





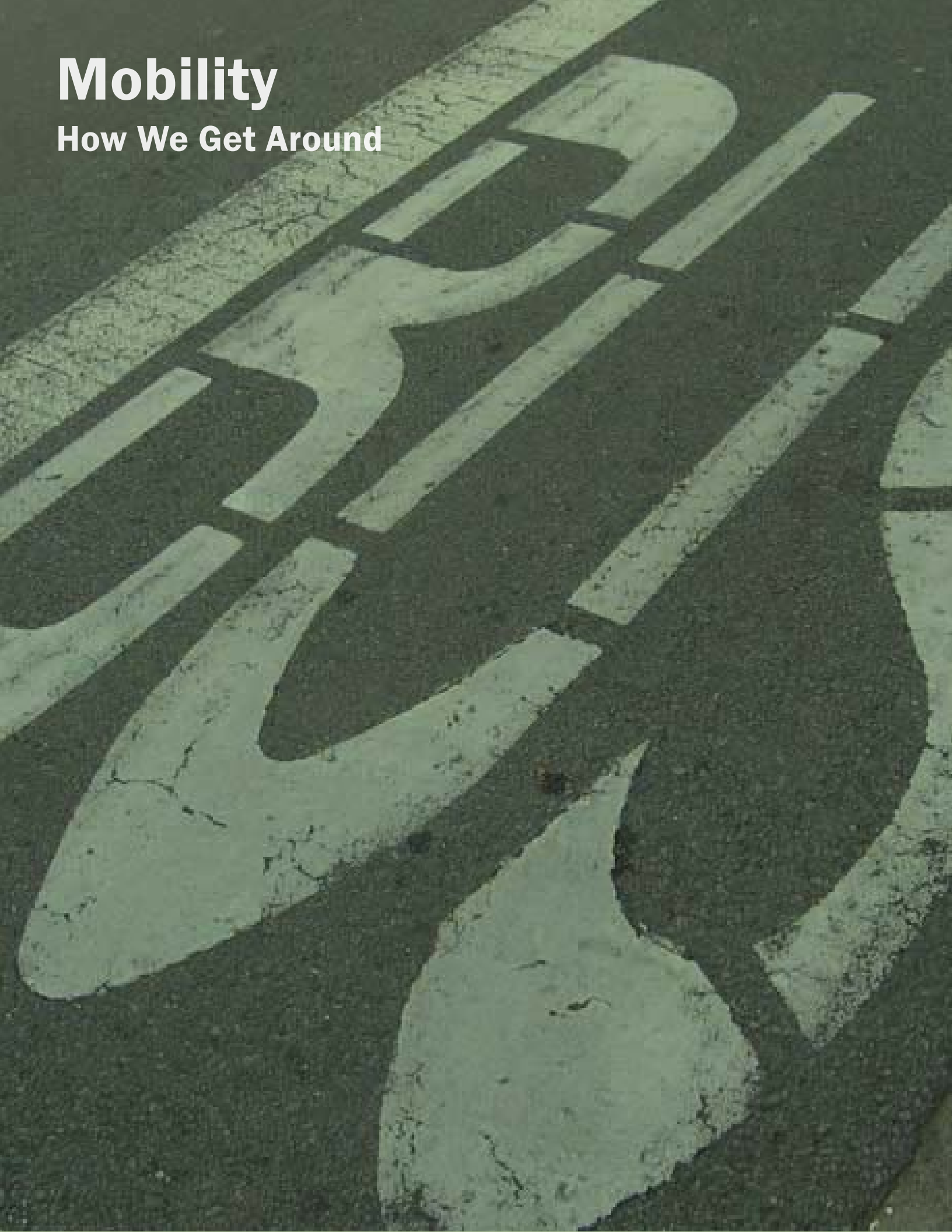


## Mobility



# Mobility

How We Get Around



Demographics



Mobility



Land Use &amp; Economy



Environment



The way we travel and the amount of time we spend getting from one place to another affect the quality of our daily lives. Of course, our travel choices are influenced by a number of factors, including Mill Valley's somewhat remote location, the community's topography, and limited options for local employment and shopping.

## Our Commute to Work

- 16% of Mill Valley residents don't need to commute because they work at home. This is three times higher than the percentage statewide (5%)
- Nearly half (46%) of all Mill Valley workers commute to jobs outside Marin County. This is much higher than the statewide percentage (17%), but reflects the importance of San Francisco as an employment center.
- Consistent with the number of people who commute out of the county, 45% of Mill Valley commuters travel at least 30 minutes to work each day.
- 17% of local residents have a less than 10-minute commute each day.

## Our Mode of Travel

- 68% of Mill Valley commuters drive alone to work in their automobiles, which is slightly less than the 73% statewide, but up from 1990 levels (62.6%).
- Slightly less than 5% (4.7%) of Mill Valley commuters carpool, which is less than half the statewide percentage (11.5%).
- 8.3% of Mill Valley commuters take public transit to work compared to only 5.2% statewide, but has declined since 1990 when 11.9% used transit.
- Mill Valley is served by 4 bus lines: Route 4 by Golden Gate Transit and Routes 17, 22, and 61 by Marin Transit. Total ridership for Route 17 was 281,526 passengers, 25,889 passengers for Route 61, and 393,870 passengers for Route 22 in FY2011. Route 4 reported 366,173 riders in FY2008.
- The average headways (i.e., time between buses) has not changed significantly since 1990.
- Travel time from Mill Valley to San Francisco via bus is approximately 30 minutes.
- Approximately 7% of Mill Valley commuters walk or bike to work compared to only 3.7% statewide. (1990: 4.1%, 2000: 3.9%)

## "JUST THE FACTS, MA'AM"

- Price of Gasoline: \$1.16/gallon in 1990; \$4.31/gallon in 2012
- National Fuel Economy Standard: 27.5 mpg in 2004; 35.5 mpg in 2012
- Average Miles Per Gallon (Fleet): 17mpg in 1990; 17 mpg in 2010
- Parking Meter Rates: \$.20 in 1990; \$.75/hr. in 2010
- City Parking Revenues: \$327,700 in 1990; \$497,500 in 2010
- Golden Gate Bridge Toll: \$2 in 1990; \$6 in 2010





### Figure 7: Roadway Network

- 
- City Boundary
- Downtown
- Highway
- Roads
- Arterials
- Collectors
- Truck Routes

A scale bar with a blue circle containing a white arrow pointing upwards. The bar is marked with 0, 0.25, and 0.5 Miles.



Demographics



Mobility



Land Use &amp; Economy

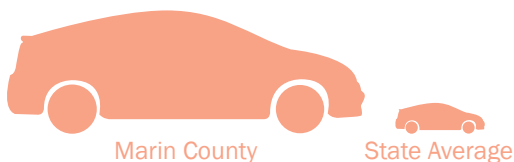


Environment



## Our Relationship to Our Cars

- Mill Valley has an average of 2.3 vehicles per household – similar to the national average.
- Considering that 6% of Mill Valley households have no vehicles, and that 2,954 residents are too young to drive, Mill Valley has approximately 3,000 more cars than driving age residents.
- 6% of households do not own a car; 33% have 1 vehicle; 4% have 2 cars and 20% have 3 cars.
- On average, Mill Valley households make more than 11 vehicle trips per day, which is 60% higher than the national average (7 trips/day).
- While Mill Valley's population has grown by 2% over the past decade, the average weekday traffic volumes increased by 20% during the same time.
- Marin County has the highest rate of ownership of Priuses and other hybrid cars of any California county, and 4 times the state average.



**Marin County has**  
**4 times**  
 the state average  
 of hybrid car  
 ownership



### Existing Bikeways

Total Bikeway mileage = 7.1

### Existing Pedestrian Facilities

Total Stair length in miles = 0.5

Total Lane and trail in length = 5.5

Total steps, lanes and trails mileage = 6

### Golden Gate Transit Ridership

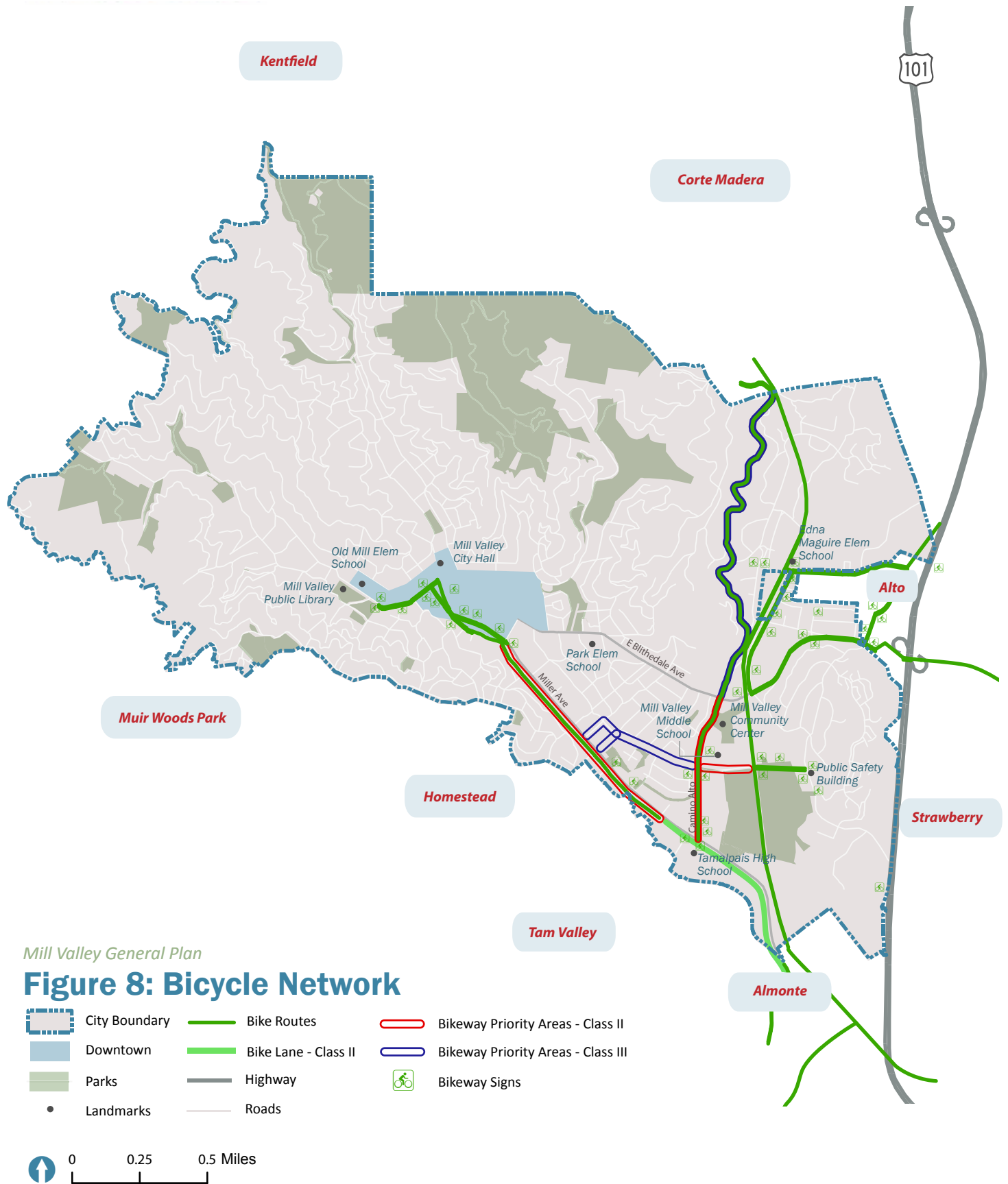
Avg weekday Golden Gate Ridership: 1,994

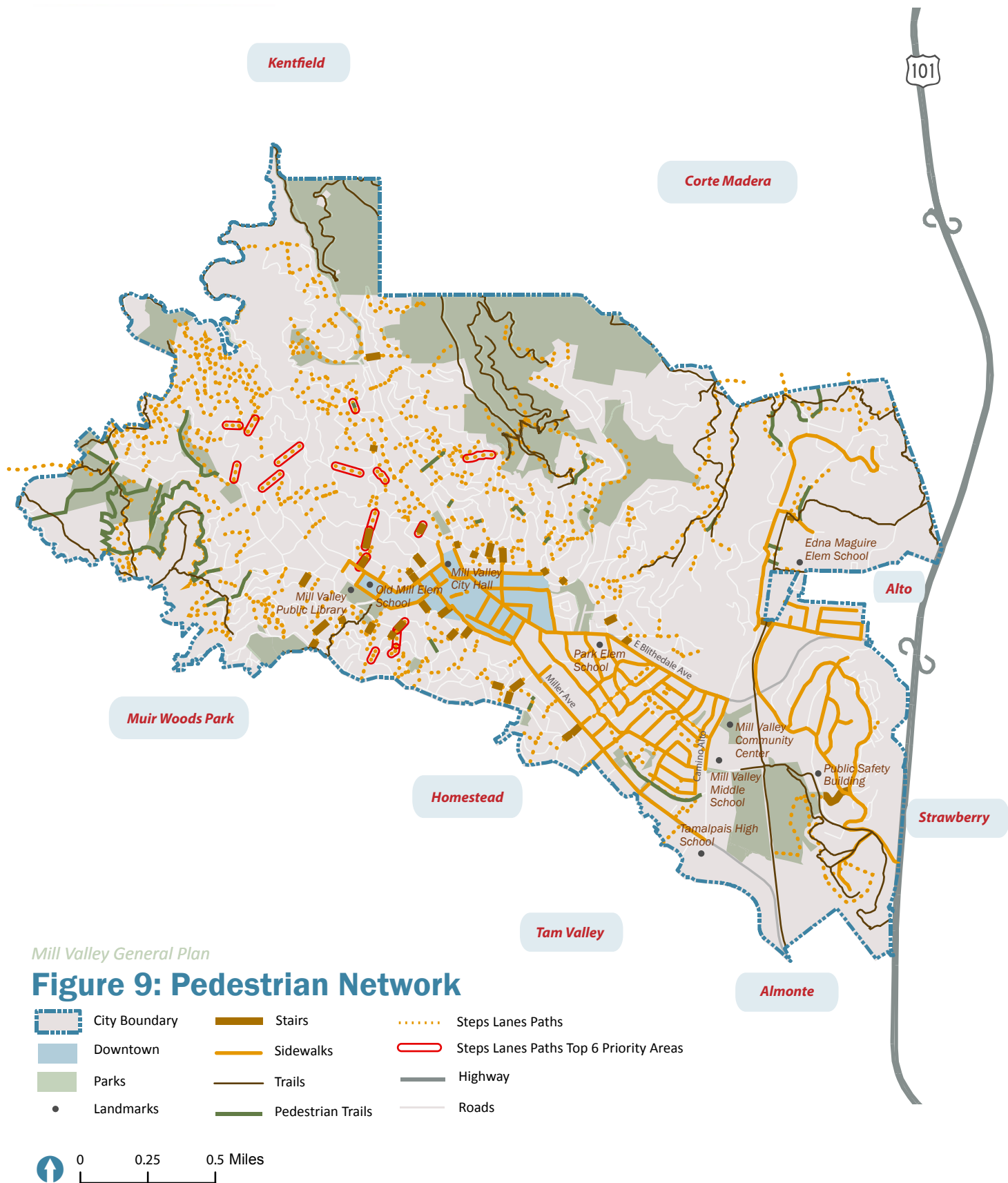
# of Daily Bikes on GGT: 40

Total # Bike Commuter and Utilitarian riders: 228

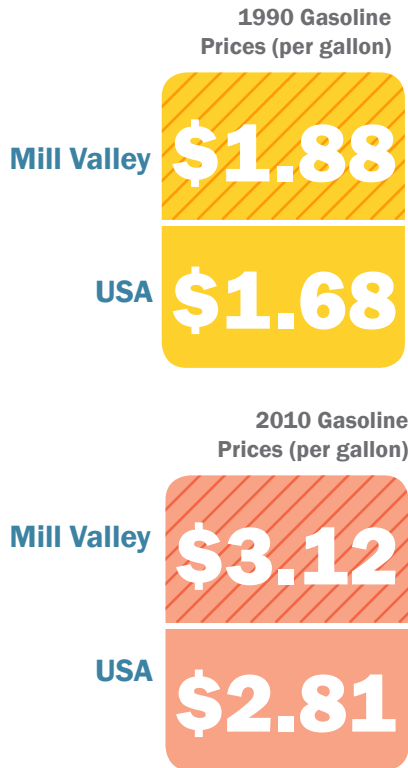
### Total Daily Bike Trips


Total Daily Bike Commute Trips: 456









 **\$4/**  
**Gallon**  
could result in an additional **670 million** public transit passengers

## Mobility Trends To Watch:

The automobile and driving experience is going to continue to change

- o By 2040, the number of hybrids and electric vehicles will increase from about 1 percent today to nearly 50 percent
- o In 2040, the average new car will get 48 miles per gallon (MPG), compared to 27 MPG in 2010.
- o Mobile navigation software (e.g., Waze) that learns from other users' driving times to provide routing and real-time traffic updates will allow drivers to avoid traffic tie-ups.
- o The trend towards autonomous (i.e., self-driving) cars is expected to continue. Recent new cars include crash-avoidance and self-parking technologies, and Google has tested completely autonomous cars.
- o Smart highways, such as those implemented in Seattle, that have variable speed limits will be implemented to relieve congestion and reduce accidents.

## Attitudes toward the private automobile are shifting

- o The average annual number of vehicle miles traveled by young people (16 to 34 year-olds) in the U.S. decreased by 23 percent between 2001 and 2009, falling from 10,300 miles per capita to 7,900 miles per capita.
- o The share of 14 to 34-year-olds without a driver's license increased by 5% between 2000-2010, rising from 21% to 26%, according to the FHA.
- o A 2011 report from the American Public Transportation Association finds that \$4 per-gallon gas prices could result in an additional 670 million public transit passenger trips and \$5 a gallon could generate an additional 1.5 billion passenger trips.
- o The continued growth of car-sharing (e.g., Zipcar), as an alternative to private ownership. Car-sharing membership in the U.S. rose by 117% between 2007 and 2009, and has been projected to have about 4.4 million members by 2016.

Demographics



Mobility



Land Use &amp; Economy



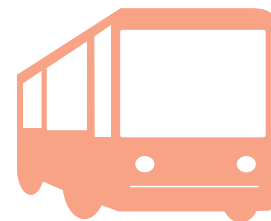
Environment



## Parking Trends To Watch:

### Our thinking on how to address parking is evolving

- o Many communities are adopting off-street parking requirements for new development (e.g., maximum ratios, lower minimum ratios, shared parking, etc.) that reduce the impacts on community character and cost of development.
- o The use of mechanical parking systems (e.g., parking lifts) in developments is increasing in order to accommodate parking while reducing costs per space.
- o The application of variable pricing for parking that increases parking rates with increased demand to reduce congestion, incentivize other modes of travel, etc. is expected to increase.
- o The use of mobile parking applications for smart phones and mobile devices that enable drivers to find, reserve, and pay for parking remotely is expected to increase.
- o The use of “guided parking” technologies (e.g., wireless sensing devices, in-car mapping devices), such as Sausalito’s Streetline program ([www.streetline.com](http://www.streetline.com)), that reduce congestion by providing real-time information on the location of available spaces is expected to increase.



National transit  
ridership has <sup>28.7%</sup> increased by ↑

Real Time Passenger Information Systems are making transit more convenient and contributing to increased ridership.



**35% increase**  
in bike commuting

## Alternative Modes Of Transportation Trends To Watch:

Transit will capture a bigger share of daily trips

- o National transit ridership increased by 28.7 percent from 1991 to 2010. During the same period, Federal assistance applied to transit increased by nearly 74.3percent.
- o Vehicle revenue miles increased by 18.1 percent between 2001 and 2010 over all modes. Light rail increased 73.1%, commuter rail 24.5%, and bus 5.3%.
- o Real Time Passenger Information Systems that track bus and rail arrival times at stations, stops, and on smart phones, is making transit more convenient and contributing to increased ridership.

Walking and Biking will continue to grow as a preferred travel option

- o Bike commuting in the 70 largest U.S. cities increased by 35 percent between 2005 and 2009.
- o A recent national survey indicated that 60% would choose a smaller home if it meant a commute of 20 minutes or less.
- o Two-thirds of survey respondents said that being within an easy walk of shops and services was an important factor in deciding where to live.
- o In 2010 the Transportation Department decreed that the needs of cyclists and pedestrians must be placed alongside those of motorists in funding transportation projects.
- o The Centers for Disease Control and Prevention are pushing “active transportation” systems that include walking and biking to promote public health.



Demographics



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## The SMART train is coming!

(SMART = Sonoma-Marin Area Rail Transit. [sonomamarintrain.org](http://sonomamarintrain.org))

With two SMART stations less than 10 miles of Mill Valley, the SMART Train will provide new transit opportunities for Mill Valley residents, visitors and workers:

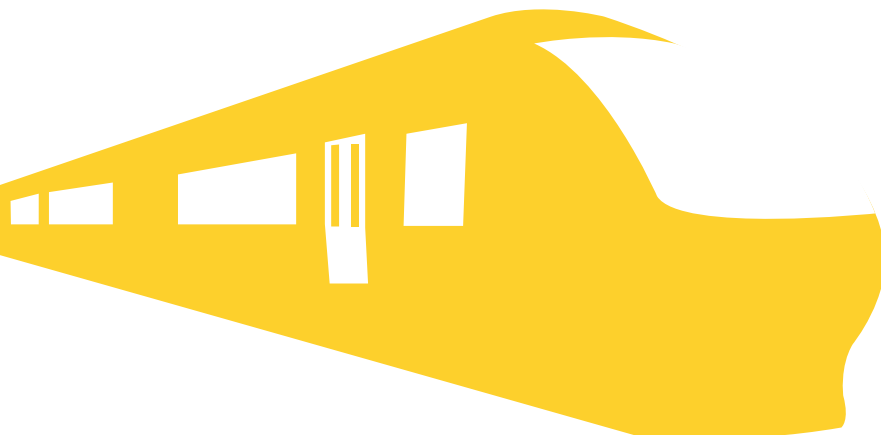
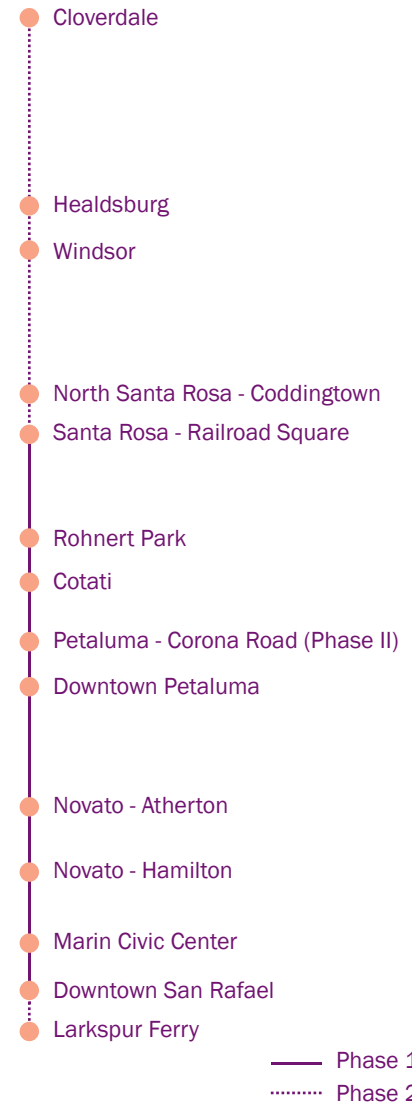
- **Downtown San Rafael SMART station, approximately 7 miles/13 minutes**  
(with current bus connection to Mill Valley via Marin Transit Route 17)
- **Larkspur Landing, approximately 6 miles/12 minutes**

According to MTC\* projections, 82% of the employed residents in Marin and Sonoma counties will travel to jobs within the SMART train district by 2025. Meanwhile, the percentage SMART District commuters going to jobs in San Francisco will drop to about 9% (from 14 % of the total in 2000). \* Metropolitan Transportation Commission

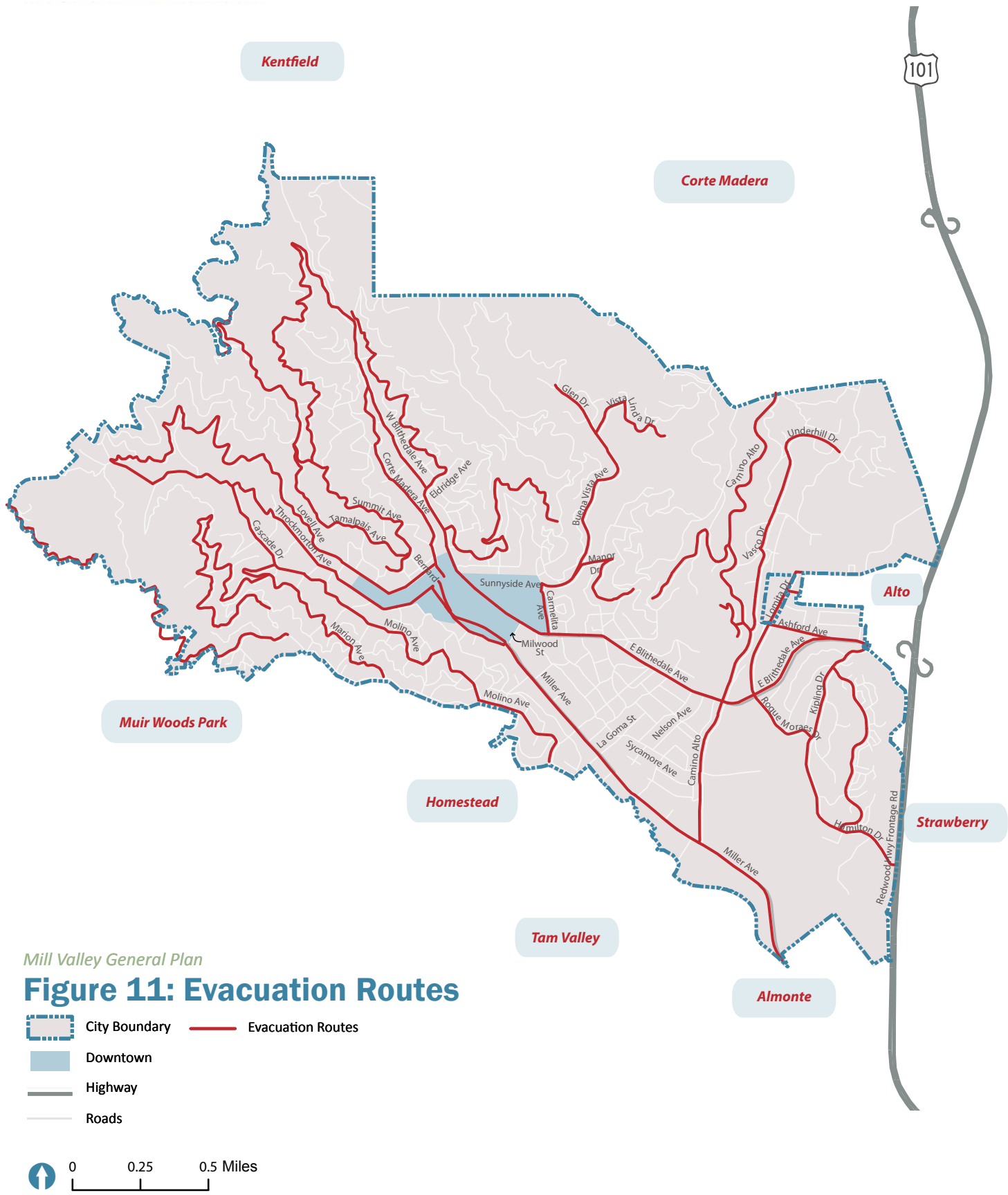
Each time an individual chooses to ride the train instead of driving alone, their carbon emissions will be reduced by 70%.

## That's an impressive savings!

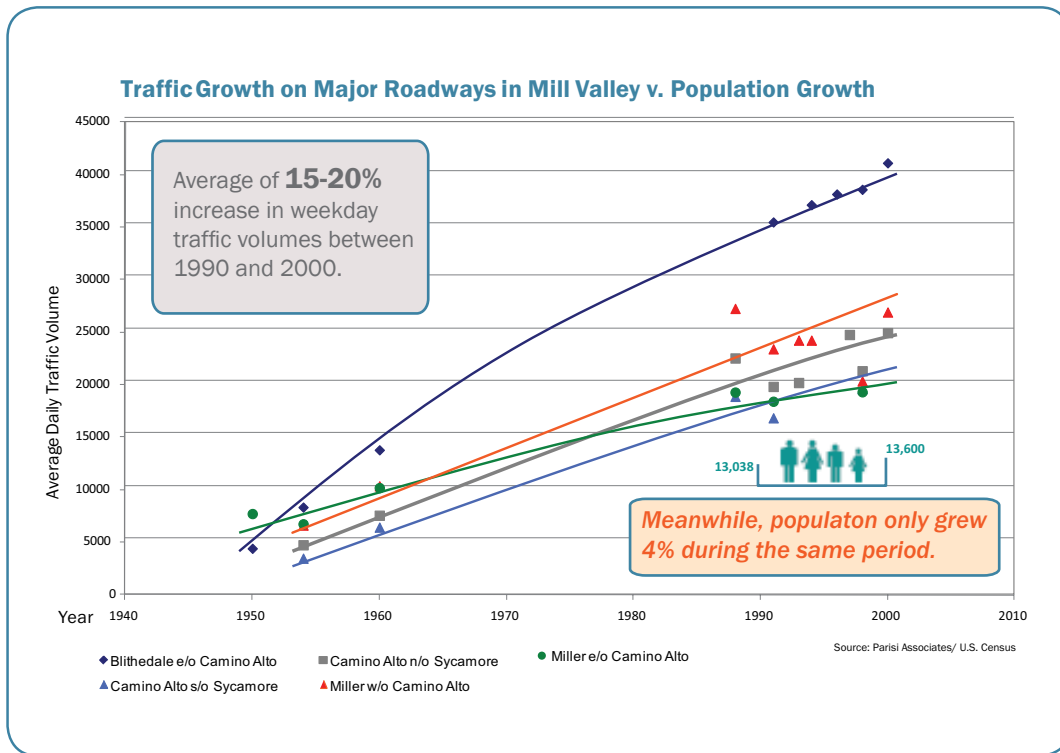
*But as a catalyst for change, SMART has the potential to do much more...*























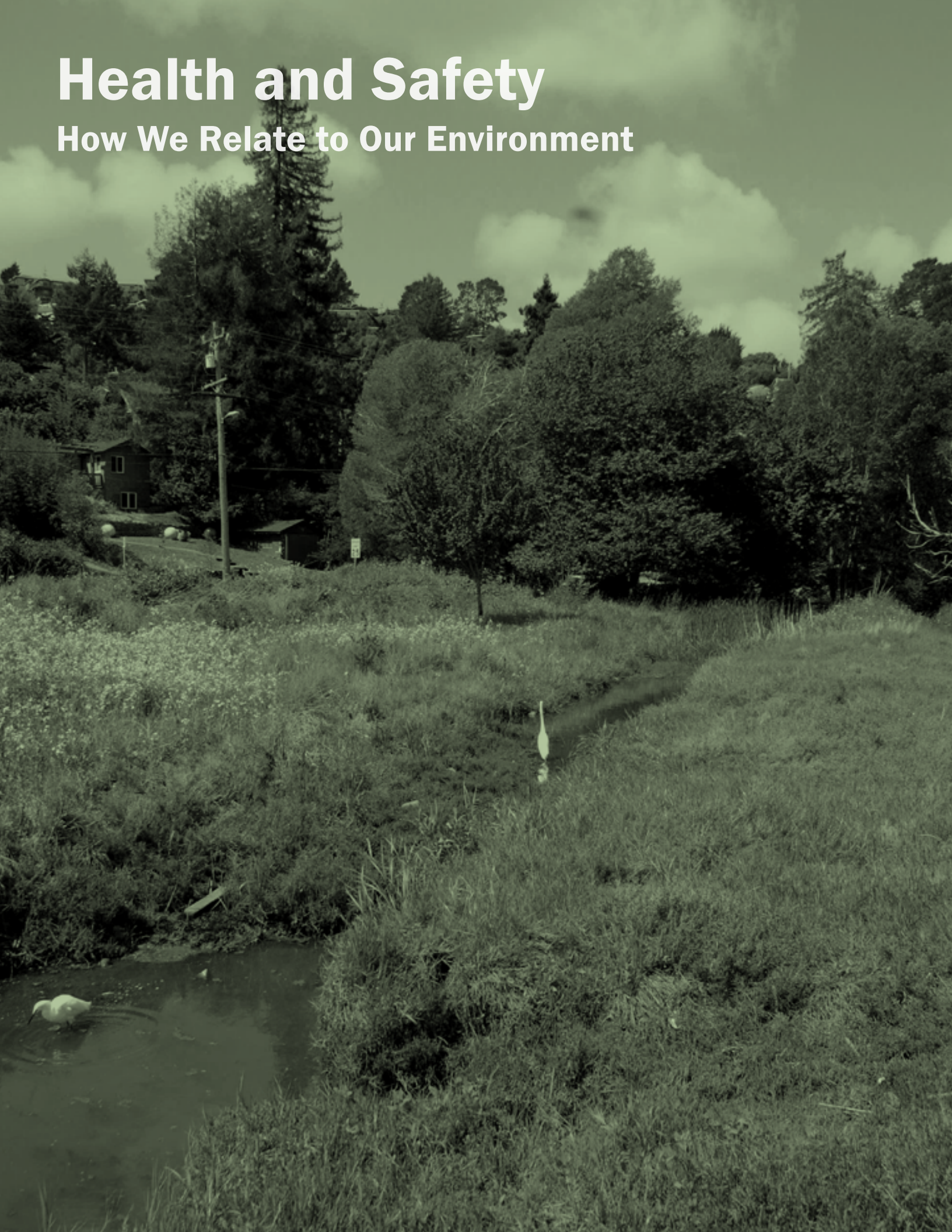
## Environment





# Health and Safety

How We Relate to Our Environment





Our environment influences the way we live — sometimes subtly, sometimes dramatically. We in turn, influence the environment by the way we live.

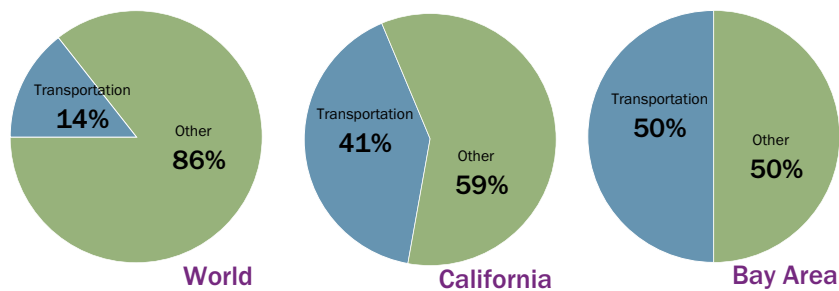
### The Air We Breathe

- The EPA’s Air Quality Index level for Mill Valley is 30.4, which means air quality is satisfactory and air pollution poses little or no risk. This compares to the U.S. average AQI of 32 (lower is better).
- For six out of seven monitored air pollutants, Mill Valley is consistent with national averages or significantly better.
- Nitrogen Dioxide (which is produced by motor vehicles and power plants, and results in a brownish haze) levels in 2010 were 12.4 parts per billion which is greater than the national average (9.4 ppb), but within EPA adopted standards.
- While the BAAQMD declared 11 “Spare the Air” days for the Bay Area in 1991; 25 in 1996; and 8 in 2011, the EPA’s AirNow website shows that Marin County had zero unhealthy air days between 2000 and 2010.

### Our Ecological Footprint

- Marin County generates more garbage per person than any other county in the U.S.
- Transportation (e.g., cars, buses, trucks, etc.) generates more than half (53%) of Mill Valley’s greenhouse gas emissions compared to 50% for the Bay Area, 41% for California, and 14% for the world.
- Marin County’s ecological footprint (i.e., the amount of land and sea needed to produce the resources to support one person) is estimated to be about 27 global acres per person. The U.S. average is about 20 acres, and the world average is 5.4 acres.

### GHG Emissions Compared

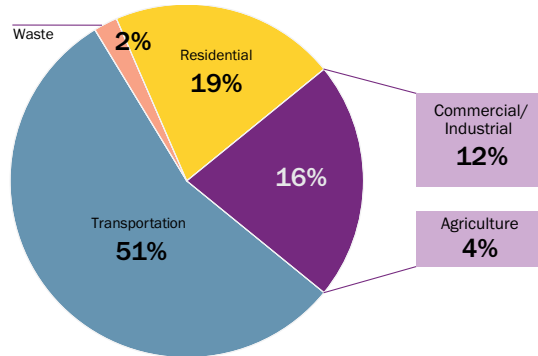


### “JUST THE FACTS, MA’AM”

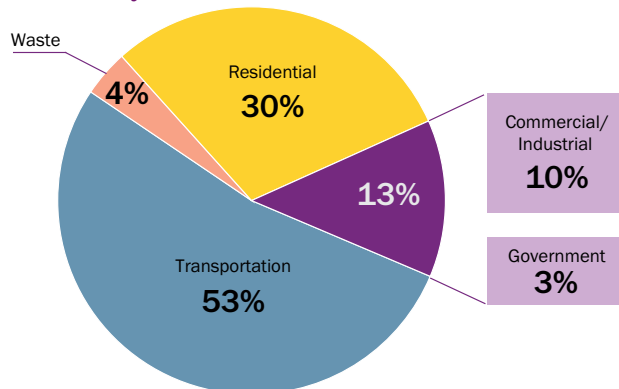
- Mill Valley generates approximately 94,878 metric tons of CO2-e per year.
- The 2011 annual Christmas bird count for southern Marin identified 41,500 birds and 164 different species in a single day.
- According to EPA’s AirNow website Marin County had zero unhealthy air days between 2000 and 2010.
- In 2011 there were 214 earthquakes recorded within 100 miles of Mill Valley—only two exceeded a magnitude of 4.0.
- The 2005 flood is estimated to have resulted in \$110 million in damages, and impacted 1,200 homes and 200 businesses



## 2005 GHG Emissions- Marin County

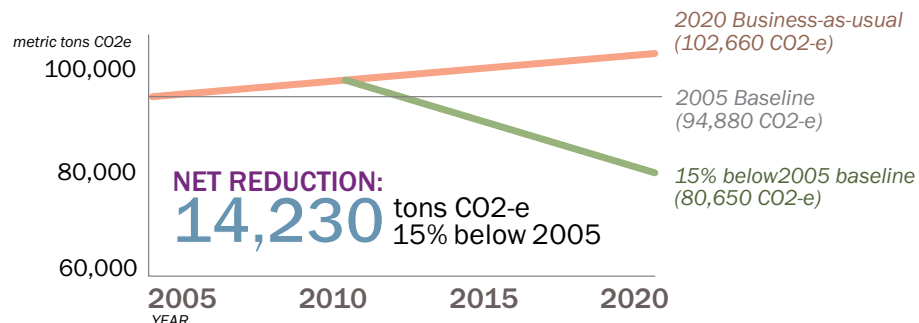


## 2005 GHG Emissions- Mill Valley



**MILL VALLEY:**  
**94,878**  
metric tons CO<sub>2</sub>-e

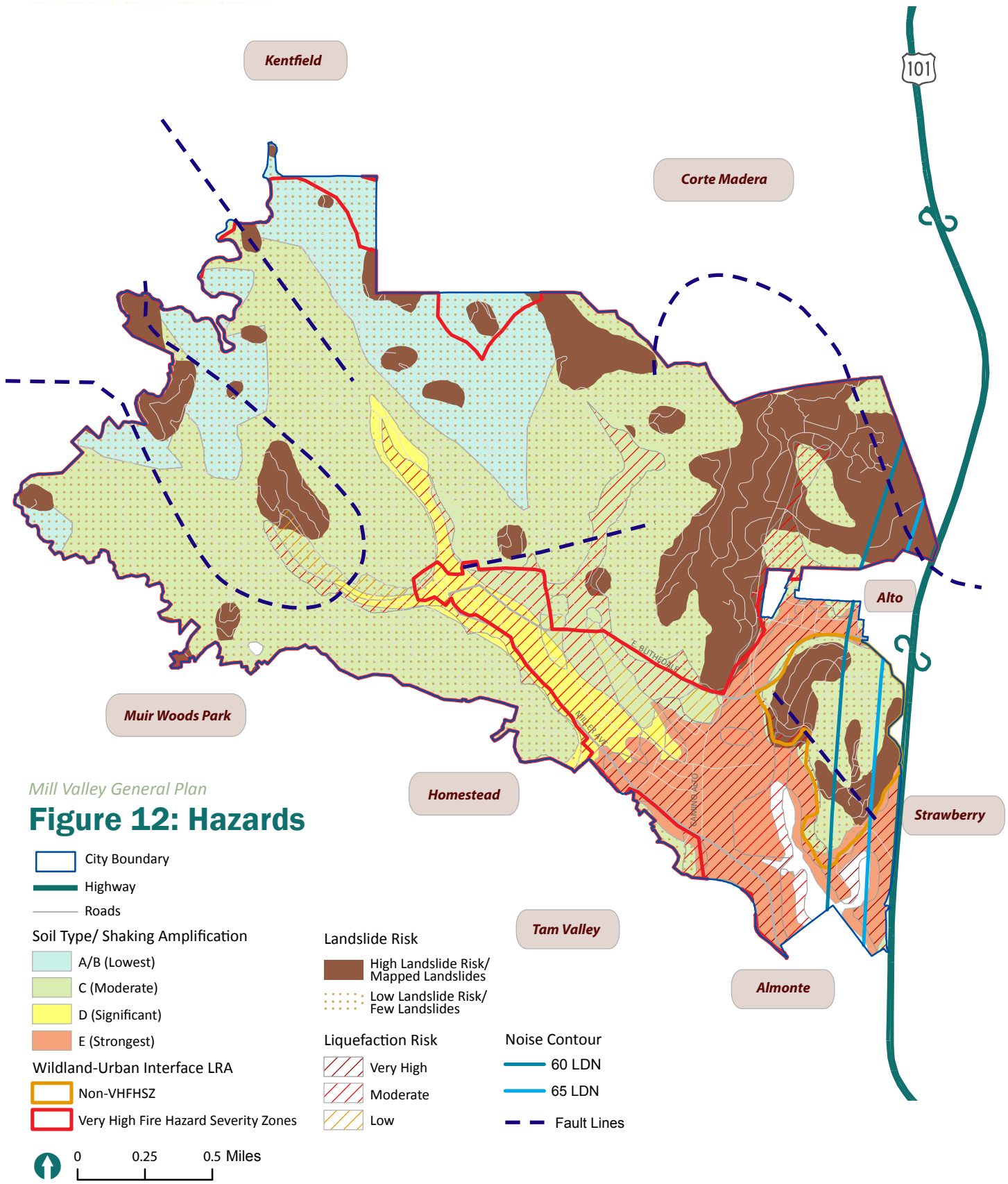
## Mill Valley's 2020 GHG Emissions Target



## Living With Mother Nature

- Due to its setting, Mill Valley is vulnerable to a number of natural disasters, including earthquakes, wildfire, severe winter storms, landslides, flash floods and tidal flooding.
- The primary cause of natural disasters in Mill Valley is storm-related, with flooding being the primary type of natural disaster (12).
- The number of natural disasters in Marin County (17) is greater than U.S. average (12).
- Many parts of Mill Valley are subject to potential flooding due to overflowing creeks caused by high rains and flash flooding; severe winter storms and high tides, or a combination of the two.
- Sea level is projected to rise 16 inches by 2050 and 55 inches by the end of the century due to the effects of climate change.
- Projected sea level rise will expand the areas subject to flooding to include low-lying areas of Mill Valley from Bothin Marsh to Sycamore Park.
- By 2050, the daily high tides will inundate the same area currently subject to flooding by a 100-year flood event.

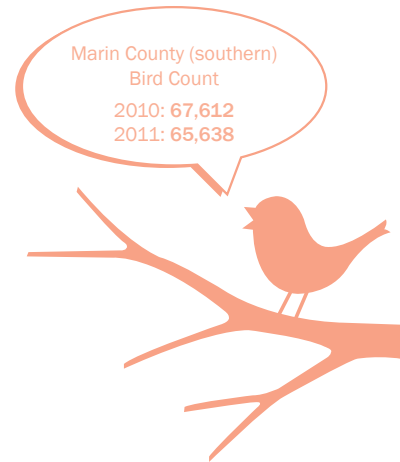






## Our Natural Resources

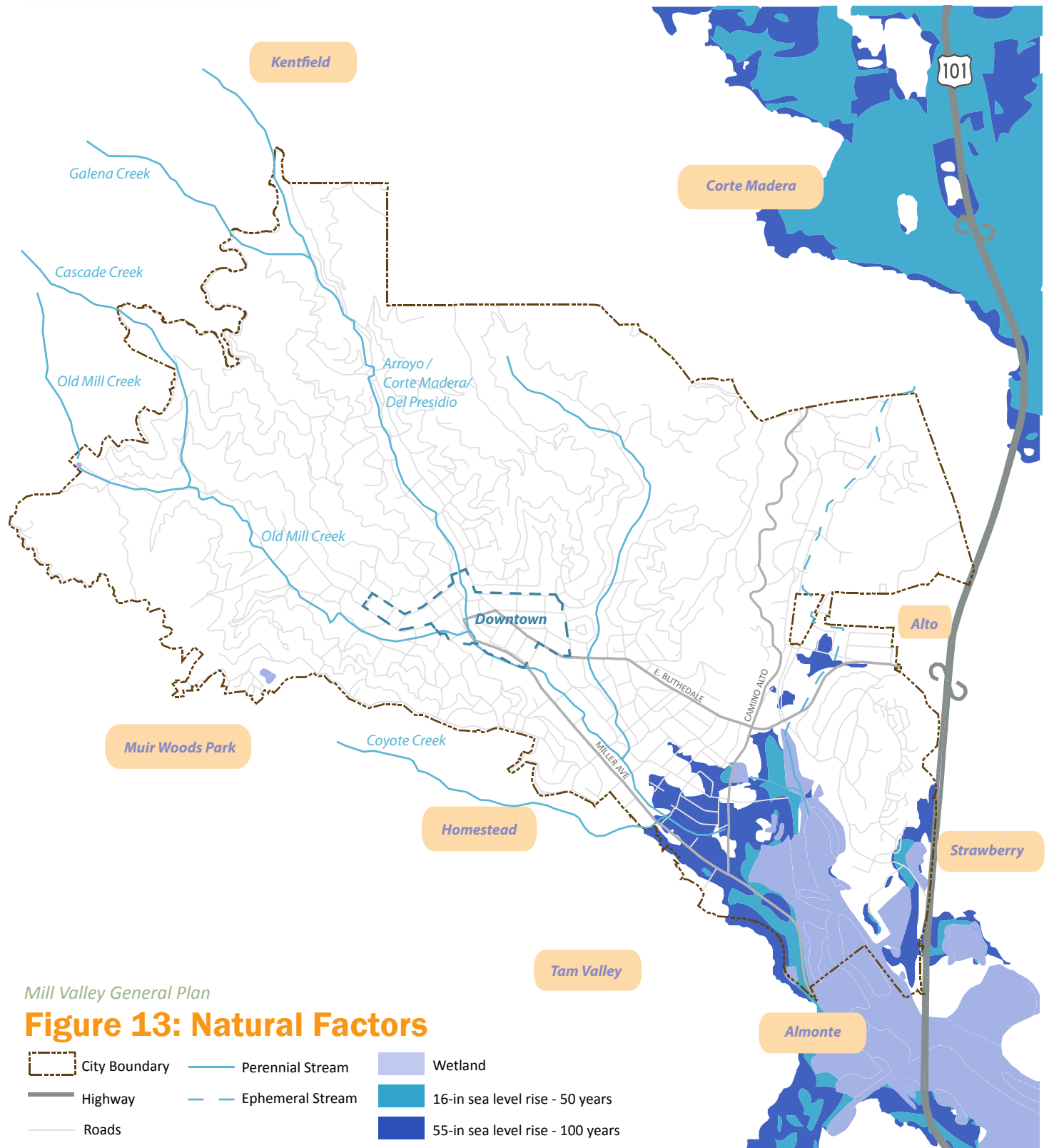
- Mill Valley is blessed with a natural setting rich in resources from wooded slopes, to riparian corridors, to marshy bayfront.
- Mill Valley's native biotic resources include redwood groves, mixed stands of broad-leaf evergreens (madrone and others), oak woodland (Coast live oak), chaparral, coastal scrub, grasslands, marshes, and mudflats.
- Natural resources along the community's edges are protected in a series of open space preserves: Blithedale Summit, Camino Alto, and Alto Bowl to the north and Bothin Marsh to the southeast.
- Mill Valley is interwoven with a complex network of six creeks (Arroyo Corte Madera del Presidio, Old Mill Creek, Cascade Creek, Warner Creek, Ryan Creek, and Sutton Manor Creek) that drain the watershed into Richardson Bay.
- The wetlands in Bothin Marsh Preserve, in the northwest portion of Richardson Bay, along with those in Corte Madera, represent the majority of the tidal marsh habitat of west-central San Francisco Bay.
- Richardson Bay, one of 148 Important Bird Areas in California (Daniel S. Cooper, 2004), provides refuge for thousands of waterfowl during high tide and shorebirds during low tide, including 3 sensitive species: Long-billed Curlew, San Pablo Song Sparrow, and San Francisco Clapper Rail.
- Hundreds of shorebirds, especially Western Sandpiper, utilize the exposed mudflats of Bothin Marsh daily during migration.



Mill Valley is blessed with a natural setting rich in resources from **wooded slopes, to riparian corridors, to marshy bayfront.**









## Our Health and Welfare

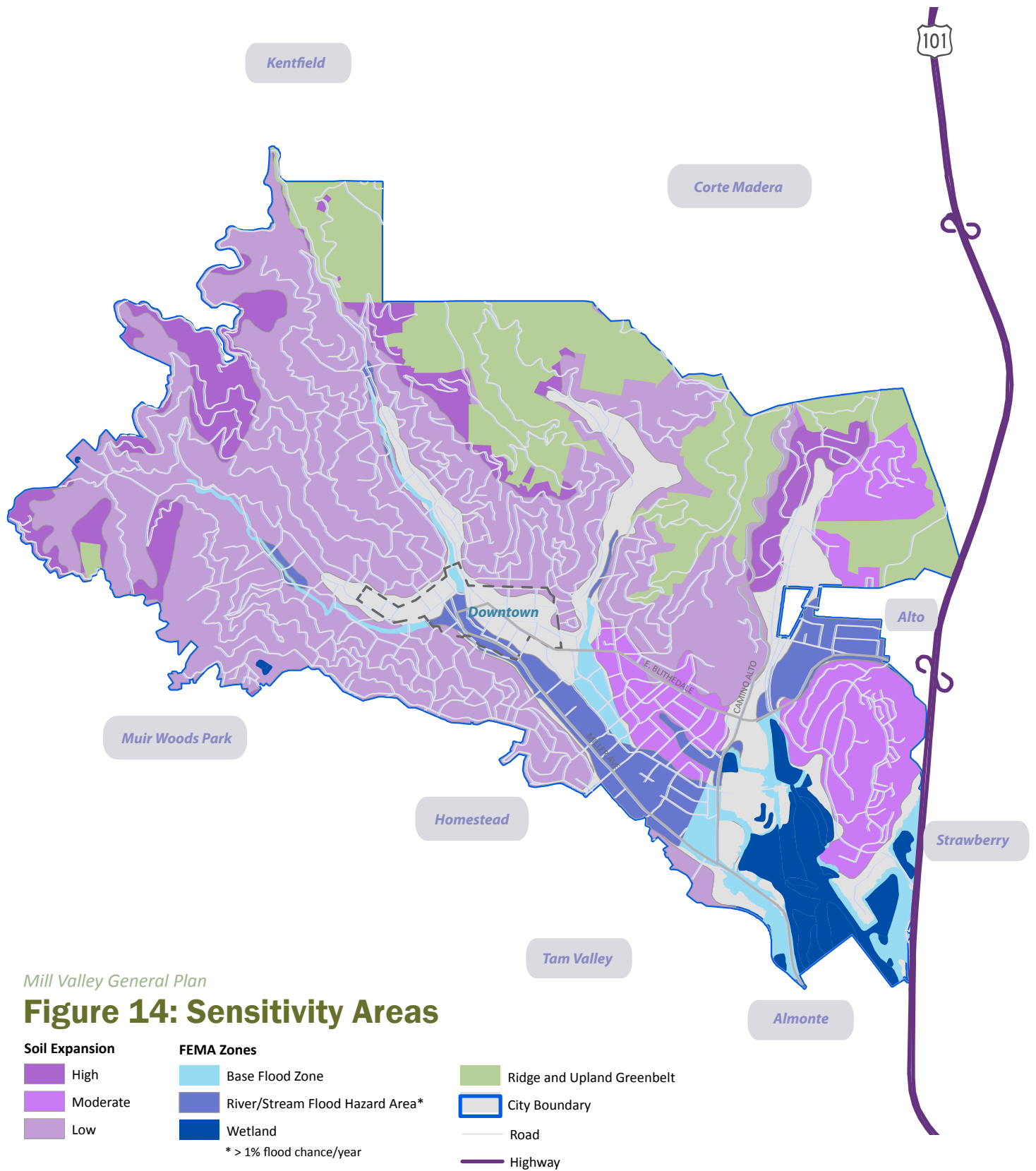
- For three consecutive years, Marin has been named the healthiest county in all of California by a national study (University of Wisconsin and the Robert Wood Johnson Foundation).
- The rate of adult diabetes in Marin County is 7% compared to 11.3% nationally.
- The rate of adult obesity rate in Marin County is 17% compared to 36% nationally.
- Marin's rate of breast cancer has historically been among the highest in the nation. Rates for white women in Marin are 28% higher than rates in other Bay Area counties and 38% higher than in other urban areas in California.
- Between 1991 and 1999 breast cancer rates in Marin increased by 60%, compared to increases of less than 5% in other areas of California.
- In recent years, the number of Bay Area kindergartners who have been immunized against diseases like whooping cough (pertussis) and measles has declined.
- Marin County has the lowest rate of immunizations (83%) in the nine-county Bay Area, and a rate of "personal belief" vaccine exemptions that is more than three-times the state average.
- Marin County has been particularly hard hit by an outbreak of pertussis, having the second-highest case rate in the state, which is nearly eight-times the statewide average.

## Staying Safe and Fit

- Mill Valley's pedestrian system includes 18 miles of sidewalks, and a unique network of steps, lanes, and trails that extend the sidewalk system into the hillside neighborhoods, including 5.5 miles of lanes and trails, and 0.5 mile of steps.
- Mill Valley has 7.1 miles of bikeways, including: 2.5 miles of Type I bike paths, 0.85 miles of bike lanes and 3.75 miles of Type III routes. The 2008 Bicycle and Pedestrian Plan calls for an additional 3.4 miles of Class II and III facilities to be developed.
- In Marin, 95% of adults and youth report living walking distance to a park, playground, or open space, and 85% report visiting one in the last month.

For **3** consecutive years  
Marin has been named the  
**healthiest county in**  
**all of California**





Mill Valley General Plan

**Figure 14: Sensitivity Areas**



- Ten (10) bicycle collisions were reported in Mill Valley between 1998 and 2000. Eight of the ten accidents involved adult cyclists.
- Sixteen (16) pedestrian accidents were recorded between 1998 and 2000. Eleven of the accidents involved pedestrians who were struck in a cross-walk while they had the right-of-way.
- The prevalence of crime in Mill Valley is quite low. Between 1999 and 2010, the crime index declined 41% (lower means less crime), from 164.3 to 97.5 compared to 319.1 for the U.S.
- Theft and burglary are by far the most common types of crime in Mill Valley, with an average of 174 thefts and 69 burglaries reported annually between 1999 and 2010.



## Environment, Health and Sustainability Trends To Watch:

Climate change is going to continue to affect the way we live

- o Climate change will increase the frequency and intensity of conditions conducive to air pollution, harsh heat, and vector bore disease.
- o Between 1900 and 2000, sea level rise in the Bay was 7 inches, primarily due to thermal expansion from global warming, but this rate of increase is accelerating.
- o Estimates of sea level rise range from as little as 2-3 feet if current emission rates trend downward, to as much as 8.5-35 feet by the end of the century if emissions continue to rise.
- o Based on current trends, by 2050 the average April measurement of the Sierra snowpack will drop by 13 feet, resulting in a loss of 36% of California's water supply.
- o Treating and delivering water accounts for approx 20% of all electricity used in California and is the largest single purpose use of electricity in Marin.

 **7.1**  
miles  
**of bike trails**





# Our Response to Environmental Challenges

A recent Gallup poll (3/12) asked Americans how much they worry about each of seven environmental problems. The results show significantly less worry today than in 2000, when worry was at or near its high point for each item. They also show less worry about global warming than any of the other six issues.

## Ranking of Public Concern of Environmental Issues

	2000 %	2012 %	Change (pct. pts.)
Pollution of drinking water	72	48	-24
Air Pollution	59	36	-23
Pollution of rivers, lakes & reservoirs	66	48	-18
Contamination of soil & water by toxic waste	64	50	-14
Loss of tropical rain forests	51	37	-14
Global Warming	40	30	-10
Extinction of plant and animal species	45	36	-9

o A 2012 Media Matters analysis found that television news coverage of climate change dropped significantly between 2009 and 2011—90% on Sunday shows and 72% on nightly news.

In 2011, these networks spent more than twice as much time discussing Donald Trump as climate change.





## Trends To Watch continued:

### New technologies and practices will promote a more sustainable future

- o Solar energy is projected to grow exponentially as its cost continues to decline. Projections indicate that by 2030 solar electricity is likely to cost half what coal electricity does today.
- o Cellulosic biofuels offer the promise of creating a viable energy source from waste products, such as wood waste, grasses, corn stalks, and other non-food products.
- o Green information and communications technologies hold promise for increasing the energy and resource efficiency of most aspects of urban development, such as:
  - o traffic congestion monitoring and pricing systems
  - o water monitoring (leakage detection, purification)
  - o building applications (temperature, light, humidity)
  - o intelligent public transportation and logistics
  - o public shared offices with teleconferencing
  - o home and office smart appliances
  - o smart grids
  - o carbon inventories and carbon accounting
- o Implementation of carbon taxes for the use of fossil fuels will help disincentivize their use and account for the impact their use has on the earth's climate.
- o Implementing adaptation strategies will be needed to respond to the effects of climate change including major investments in infrastructure to prevent coastal flooding and to store dwindling seasonal water supplies.
- o The combination of high oil prices, fuel shortages and supply disruptions is expected to continue the trend toward more compact, transit-supported development patterns.
- o There is expected to be increased focus on local and regional food production in and around cities as higher fuel prices and unexpected energy shortages drive up food prices.



higher fuel prices and  
unexpected energy shortages  
**drive up food prices.**



The US could avoid  
**\$550 billion**  
 in projected medical costs by  
 maintaining the  
 current obesity  
 rate of **36%**

## Public health will continue to rise as a priority

- o The percentage of U.S. residents who are obese is expected to reach 42% by 2030, raising the number of U.S. adults who are obese from 78 million in 2012 to more than 100 million by 2030.
- o The U.S. could avoid \$550 billion in projected medical costs by maintaining the current obesity rate of 36%.
- o Forty-eight percent of likely California voters responding to a Field Poll said unhealthy eating habits and a lack of exercise are the biggest threats to children's health.
- o 73% of respondents to the Field Poll said they believe it is a community's responsibility to address childhood obesity.
- o 57% of respondents said local governments should be able to tax sales of alcohol, cigarettes, junk food or sweetened beverages to pay for anti-obesity programs, if the proposals were approved by a majority of voters.
- o In 2010, health spending in California reached \$230 billion, triple 1991 levels.
- o California's per-capita health spending of \$6,238 was the ninth lowest in the nation.

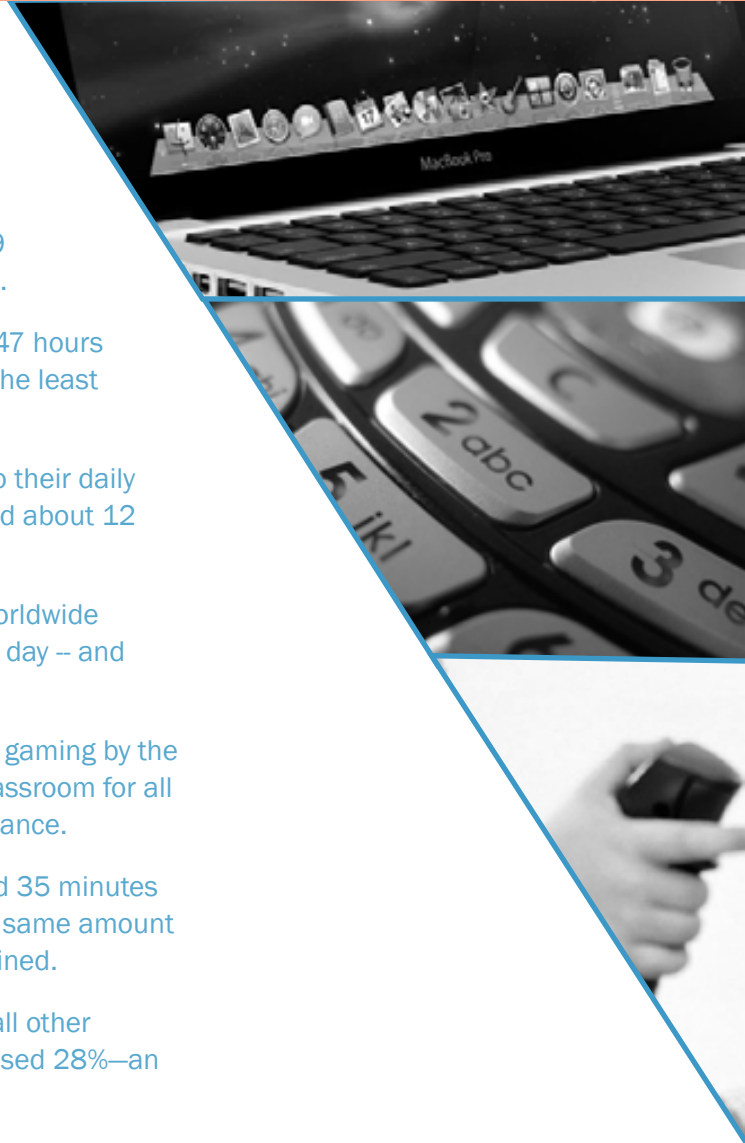




# Electronic Media

## It's Certainly Seductive!

- o In 2010, the average American watched 34 hours 39 minutes of TV per week (i.e., just under 5 hours/day).
- o The heaviest users of traditional TV are adults 65+ (47 hours 33 minutes per week) while teens age 12-17 watch the least amount of TV (23 hours 41 minutes per week).
- o Since 1990, adults have added more than an hour to their daily TV watching, while those younger than 17 have added about 12 minutes.
- o Currently there are more than half a billion people worldwide playing computer and videogames at least an hour a day – and 183 million in the U.S. alone.
- o The average young person racks up 10,000 hours of gaming by the age of 21 – or 24 hours less than they spend in a classroom for all of middle and high school if they have perfect attendance.
- o In 2010, consumers spent an average of 2 hours and 35 minutes being online and 50 minutes on mobile devices—the same amount of time allotted to newspapers and magazines combined.
- o Time spent with mobile devices is rising faster than all other media. In 2010, time spent on mobile devices increased 28%—an even larger gain than the 22% growth in 2009.
- o In 2010, time spent reading magazines and newspapers declined 9% each.



## Workbook Notes







## Workbook Notes

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## Workbook Notes





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