Executive Summary

Shoreline Lake at Sunrise

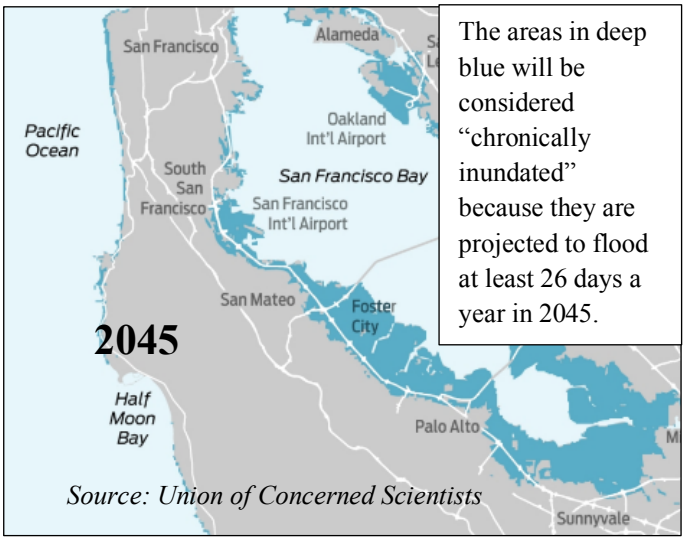
Shoreline Lake is one of many spectacular places to visit in Mountain View. It is open to anyone who chooses to spend time there, as are our many parks.

Cities in Silicon Valley are responding to the challenge of climate change by reimagining futures that are healthy and vibrant. Mountain View City Council has, in recent years, set a bold new direction for the City. It has implemented land use policies meant to increase housing, aid mobility, and provide infrastructure for a healthy, climate-friendly environment. It has taken a lead role regionally in the creation of Silicon Valley Clean Energy (SVCE) to bring 100% carbon-free electricity to the community. However, despite these efforts, total 2015 community-wide emissions were 9.1% higher than in 2005 (the City's "baseline" emissions year), with transportation emissions increasing from 53% in 2005 to 60% in 2015. This puts 2015 emissions levels 21% above the City's adopted reduction target of 10%, a very large gap. And, with a 2020 reduction target of 15-20%, and emissions continuing to climb, the gap will increase, causing Mountain View to fall further behind.

Additional bold action is needed to achieve Mountain View's goals of greenhouse gas reduction (**80% reduction by 2050**), sustainability, equitability, and maintaining and improving the quality of life throughout the City. Strong actions are required now, before our city population increases dramatically, so that critical changes can be implemented before we develop new large-scale housing and business projects. By ensuring that future development follows strong carbon-reduction measures, Mountain View will reduce its contribution to climate change.

Mountain View must do its part to tackle the consequences of climate change, such as sea-level rise and flooding, which (if not addressed) will cause displacement of many of Mountain View's residents and businesses.

Where chronic flooding will occur: With rapid sea-level rise, if no action is taken, much of the Bay Area will be subject to flooding, and many residents will have to move, according to a new report from the Union of Concerned Scientists[1]. It will take



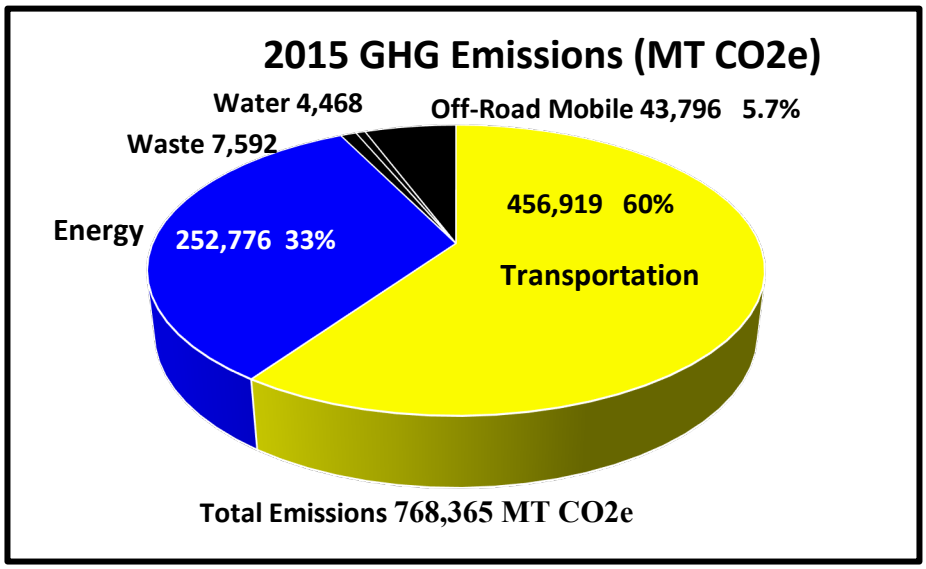
The areas in deep blue will be considered "chronically inundated" because they are projected to flood at least 26 days a year in 2045.

[1] https://blog.ucsusa.org/kristy-dahl/sea-level-rise-chronic-inundation-san-francisco-bay-area

substantial resources to prevent this, via massive projects like the Shoreline Project, which is intended to protect the shoreline of Santa Clara County.

Overview of recommendations

The chart below shows that Mountain View generated a total of **768,365 metric tons of carbon dioxide equivalent (MT CO2e)** emissions community-wide in 2015, with transportation accounting for 60% of total emissions and energy making up an additional 33%.



Our recommendations therefore focus primarily on these two key sectors (transportation and energy), but we also recommend changes in the areas of waste, water, and consumption. Many of these include behavior modifications that will have significant impact as our population increases.

Inclusion must be a consideration in all planning; we recommend achievable short-term and long-term community-wide actions to reduce greenhouse gas emissions and create a sustainable environment.

Our recommendations are in alignment with Mountain View's vision of *a thriving community where residents and businesses actively consider the environmental impact of their daily activities and strive to leave the world better than they found it*. Together, the City and community can transform Mountain View into a model of sustainable development to meet the needs of the present without compromising the ability of future generations to meet their needs. [2]

Transportation:

Mountain View's service population grew by 37% between 2005 and 2015, which drove up traffic and the resulting greenhouse gas (GHG) emissions significantly. This is particularly critical because transportation accounts for roughly 60% of Mountain View's GHG emissions.

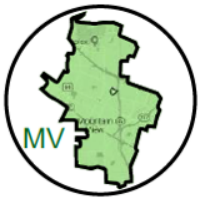
[2] https://www.mountainview.gov/depts/comdev/sustain/default.asp

Similar population growth is planned for the foreseeable future. In addition, autonomous vehicles will offer even more people the opportunity to drive alone. The resulting traffic and emissions will reduce the quality of life in Mountain View if aggressive action is not taken to provide transportation alternatives. Mountain View has many transportation initiatives underway, but we believe the city must take a more aggressive approach, both in speed of delivery, and in the range of solutions offered.

Good land use planning can help reduce driving, **but to be most effective, it needs to be coupled with good transportation options.** People cannot reduce their driving if driving is the only viable option, as it is today for most people in Mountain View.

A holistic suite of actions has been demonstrated to be effective in encouraging people to switch to alternative modes of transportation: **restrict parking**, **make transit free and convenient**, **design streets for bikes and pedestrians**, and **extensively encourage alternative commuting practices through outreach**. These actions all work together. Taken separately, they are unlikely to have the necessary impact. Together they can be transformative.

These, together with **accelerating the electrification of vehicles**, can help Mountain View to significantly reduce GHG emissions from transportation about 30% below 2005 levels, and significantly reduce vehicle miles traveled.



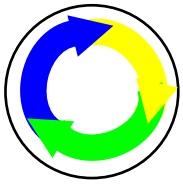
Buildings, Land Use, and Energy:

The buildings segment represents the second-largest portion of the overall GHG emissions at 33% in 2015. This segment is one of the few areas in which Mountain View has direct control over GHG emissions through its local building codes and ordinances. The number of building units is expected to increase by over 50% by 2030 so now is the time to set the standards for sustainable growth.

With the establishment of Silicon Valley Clean Energy (SVCE), Mountain View has access to a clean electric grid; now we can reduce GHG emissions from natural gas usage by creating and implementing a decarbonization policy and roadmap.

To achieve this vision, Mountain View must adopt an aggressive green-building code and expand its green-building incentives. In all new and remodeled buildings, highly efficient, GHG-free systems should be incorporated from the start. Setting specific measurable goals for Transit Oriented Development (TOD) is important to reduce emissions at the crossroads of buildings and transportation. For existing buildings, a key focus will be leveraging and promoting incentives from public and private entities. This includes expanding the EV-charging infrastructure where many private programs can accelerate success and where a special focus on multi-family environments is needed. As the City asks the community to make these changes, it's important for Mountain View City operations to lead by example with the highest standards for retrofits and new construction.

While direct emissions reductions are the focus of the task force, it's important to look holistically and work to reduce embodied emissions generated through building construction, which account for 15% of the lifetime emissions of a new building. In addition, increasing the tree canopy, promoting native vegetation and reconnecting people to nature is important for creating a healthier and more sustainable community as well as mitigating some of the worst effects of climate change.



The Circular Economy:

***Consumption*:** We recommend that a Consumption-based Inventory (CBI) be added to the methods used to calculate carbon emissions. We believe that recommendations referencing CBI measurements should be considered with equal weight as recommendations using standard city-scale GHG inventory methods.

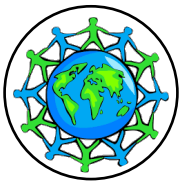
Mountain View should collaborate with other Bay Area municipalities to find a solution to start processing our recycling domestically, instead of shipping material to recycle overseas.

***Single-use items**:* Our goal is to create a Mountain View free of single-use plastic, where sustainable options are available, and people can make conscious choices about their plastic consumption.

***Waste and Water**:* We recommend expanding the City's composting program to all residential and commercial buildings, and we recommend building anaerobic digesters that can produce energy from diverted food waste and organics.

Lifestyle: We recommend that Mountain View participate in "Green Monday," which is a global movement to encourage people to eat more plant-based foods.

***Sustainable Landscaping**:* Mountain View should encourage replacement of lawns with low-input alternatives and should incentivize a transition to zero-emissions landscaping equipment (leading by example, with city operations transitioning to zero-emission landscaping equipment by 2030).



Inclusion and Outreach:

Implementation of the ESTF-2 recommendations will require **sustained investment**, including in community outreach efforts.

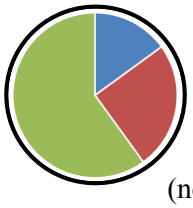
90% of Mountain View residents are concerned about climate change; 67% are extremely concerned (based on the results of the Outreach, Regional Collaboration, and Advocacy Working Group online survey). Though two community forums, the online survey, and interactions with stakeholders at several other events, we discovered that the Mountain View community wants much more interaction, collaboration and information on the City's existing and future sustainability efforts.

Several key recommendations serve to enable the implementation of all other recommendations:

- The City of Mountain View needs to **elevate the Sustainability Office** and increase staffing, including hiring of a high-visibility, cross-functional Chief Sustainability Officer. To succeed, the City will need internal outreach (across City departments), to help implement and enforce the recommendations, and public outreach (to all residents). Strong regional collaboration will also be essential. However, this is not obtainable under the City's present sustainability staffing levels.
- Mountain View needs to have a robust **Residential and Business Outreach Program** that empowers its residents and businesses to take action that improves their environment and the environmental sustainability of the City of Mountain View.

- Having **community engagement tools** would facilitate significant GHG reductions. Our goal is for community outreach efforts to result in 50% of households in Mountain View taking at least one action to reduce GHG emissions by 2030.

The residents have spoken. Regional collaborators have spoken. The scientists have spoken. The time is now: Mountain View needs to invest in the future.



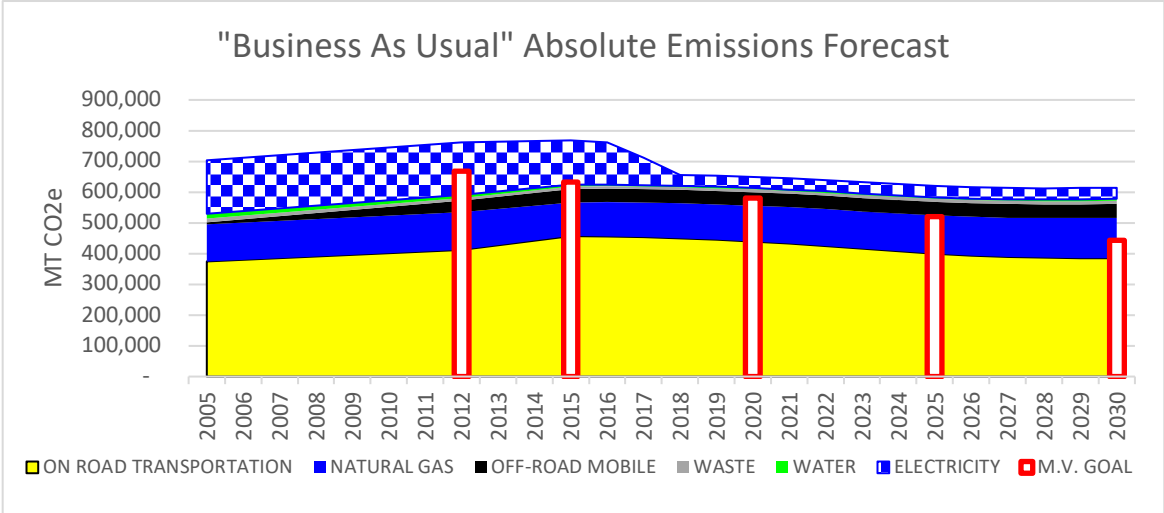
Metrics and Measurement:

The task force strongly believes that "you can't manage what you don't measure." Consequently, we recommend that Mountain View should have an emissions budget (not just a goal) for every year, not just every fifth year. We recommend that Mountain View measure its emissions every year and report the results quickly. Emissions that exceed the annual budget should be mitigated by purchasing carbon offsets.

The recommendations from the task force calculate their impact based on improvements to the Business as Usual (BAU) emission estimates. These forecasts account for residential population, workforce size, housing unit growth, office space growth, and current emissions.

Business as Usual:

The following chart shows Mountain View's expected GHGs given projected population growth, accounting for implementation of policies and projects already in place. If no additional action is taken, Mountain View's reduction targets will be missed.



Key Success Factor: Staffing

Because decisive action is necessary to meet Mountain View's GHG goals, and because the necessary action is not simple, staffing this effort appropriately is a key success factor.

When benchmarking other Bay Area cities with aggressive climate plans, we realize that Mountain View is seriously understaffed in the sustainability area. For our recommendations to succeed, adequate staff will be required. Therefore, we recommend that in the fiscal year 2018-19, three full-time employees be hired, including a Chief Sustainability Officer (CSO) and two supporting staff.

Cities and states have become the first line of defense against climate change in the US. We want our city to join with other cities in this vital effort; ongoing adequate staff is necessary to make this a reality.

Conclusion

As part of our process to create recommendations, we held two community forums through which we received powerful and creative feedback, with 130 interested community members in attendance. We participated in local Earth Day events and hosted community tables at the farmers' market and other public events. Our sustainability survey had over 900 responses; our recommendations reflect the voices of people who want a sustainable future for Mountain View.

Given our position in Silicon Valley, and our history of regional collaboration, Mountain View has an opportunity to create impactful programs for emissions reduction that provide a catalyst for other communities. Given the global nature of climate change, expanding the impact of Mountain View's actions provides visibility to the community and multiplies local efforts. Now is the time for bold and innovative action while collaborating for a sustainable future.

In conclusion, after much study, community engagement, and consultation with staff and other experts, the Environmental Sustainability Task Force 2 (ESTF-2) urges City Council to demonstrate its commitment to leading on climate action by adopting these proposals in full. It will be necessary to allocate significant resources to catalyze the real changes that will make it possible to meet our GHG targets while making the community more resilient. Mountain View can be a shining example of innovation and action that other communities can emulate, as we work together to build a more equitable and sustainable region for all.

Task Force members participating in various outreach activities

Mountain View's 2030 Sustainability Vision