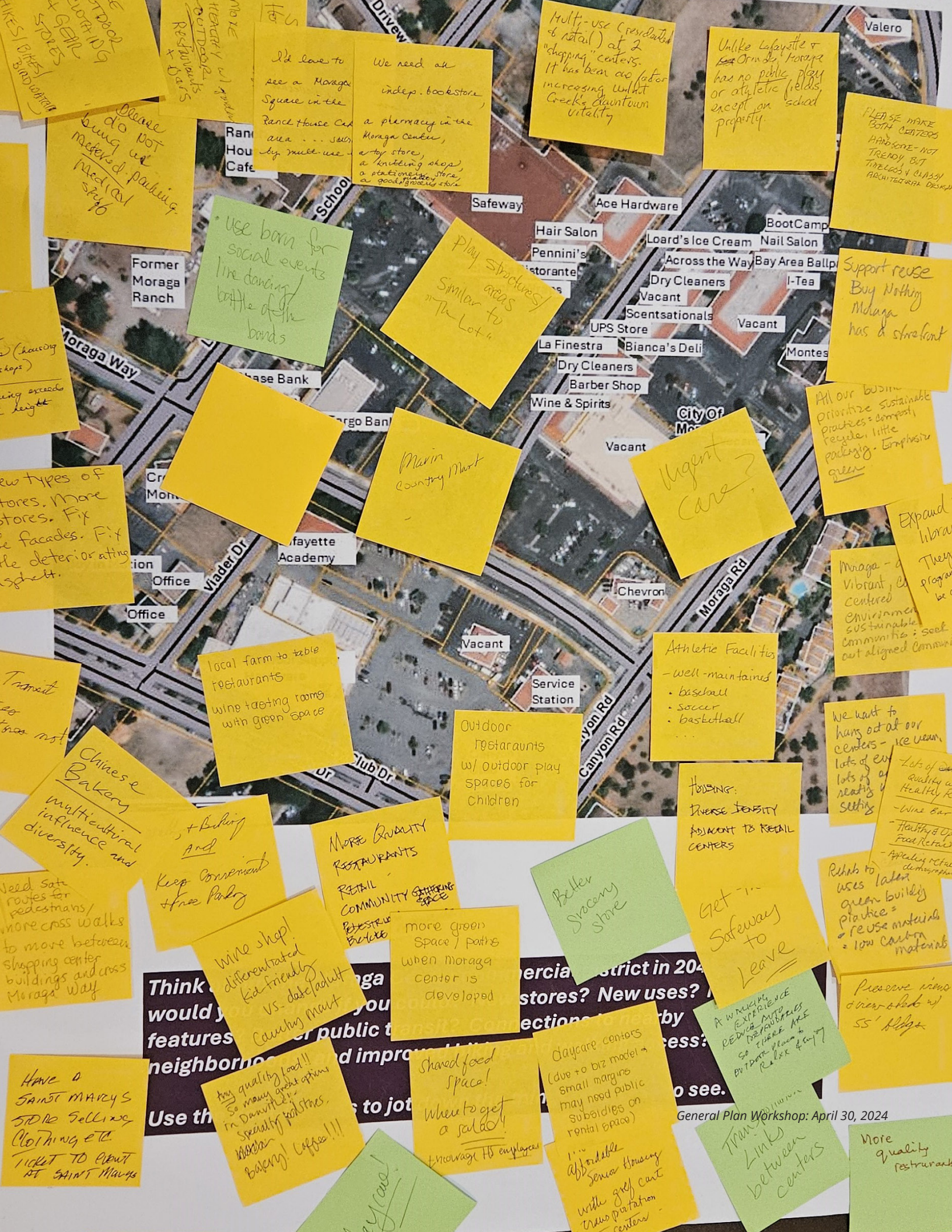
Safeway
Ace Hardware
Hair Salon
Pennini's
Loard's Ice Cream
Nail Salon
BootCamp
Across the Way
Bay Area Ballp
Dry Cleaners
I-Tea
Vacant
Scentsationals
Vacant
UPS Store
La Finestra
Bianca's Deli
Dry Cleaners
Barber Shop
Wine & Spirits
Former Moraga Ranch
Moraga Way
Moraga Rd
Viader Dr
Canyon Rd
Chevron
Service Station
Vacant
Office
Office
Academy
Valero
Use barn for social events line dancing/ battle of the bands
Play Structures/ areas Similar to "The Lot"
Marin Country Mart
Urgent Care?
Local farm to table restaurants
wine tasting rooms with green space
Outdoor restaraunts w/ outdoor play spaces for children
Athletic Facilities
- well-maintained
• baseball
• soccer
• basketball
Housing:
Diverse Density
Adjacent to Retail Centers
Get Safeway to Leave
Better Grocery Store
More Quality Restaurants
Retail
Community Gathering Space
Chinese Bakery
multicultural influence and diversity.
Keep Convenient Free Parking
Need safe routes for pedestrians/ more cross walks to move between shopping center buildings and cross Moraga Way
Wine shop! differentiated kid-friendly vs. date/adult Country Mart
more green space / paths when Moraga center is developed
Shared food space! Where to get a salad?
Encourage HS employees
Daycare centers (due to biz model = small margins may need public subsidies on rental space)
Affordable Senior Housing with golf cart transportation
Have a Saint Marys store selling clothing etc. Ticket to event at Saint Marys
Transit Links between centers
More quality restaurants
Think
would
features
neighborh
Use th
to jot
to see.
stores? New uses?
by
ess?
ercial District in 204
General Plan Workshop: April 30, 2024

3

SUSTAINABILITY AND CLIMATE CHANGE

The General Plan affects the ways we will grow, travel, work, shop, build, and live for the next 15 years. As such, it is an important opportunity to express the Town's commitment to addressing global climate change at the local level. While the State does not require a Sustainability Element in the General Plan, this chapter has been included to underscore the importance of sustainability and resilience as central themes of this document.

In 1987, the United Nations defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." Other definitions have followed, with one consistent theme: everything we need for our survival as a species depends, either directly or indirectly, on our natural environment. The phenomenon of climate change has made sustainability an urgent priority, compelling us to seek new ways to reduce our impacts on the planet.

Moraga was largely developed during the 1950s, 60s, and 70s, an era when the automobile was the dominant form of transportation, gasoline was cheap, roads were uncongested, and climate change was not a concern. Today, the City's land use pattern is dependent on cars and its road system and commercial districts have been designed for driving rather than walking or cycling. The town was also developed before wildfire was a pervasive concern and the risks of living in high fire hazard areas were fully understood.

Making Moraga a more sustainable and resilient community requires policies that touch all elements of this General Plan. The Plan's policies have been structured in ways that conserve the qualities that Moragans love about their town, while making the community safer. This General Plan retains the low densities of Moraga's neighborhoods but places a stronger emphasis on emergency preparedness and defensible space. It also supports higher-density infill development in the town's commercial centers,

recognizing that such land use patterns are more sustainable and ultimately more resilient to climate impacts.

The General Plan recognizes the essential nature of car travel for many Moraga residents, while promoting zero emission vehicles and streets that are safer for walking and bicycling. Its policies emphasize water and energy conservation, a shift to renewable energy, and greater energy independence—all with the goal of reducing our collective carbon footprint.

This Chapter highlights key aspects of sustainability, climate change, and resilience and indicates where they are addressed in this plan. As noted in Chapter 2, relevant policies are noted throughout the document using a leaf (sustainability) icon or a climate (resilience) icon.

3.1 THE CLIMATE IMPERATIVE

The Intergovernmental Panel on Climate Change's Sixth Assessment Report (2021) concluded that consumption of fossil fuels such as natural gas, coal, and gasoline has substantially increased the level of greenhouse gases (GHGs) in the atmosphere. Climate models predict that continued increase in GHGs will cause global temperatures to rise by 5 to 9 degrees Fahrenheit by the end of this century.

For Moraga, the impacts of warmer temperatures include greater wildfire risks, threats to our water supply, more severe storms and flooding, increased risk of drought, loss of species, and public health hazards. These impacts require that we think about the future differently than we have in the past.

California has been a leader in efforts to address climate change at the state and local levels (see text box). In 2022, the California Air Resources Board released a plan to achieve carbon neutrality by 2045. Achieving this goal is

CLIMATE CHANGE MILESTONES IN CALIFORNIA

Key milestones in the State's climate change response include:

- **Executive Order S-3-05 (2005)**, which established that California would reduce GHG emissions to their 2000 level by 2010, their 1990 level by 2020, and 80 percent below their 1990 level by 2050.
- **Assembly Bill (AB) 32 (2006)**, which instituted a schedule to meet the State's emissions targets, including tracking, reporting, and enforcement.
- **Senate Bill (SB) 97 (2007)**, which amended the California Environmental Quality Act (CEQA) to require greenhouse gas emissions to be addressed during environmental review.
- **SB 375 (2008)**, which required each region of California to adopt a Sustainable Communities Strategy, and then tie State transportation funds to projects that help implement that strategy.
- **SB 350 (2015)**, which aimed to double energy efficiency in buildings and increase the renewable energy portfolio to 50% by 2030.
- **SB 100 (2018)**, which set a target for California to achieve 100% carbon-free electricity by 2045.

dependent on the collective actions of California's local governments, as well as the private sector. The State has encouraged local governments to adopt Climate Action Plans identifying strategies to reduce GHG emissions at the local level.

Moraga completed a Climate Action Plan (CAP) in 2014. It included a goal of reducing GHG emissions by at least 15 percent below 2005 levels by 2020. The 2014 CAP's planning horizon has passed, and new targets should be set. The 2040 General Plan supports updating the 2014 Plan, followed by regular reporting on progress and periodic major updates.

3.2 SUSTAINABILITY AND CLIMATE CHANGE STRATEGIES IN GENERAL PLAN 2040

FOCUSING OUR GROWTH

This General Plan focuses Moraga's growth in the Moraga Center and Rheem Park commercial districts. It allows residential densities of 24 units per acre in these two areas, which will enable a more diverse mix of new housing than the town has seen in the past four decades. The General Plan also encourages new commercial development in these two areas, including retail, office, and hospitality development. It also supports civic amenities and public spaces that allow these areas to evolve into walkable mixed-use "villages."

This form of development is more sustainable than low-density residential development and car-focused shopping centers. It uses energy more efficiently, reduces land consumption, improves access to public transportation, and enables more daily trips to be completed without driving long distances. Per capita carbon emissions are as much as three times lower in denser mixed-use areas than they are in low-density residential areas. Living near everyday goods and services, such as restaurants and grocery stores, makes walking easier and more convenient. Mixed use neighborhoods are designed to be walkable, with sidewalks, crosswalks, street trees, and architecture that encourages safe pedestrian movement.

Focusing Moraga's growth in its two commercial districts is not a new concept; it was also advocated by the Town's 2002 General Plan. The 2040 General Plan takes prior plans a step further, recognizing the link between compact growth and greenhouse gas reduction. Multi-family apartments and townhomes represented 33 percent of Moraga's housing units in 2024. By contrast, approximately 62 percent of the housing capacity identified in General Plan 2040 is on multi-family and mixed-use zoned sites. This will result in a higher overall share of medium to high density units in the future. Some of the new development will serve Moraga workers, college students, and others who currently face long commutes to Moraga each day.

Policies to reduce GHG emissions through focused and compact growth

- Policy LU-1.1: Directing Growth
- Policy LU-1.2: Sustainable Development
- Policy LU-4.3: Higher Density Residential Uses
- Policy LU-4.4: Residential Densities in Moraga Center and Rheem Park
- Policy LU-4.10: Sustainable Commercial Development
- Policy CD-1.3: Location of New Development
- Policy CD-4.6: New Multi-family Development
- Policy CD-5.3: Pedestrian-Orientation
- Policy CD-5.9: Connecting Activity Centers
- Policy CD-7.1: Walkability
- Policy CD-7.2: Mixed Use Development
- Policy H-1.4: Infill Housing
- Policy EV-1.8: Workforce Housing
- Policy OSP-1.5: Transfer of Development Rights

GREENER TRANSPORTATION

Transportation accounts for roughly half of Moraga's GHG emissions. Reducing these emissions requires a multi-pronged strategy that reduces the number of vehicle miles traveled (VMT) by Moraga residents and workers while also reducing dependence on fossil fuels for transportation. The General Plan Transportation Element focuses on both of these objectives, while improving transportation safety and managing congestion.

Policies in the 2040 General Plan emphasize the concept of "complete streets." This concept recognizes that roads should be designed for pedestrians and bicyclists as well as cars. In some cases, this might mean adding bike lanes and sidewalks where none exist today. Improving the pedestrian and bicycle network is a critical focus of this Plan. While many Moraga residents walk or bicycle for recreation and fitness, only six percent walked or bicycled to work in 2024. The General Plan aims to make "active" transportation a more viable alternative to driving for many trips, recognizing the environmental and health benefits.

The General Plan also seeks to improve transit service to Moraga, which is currently very limited. Although transit operations are beyond the Town's control, increasing population density in the two commercial areas can make increased service more viable. Policies in the Plan also aim to reduce VMT by improving retail, entertainment, and restaurant choices in Moraga's commercial districts, making it less necessary to drive out of town for basic goods and services. Another key strategy for reducing VMT is to support programs such as ridesharing, vanpooling, telecommuting, and flextime.

Reducing dependency on gasoline-powered motor vehicles and trucks requires a different set of strategies. To some extent, this will be guided by State requirements, including an Executive Order to phase out the sale of new gas-powered cars by 2035. Likewise, the California Building Standards Code already requires certain types of new development to include parking spaces outfitted for zero-emission vehicles. The Town can support such efforts by switching its own fleet to zero- emission vehicles and encouraging infrastructure for such vehicles in key locations. Another local strategy for reducing emissions is to reduce vehicle idling by installing "smart" traffic signals and other technologies that allow the local road system to operate more efficiently.

Policies to reduce GHG emissions through greener transportation

- Goal T-2 strives for a more sustainable transportation system. Policies T-2.1 through T-2.8 outline how this goal will be achieved, including reducing VMT and increasing zero emission vehicle use.
- Goal T-3 relates to "complete streets" that support all modes of travel. Policies T-3.1 through T-3.6 outline how this goal will be achieved.
- Policy T-4.3: Smart Signals
- Policies T-5.1 through T-5.7: Pedestrian and Bicycle Circulation and Safety
- Policies T-5.8 through T-5.11: Transit Improvements
- Policy EV-4.5: Bicycle and Pedestrian Access to Commercial Centers
- Policy CON-3.5: Transportation control measures (TCM) to improve air quality
- Policy CON-6.4: Transportation focus of GHG programs
- Policy G-2.4: Regional Transportation Sustainability Focus

GREEN BUILDINGS AND ENVIRONMENTALLY SENSITIVE SITE PLANS

Green buildings are structures designed and constructed to minimize their environmental impact while enhancing the health and well-being of their occupants. Sustainable materials, such as recycled products, are commonly used, along with water-saving fixtures and renewable energy sources. Indoor environmental quality is also prioritized, with the use of non-toxic materials, good ventilation, and natural lighting. Various certification programs, such as LEED (Leadership in Energy and Environmental Design) evaluate and recognize these practices. The benefits of green buildings extend beyond environmental protection and also include reduced utility costs and healthier living spaces.

The concept of "green building" can be extended beyond structures and also applied to site planning and subdivision design. The 2040 General Plan includes policies to preserve biodiversity and open space, minimize tree removal, and protect natural habitat. For many years, Moraga has emphasized clustering the allowable number of units on a site in ways that enabled most of the site to be retained as open space. This can improve architectural quality, reduce grading and site disturbance, and conserve important natural resources. The Town also supports density transfers and transfer of development rights to reduce environmental impacts.

Policies to reduce GHG emissions through green buildings

- Policy LU-1.9: Clustering
- Policy OSP-1.5: Transfer of Development Rights (TDR)
- Policy CD-1.4: Site Planning, Building Design, and Landscaping
- Policy CD-7.3: Resource Efficiency in Site Development
- Policy CD-7.4: Green Building
- Policy CD-7.5: Sustainable Building Materials
- Policy CD-7.6: Landscaping
- Policy CD-7.7: Cool Roofs and Pavement
- Policy H-5.1: Environmental Sustainability (in Housing)
- Policy CON-3.1: Development Design (to improve air quality)
- Policy CON-3.4: Buffering along Major Roadways
- Policy CON-3.6: Indoor Air Quality

ENERGY CONSERVATION AND RENEWABLE ENERGY

Moraga's residential and commercial buildings collectively generate almost the same volume of GHG emissions as the transportation sector. These emissions are primarily the result of electricity and natural gas use. Most of the building stock in the town was built prior to modern energy efficiency standards and many homes are still dependent on fossil fuels.

California implements various building standards to conserve energy, primarily through CALGreen and Title 24. As discussed in the Conservation Element of this Plan, the latest building codes mandate that new residential buildings achieve Net Zero Energy (NZE) by 2020 and commercial buildings by 2030. This includes regulations on energy use related to building envelopes, mechanical systems, and lighting. The General Plan encourages sustainable building

practices aligned with CALGreen codes, resulting in lowering greenhouse gas emissions.

Conservation Element Goal CON-5 is to promote energy conservation, fossil-free energy generation, and greater energy security. The General Plan includes a set of policies supporting this goal, including weatherization of existing development, enforcement of State energy efficiency building standards, and promotion of renewable energy for building heating, cooling, and power. The Plan supports energy independence through such measures as microgrids and home photovoltaic systems with battery storage.

Policies to reduce GHG emissions through energy strategies

- Policy CON-5.1: Energy Conservation
- Policy CON-5.2: Energy Efficiency Standards
- Policy CON-5.3: Renewable Energy
- Policy CON-5.4: Energy Innovation
- Policy CON-5.5: Decarbonization
- Policy CON-6.3: Leading by Example
- Policy CON-6.5: Buildings and GHG Emissions

WATER CONSERVATION AND EFFICIENCY

Fresh water is a limited commodity in California and will become scarcer in the future due to climate change. Policies supporting water conservation are included in the Conservation Element (Goal CON-2). Much of Moraga's water consumption is associated with landscape irrigation. As such, the General Plan strongly supports water-efficient landscaping (Community Design Element) and the future use of recycled water to meet the town's water demand (Conservation Element). More judicious use of water can also reduce electricity use associated with pumping, treatment and transport. This supports GHG reduction goals and avoids water waste.

Policies to reduce GHG emissions through water conservation

- Policy CON-2.8: Water Conservation
- Policy CON-2.9: Reclaimed Water
- Policy CON-2.10: EBMUD Lands
- Policy CD-7.6: Landscaping
- Policy S-3.5: Fire Flows

WASTE REDUCTION

Landfills are a source of methane, a greenhouse gas that is 28 times more potent than carbon dioxide in terms of its heat-trapping effects. Waste reduction and recycling can extend landfill capacity and reduce the amount of methane that would otherwise be generated. Waste reduction also conserves natural resources. Like other Bay Area cities and Towns, Moraga is working to increase its waste diversion rate and support new and expanded programs such as commercial food waste recycling and construction debris recycling.

Policies supporting improvements to solid waste management are included in the Conservation Element (Goal CON-4). In addition, the Safety and Resilience Element addresses the safe disposal of hazardous materials, including household hazardous waste. Together, these goals and policies support improved environmental quality, less waste, and reduced greenhouse gas emissions.

Policies to reduce GHG emissions through waste reduction

- Policy CON-4.1: Waste Reduction
- Policy CON-4. 2: Expanded Participation in Recycling/ Composting
- Policy CON-4.3: Special Waste Pickup
- Policy CON-4.4: Source Reduction
- Policy CON-4.5: Construction and Demolition Debris

GREEN INFRASTRUCTURE

Moraga's open spaces effectively serve as "green infrastructure" and mitigate some of the impacts of climate change. In particular, riparian zones—the wooded areas along creeks and streams—can filter and slow down stormwater runoff. The town's trees sequester carbon emissions, while also reducing the heat island effects of urban development. Its gardens and landscaping can provide pollen and nectar for butterflies and pollinating insects.

The town's open space networks provide migratory corridors for wildlife and sustain biologic resources. Ultimately, green infrastructure provides an ecological framework that supports the health of the town and its surroundings.

The Land Use, Community Design, and Open Space and Parks Elements of this General Plan all support the maintenance of the Town's open space networks, including the natural functions of drainage ways and creeks. Within developed areas, the Plan supports the use of permeable pavement, rain gardens, and other natural approaches to managing stormwater. The Plan supports the concept of "Low Impact Development," which aims to manage stormwater flows by incorporating it into the environment and reducing excessive runoff to storm drains. This can reduce flooding and erosion and also help improve water quality. The General Plan also supports tree preservation and planting, recognizing the value of Moraga's "urban forest" to improving air and water quality.

Policies to reduce GHG emissions through green infrastructure

- Policy CON-1.3 and 1.4: Creek Protection
- Policy CON-1.5: Wildlife Corridors
- Policy CON-1.8: Woodland Areas
- Policy CON-1.9: Tree Preservation
- Policy CON-1.10: Urban Forest
- Policy CON-2.2: Stormwater
- Policy CON-2.3: Urban Runoff
- Policy CON-2.7: Low Impact Development
- Policy CON-6.8: Green Infrastructure
- Policy S-5.3: Flood Mitigation
- Policy S-7.1: Climate Informed Decision-Making
- Policy S-7.5: Nature-Based Resilience
- Policy S-7.8: Urban Heat Islands

MUNICIPAL OPERATIONS

Local governments play an important role in achieving the emission reduction goals for their communities. Although municipal operations account for a small total of GHG emissions, local governments can lead by example and implement practices that can be emulated by residents and businesses. Moraga has taken important steps in recent years related to energy procurement, waste reduction, and renewable energy generation facilities. The General Plan supports continued movement in this direction.

Goal CON-6 establishes policies that incorporate climate change as a planning consideration, support regional partnerships to address GHG reduction, promote climate education and awareness, and recognize green businesses. The Plan supports further collaborations with agencies and community-based organizations that promote and advocate for sustainability and resilience.

Policies to reduce GHG emissions through municipal operations

- Policy CON-6.1: Climate Action Strategies
- Policy CON-6.2: Climate Change as a Planning Consideration
- Policy CON-6.3: Leading by Example
- Policy CON-6.6: Regional Partnerships
- Policy CON-6.7: Climate Change Education and Awareness
- Policy CON-6.9: Green Business
- Policy G-2.4: Sustainability Focus

ECONOMIC SUSTAINABILITY

Moraga's success in reaching its climate goals hinges on the strength of the local economy. When local goods and services are readily available, residents don't have to drive as far, which helps reduce greenhouse gas (GHG) emissions. Similarly, the availability of workforce and student housing in Moraga influences how far workers and students must commute, further affecting GHG emissions. Sustainability is an economic issue as well as an environmental one.

The Land Use, Housing, and Economic Vitality Elements of this General Plan address this issue. Ultimately, economic sustainability supports Moraga's fiscal sustainability, which is essential to implement the programs, capital improvements, and private investments envisioned by this General Plan. Growth and development will be required to maintain the quality of services residents desire—and to attain the climate targets adopted by the State.

Policies to reduce GHG emissions through economic development

- Goal LU-1: Balanced Community
- Policy LU-4.10: Sustainable Commercial Development
- Policy EV-1.7: Shop Local Initiatives
- Policy EV-2.2: Reducing Retail Leakage
- Policy EV-4.1: Upgrading the Centers
- Policy EV-4.3: Mixed Use Development
- Policy EV-4.6: Infrastructure
- Policy EV-5.1: Revenue Generating Uses
- Polic H-1.4: Infill Housing
- Policy H-2.1: Housing Variety
- Policy H-2.3: Affordable and Workforce Housing
- Policy H-2.6: Missing Middle Housing

3.3 SUSTAINABILITY AND RESILIENCE

Sustainability and resilience both support the long-term ecological and social health of the community. While sustainability emphasizes responsible resource use and environmental protection, resilience refers to the ability of communities to withstand and recover from the impacts of natural disasters and long-term stressors. Resilience can support sustainability by ensuring that systems can endure future challenges.

Just as the General Plan provides a framework for a more sustainable Moraga, it also provides a framework for a more resilient Moraga. Resilience is a guiding principle of this Plan, and the focus of the Safety and Resilience Element (Chapter 11). The concept of resilience shapes the Town's land use and transportation plans, its infrastructure investments, and its emergency preparedness and evacuation strategies.