if you have irrigation. Set it to water at night or pre-dawn, and use shorter, repeated cycles rather than one long cycle. Use drip irrigation instead of sprinklers where possible.
- Desert Beauty** – Replace your lawn with [drought tolerant landscaping](#).
- Natural Sponge** – Apply backyard or purchased compost to help soil hold more water.

## Cut Waste & Conserve Materials!

- Share!** Offer to share items like tools, large appliances like lawn mowers or leaf blowers, and other items you use infrequently among neighbors. Use services like [Yerdle](#) or [Craigslist](#) to facilitate the sharing or exchange of items of all shapes and sizes.
- Stop Junk Mail** from reaching your home by registering with the [Direct Marketing Association's Mail Preference Service](#) or by utilizing this [junk mail kit](#).
- Waste Not** – Prevent food waste by [composting](#) food scraps in your yard waste bin.
- Single Stream** – [Recycle](#) ALL plastics, clean paper and cardboard, glass, and metal in your single stream recycling cart.
- Compost Right at Home!** Take a [free class](#) on backyard composting and get a free soil saver bin from the City. You'll make your own rich compost for a healthy garden and soil.
- Get Creative** – Reuse leftover materials for new projects and support upcycling by shopping at used goods stores and at [Cupertino's Citywide Garage Sale](#) in September.
- Don't Give Up, Give Away!** Donate clothes and unwanted items to your local thrift store. Participate in the City's Garage Sale instead of sending usable items to the landfill.
- Reduce @ the Source** – Purchase products with [less packaging](#) or send it back.
- Buy Recycled** – Choose paper, plastic, and other products produced with recycled content to reduce demand for and your use of new materials.



## Build Community!

- Support local!** Shop at markets, restaurants, and food trucks that serve local food, or participate in [community supported agriculture](#) for fresh, healthy food that supports local businesses and doesn't have to travel far to reach your plate.
- Volunteer** with organizations performing sustainability work. A few local places to start include [Acterra](#), [Sierra Club](#), [Cool Cities](#).
- Find your neighborhood leader or become one** and [discover](#) which of your neighbors is working to build safer, greener, more harmonious neighborhoods!
- Coordinate a garage sale** and [inform your neighbors](#) about Cupertino's own event.
- Organize!** Find an issue of importance to your neighborhood and develop a [roadmap for change!](#) Apply for a [Community Improvement Grant](#), start a [petition](#), conduct a [neighborhood needs assessment](#), visit [City Council or a relevant Commission](#) meeting, get in touch with City Staff – find an action and start a movement!

## Green@Work

*“Never doubt that a small group of thoughtful, committed citizens can change the world.”*

– Margaret Mead

## Save Energy!

- Performance Review!** Encourage your workplace to get an energy audit to understand which cost-effective opportunities are feasible for your facility. May utilities offer this service for free, or seek an auditor with access to [rebates](#) and [financing information](#) to fast-track major upgrades.
- People First** – Work on [operational or behavioral changes first](#), since they are often no cost or low cost options: institute a shut-off policy for workstations and lights, close off unused rooms, unplug workstation electronics, etc.
- Bright Lights, Green City** – Upgrade lighting for energy and cost savings, and better working light levels. Check for available [rebates](#). Use task lighting instead of lighting an entire area with overhead lighting.
- Prioritize PACE** – Assess facilities & access this [new financing tool](#) to make upgrades.
- Head Count** – Use occupancy sensors for lighting and for heating/cooling.
- Work Flow** – Regularly maintain HVAC system: look for leaks/efficiency improvements.
- Head in the Cloud** – Consider switching some IT systems to cloud-based systems and applications to reduce need for energy-hogging servers (access EPA resources [here](#)).
- Rising Stars** – Purchase ENERGY STAR® rated or EPEAT-certified office equipment to save big on plug loads. Assess solar feasibility at your workplace and install [cost-](#)

[effective PV](#). Better yet, benchmark your facility or office using [ENERGY STAR® Portfolio Manager](#) to compare your energy use to others with similar operational and infrastructure characteristics, receive an energy rating, and learn new ways to save.

- Common-Area Conservation!** – If you own a building, don't forget to prioritize energy conservation projects in common spaces. Parking lot and pathway lighting expenses can really add up! Contact [Right Lights](#) for a lighting assessment and cut costs today!

- Build Beyond Compliance** – New construction and retrofit projects follow the City's [Green Building Ordinance](#) (based on [Leadership in Energy & Environmental Design](#) (LEED) criteria) and the [California Energy Code](#), among other requirements. As of January 2014, buildings over 5,000 square feet also follow the state's [AB1103 Building Benchmarking Requirements](#). Shoot for the stars for your space by [setting zero net energy goals](#) and/or consider joining the [Living Building Challenge](#).

## Transform Transportation!

- Cool your Commute!** Offer your employees [alternative commuting benefits](#) like VTA's EcoPass, or pre-tax dollars for transit expenses to cut travel-related emissions.
- Turnover Time** – Use [EDF's Guide](#) to replace fleet vehicles with fuel efficient/electric vehicles.
- Telework** – Use teleconferencing and adopt a [telecommuting policy](#) to save miles.
- Bike to Work** – Provide and maintain a bike fleet, and offer bicycle safety and maintenance trainings. Provide safe onsite bike storage. Employees: follow this [bike commuting checklist](#)!
- Charge it Up** – Install an electric vehicle charging station for employees.
- Play Favorites** – Offer preferential parking for carpools to facilitate [employee carpooling](#).

## Get Water Wise!

- Be an H2O Pro!** Install low-flow water devices (faucets, toilets, urinals, shower heads, etc.) to minimize your water usage.
- Dry Spell** – Replace landscaping with drought tolerant landscaping for great-looking facilities that don't use a lot of water to maintain. Check for [rebates](#).
- Water it Down** – Install a weather-based irrigation controller and set it to water at night or pre-dawn, and use shorter, repeated cycles rather than one long cycle. Use drip irrigation instead of sprinklers where possible to reduce water use and cut your utility bill.
- Writing on the Wall** – Post signs asking employees to conserve water near bathroom and kitchen sinks and report leaks if encountered here too.
- Common-Area Conservation!** – If you own a building, don't forget to prioritize water conservation indoors and outdoors. Be mindful of watering in common landscaped areas.

## Cut Waste & Conserve Materials!

- Two-time it** – Print double-sided and make it the default printer setting. Keep a stack of draft paper near the printer for reuse.
- Job Duties** – Make recycling and composting mandatory for your workplace. Make sure each space has adequate bins for proper disposal and provide employee training to ensure everyone’s onboard.
- Go Zero** – Provide reusable dishware in the break room for employees and for events. Make [zero waste events policy](#) for company meetings and events and say no to foam!
- Buy Green** – Adopt an [environmentally preferable purchasing](#) policy that prioritizes recycled content products, reduced packaging, and recyclable/compostable products.

*“It’s not a choice between our environment and our economy; it’s a choice between prosperity and decline.”*

– President Barack Obama (2009)

## Build Community!

- Get Certified!** Join [GreenBiz Cupertino](#) to get certified as a green business: receive free energy, water, and waste assessments, free equipment to help your business save water, free guidance to help you with the certification process, and recognition for your leadership. Checkout Appendix F to get started.
- Go Local!** Prioritize restaurants and caterers that offer locally-sourced food.
- Prioritize Green** – Choose [certified green businesses](#) when purchasing products and services.
- Promote Health** – Expand health and wellness to employees, such as gym passes, weight loss workshops, etc. Host a [Community Supported Agriculture](#) pickup site.
- Green Dream Team** – Start a green team in your organization to assess your workplace’s operations and engage coworkers in ways they can take action @ work and @ home.
- Take Stock** – Complete a greenhouse gas inventory or [carbon footprint calculator](#) for your business or organization and identify ways to reduce identified emissions.
- Ready...Set...Green!** Create a [green competition](#) and award program that rewards environmental champions, energy or carbon savers in your organization.

# Green@School

## Save Energy!

- Test Time!** Encourage your school to get [an energy audit](#) to understand which opportunities to save energy are feasible for your school.
- Class Rules** – Institute behavioral change focused school policies first: shut-off policy for computers and lights, close off unused rooms, unplug electronics, etc.
- Bright Lights** – Upgrade lighting for energy and cost savings, and better light levels for more productive (*zombie-free!*) students.
- Fresh Air** – Regularly maintain HVAC system for good air quality. Have your HVAC equipment check for leaks and opportunities to increase efficiency.
- Sunny Days** – Assess feasibility for solar at your school.

## Transform Transportation!

- WOW!** Expand walking and biking programs for kids @ your school by joining the growing number of Cupertino schools participating in [Walk One Week](#) (WOW!) and [the Boltage rewards programs](#).
- Safe Routes to School** – Grow existing walk/bike to school programs: Start with a [walkability assessment](#), encourage your school to adopt a [Safe Routes Policy](#), etc.
- Safety in Numbers** – Establish a “walking school bus” that can travel together to and from school for increased safety.
- Bike Party** – Encourage your school to hold bike safety training and/or a maintenance workshop. Ensure your school provides safe and adequate bike storage onsite.
- Co-Commute** – Make transit and carpool information available to students and families to encouraging alternative (and perhaps more convenient!) ways of getting to school.

**SafeRoutes**  
National Center for Safe Routes to School



## Get Water Wise!

- Every Drop Counts** – Identify opportunities at your school to conserve water. Campaign to eliminate plastic water bottles or to install a water-bottle refill station! [Access free water conservation tools](#) such as low-flow aerators to install in school bathrooms!
- Grow Greener** – Replace landscaping with drought tolerant landscaping. Check for cost-saving [rebates](#).
- Smart Water** – Install a weather-based irrigation controller and set it to water at night or pre-dawn, and use shorter, repeated cycles rather than one long cycle. Use drip irrigation instead of sprinklers where possible.

## Cut Waste & Conserve Materials!

- Double Duty** – Change your printer’s settings to always print double-sided. Have a bin of draft paper on-hand to use for notes, printing or doodles!
- Become a Zero Waste School!** Organize a recycling and composting program for your school if you don’t already have both. Engage students in learning how to properly separate material, reduce waste, and make sure each area of the school has adequate bins for proper disposal.
- Shop Sustainable** – Adopt an [environmentally preferable purchasing policy](#) for the school that prioritizes environmentally responsible products to encourage a healthy, vibrant environment at school.

## Build Community!

- Go green@school!** Join the City’s green@school program to help educate peers about sustainability and become a certified green school. Contact [sustainability@cupertino.org](mailto:sustainability@cupertino.org) to enroll your school! Check out our program’s checklist, to get started (Appendix G).
- Lunch Green** – [Start a school garden](#) to provide healthy foods for school cafeteria and teach students about growing food and eating healthily.
- Eco Heroes** – Create a green competition and award program that rewards environmental champions at your school.
- Enhance Your Performance** – Learn how to become a [California High Performing School \(CHPS\)](#) to improve the learning and natural environment!
- Tag-Team It** – Form a school green team to assess your school’s operations and educate peers about projects proposed for your school. Learn how these projects can turn into [grant opportunities!](#)
- LEED the Way!** Go above and beyond and strive for your school to pursue [LEED certification](#) to showcase the school’s commitment to energy and environmental design.

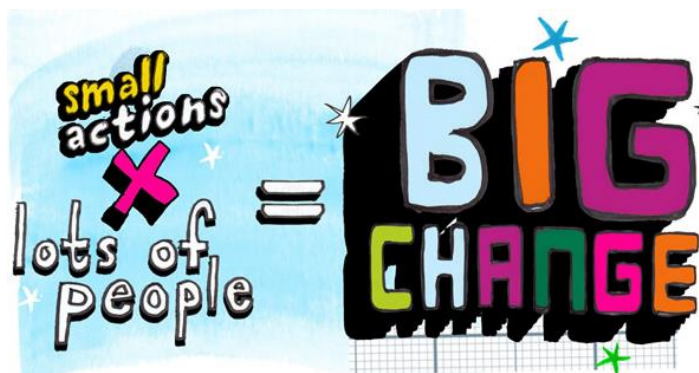
Always keep in mind that the City is your partner in climate action, as represented by the vast measures in this Plan that we'll be pursuing to protect our shared environment! Learn more about on actions to take, visit [www.cupertino.org/green](http://www.cupertino.org/green).



Source: [Nature.com](http://Nature.com)



Even without the threat of climate change, many, if not all, of the personal actions presented here have additional (co)benefits for our health and our economy. It is often the case that when we implement a practice that reduces our environmental impact, we might also save money, improve efficiency, get more exercise, eat healthier, and so on. A truly sustainable community is one that preserves our environment, supports public health, addresses issues of equity, and supports economic development. The City of Cupertino embeds these values in all programs and services it designs and offers to our residents and businesses as a means of expanding these benefits to each group. For example, bringing farmers markets to the community provides better access to fresh, local, healthy foods for residents, and allows residents to choose foods produced with fewer emissions than other food choices. Pedestrian and bikeways planning at the city level, in addition to maintaining open space and recreation facilities, supports an active lifestyle and carbon-free transportation. Consider how your personal climate actions can benefit your home, your family, your pocketbook, and your broader community as you plan your roadmap for change.



Source: <http://runkle-consulting.com>

With all these programs, services, and ideas for action at your disposal, you are well-equipped to be a climate leader in our community. Stretch your climate actions to your family, neighborhood and community-at-large by using the tools below to make sure your voice is heard, connect with others on issues of shared importance, and access useful City information. Remember that these are just a few of the resources available to help you bring environmental change forward (*checkout [Collaborative Consumption](#) to learn more about the growing shared economy and [Code for America](#) to find new civic engagement and technology tools*).

- Access Cupertino** – Need to contact City Hall but don't know where to start? This web and Application-based tool allows 24/7 access to City staff, services, and information.
- Why shop, when you can swap!** Use [Yerdle](#) to trade goods online, from kids toys, to clothing, to home goods, and pickup locally. Consider [craigslist](#) and [freecycle](#) as well!
- Skillshare!** Help your community not just by swapping ideas and goods, but also sharing skills with neighbors, friends and strangers alike.
- See. click. fix!** – Find a pot hole, cracked sidewalk, broken fire hydrant? Report these issues for quick repairs and to create safer neighborhoods.
- Community Power** – What's your community vision? [Neighborland](#) is a collaboration tool to help residents voice concerns and prioritize actions to address local issues.
- Connect to your Neighbors** – [Nextdoor](#) is a private social network for neighbors to communicate online. It could be a forum for neighbors to connect on community issues, events, and more. Have efforts already underway, share your story with neighbors and become an ambassador of change (learn more at [www.cupertino.org/greenerblocks](http://www.cupertino.org/greenerblocks)).
- Power in the Palm of your Hand.** Find [local restaurants](#) and [street tree care](#) guides using these two City Apps.

Whether you use these tools, or advance your personal, family or neighborhood's efforts the old fashioned way, three cheers for you for committing to change for the betterment of our community, environment and climate!

**Now, let's get started!**



Source: [www.imgarcade.com](http://www.imgarcade.com)





# 6



## CHAPTER 6 ADAPTATION AND RESILIENCY

This chapter describes the role of climate change adaptation and resiliency planning in the context of Cupertino and other Bay Areas communities. Adaptation and resiliency describe the ways in which humans can survive and continue to thrive in spite of climate change-related impacts, such as increasing average annual temperatures, rising sea levels, riverine flooding, and reduced snowpack, among others. This is in contrast to the aims of the CAP to mitigate, or reduce, these potential impacts by reducing the GHG emissions that cause them. Mitigation and adaptation approaches each have a role to play in providing for a safe and healthy future.