



**CITY COUNCIL AGENDA
REGULAR MEETING
CITY OF HALF MOON BAY**

TUESDAY, OCTOBER 17, 2023

**HYBRID MEETING (SEE NEXT PAGE)
ADCOCK COMMUNITY CENTER
535 KELLY AVENUE
HALF MOON BAY, CA 94019**

**Deborah Penrose, Mayor
Joaquin Jimenez, Vice Mayor
Robert Brownstone, Councilmember
Harvey Rarback, Councilmember
Debbie Ruddock, Councilmember**

7:00 PM

This agenda contains a brief description of each item to be considered. Those wishing to address the City Council on any matter not listed on the agenda, but within the jurisdiction of the City Council to resolve, may come forward to the podium during the Public Forum portion of the agenda and will have a maximum of three minutes to discuss their item. Comments on Consent Calendar items should be made during the Public Forum section of the agenda. Those wishing to speak on a Business or Public Hearing matter will be called forward at the appropriate time during that item's consideration.

Please Note: Anyone wishing to present materials to the City Council, please submit seven copies to the City Clerk.

Copies of written documentation relating to each item of business on the agenda are on file in the Office of the City Clerk at City Hall where they are available for public inspection. If requested, the agenda shall be available in appropriate alternative formats to persons with a disability, as required by Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132.) Information may be obtained by calling 650-726-8271.

In compliance with the Americans with Disabilities Act, special assistance for participation in this meeting can be obtained by contacting the City Clerk's Office at 650-726-8271. A 48-hour notification will enable the City to make reasonable accommodations to ensure accessibility to this meeting (28 CFR 35.102-35.104 ADA Title II).

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HYBRID MEETING PARTICIPATION PROTOCOLS

*This meeting will be held in-person and via Zoom for public participation. Remote participation is provided as a supplemental way to provide public comment, but this method does not always work. The public is encouraged to attend in person to ensure full participation. Public comments may be made in-person or remotely via Zoom, and interpretation will be available. All Councilmembers and staff will participate in person. During any public comment portions, attendees may use the "raise your hand" feature and will be called upon and unmuted when it is their turn to speak. The meeting will also be streamed on Channel 27, on pacificcoast.tv, and on Facebook at www.facebook.com/cityofhalfmoonbay. Please click to join the webinar: <https://us06web.zoom.us/j/87674804231> or join by phone at 669-900-9128, using Webinar ID 876-7480-4231. If joining by phone, use *9 to raise your hand, *6 to mute and unmute.*

ROLL CALL / PLEDGE OF ALLEGIANCE

APPROVAL OF AGENDA

PROCLAMATIONS AND PRESENTATIONS

MIDCOAST COMMUNITY COUNCIL UPDATE

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT UPDATE

MAYOR'S ANNOUNCEMENTS OF COMMUNITY ACTIVITIES AND COMMUNITY SERVICE

REPORT OUT FROM RECENT CLOSED SESSION MEETINGS

CITY MANAGER UPDATES TO COUNCIL

PUBLIC FORUM

1. CONSENT CALENDAR

1.A WAIVE READING OF RESOLUTIONS AND ORDINANCES

1.B APPROVAL OF MINUTES

Staff Recommendation: Approve minutes for the September 5, 2023 and September 19, 2023 Special and Regular Meetings.

[ATTACHMENT](#)

1.C RESOLUTION DENOUNCING HATE SPEECH

Staff Recommendation: Adopt a resolution denouncing hate speech and crimes and reaffirming the City's commitment to safeguard the civil rights, safety, and dignity of all community members.

[STAFF REPORT](#)

[RESOLUTION](#)

1.D RECEIPT OF LEGISLATIVE POSITION LETTERS

Staff Recommendation: Receive and file position letters for Senate Bill 4, Senate Bill 244, Senate Bill 381, Senate Bill 423, Assembly Bill 363, and Assembly Bill 1439

[STAFF REPORT](#)

[ATTACHMENT](#)

1.E EMERGENCY SEYMOUR OUTFALL REPAIR UPDATE

Staff Recommendation: Receive an informational update on the Emergency Seymour Outfall Repair pursuant to Section 22050 of the Public Contract Code.

[STAFF REPORT](#)

1.F AMENDMENT NO. 3 TO THE MAINTENANCE AGREEMENT WITH CALTRANS FOR MAINTENANCE RESPONSIBILITIES FOR THE PROPOSED EASTSIDE PARALLEL TRAIL NORTH - SEGMENT 4 (CIP NO. 619)

Staff Recommendation: Adopt a resolution authorizing the City Manager to execute Amendment No. 3 to the Maintenance Agreement with Caltrans for maintenance responsibilities for the Eastside Parallel Trail North – Segment 4 (CIP No. 619).

[STAFF REPORT](#)

[ATTACHMENT 1](#)

[ATTACHMENT 2](#)

1.G SAM BUDGET AMENDMENT REQUEST - RESERVE FUNDS

Staff Recommendation: Adopt a resolution approving the Sewer Authority Mid-Coastside Reserve Fund Budget request to replenish necessary reserves without waiving its prior protest votes related to IPS projects.

[STAFF REPORT](#)

[ATTACHMENT 1](#)

[ATTACHMENT 2](#)

2. ORDINANCES AND PUBLIC HEARINGS

2.A INTRODUCTION OF AN ORDINANCE AMENDING TITLE 13 “WATER AND SEWER” BY ADDING CHAPTER 13.22 - FATS, OIL, GREASE, AND SAND

Staff Recommendation: Conduct a public hearing and introduce on first reading an ordinance amending Title 13 (Water and Sewer) of the Half Moon Bay Municipal Code by adopting a new Chapter 13.22 entitled “Fats, Oil, Grease and Sand.”

[STAFF REPORT](#)

[ATTACHMENT](#)

3. RESOLUTIONS AND STAFF REPORTS

3.A WORKSHOP - E-BIKES AND OTHER ELECTRIC DEVICES ON TRAILS AND PATHS

Staff Recommendation: Receive an informational update on the operation of e-bikes and other electric devices (AB 1909) and provide comments and feedback to staff for the preparation of a draft ordinance on City-owned trails and paths.

[STAFF REPORT](#)

[ATTACHMENT 1](#)

3.B DRAFT CLIMATE ACTION AND ADAPTATION PLAN (PHASE 1)

Staff Recommendation: 1) Receive an update on the Draft Climate Action and Adaptation Plan Phase 1, and 2) provide direction and feedback to staff for final draft preparation and future council consideration.

[STAFF REPORT](#)

[ATTACHMENT](#)

FOR FUTURE DISCUSSION / POSSIBLE AGENDA ITEMS

CITY COUNCIL REPORTS

ADJOURNMENT



**MINUTES
CITY OF HALF MOON BAY CITY COUNCIL
WEDNESDAY, SEPTEMBER 5, 2023
ADCOCK COMMUNITY/SENIOR CENTER, 535 KELLY AVENUE**

CONVENE SPECIAL MEETING

Mayro Penrose called the special meeting to order at 5:30 p.m.

ROLL CALL

PRESENT: Councilmembers Brownstone, Rarback, and Ruddock, Vice Mayor Jimenez and Mayor Penrose

OPEN SESSION IDENTIFICATION OF CLOSED SESSION ITEMS

PUBLIC COMMENT ON CLOSED SESSION ITEMS

CLOSED SESSION

CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION (Govt. Code section 54956.9(d)(1))
Name of case: City of Half Moon Bay v. Granada CSD and Montara WSD, et al.
Santa Clara Superior Court Civil No. 17CIV316927; Court of Appeal Case No. H049896

ADJOURNMENT

Mayor Penrose adjourned the meeting at 5:58 p.m.

Respectfully Submitted:

Approved:

Jessica Blair, City Clerk

Deborah Penrose, Mayor



**MINUTES
CITY OF HALF MOON BAY CITY COUNCIL
WEDNESDAY, SEPTEMBER 19, 2023
ADCOCK COMMUNITY/SENIOR CENTER, 535 KELLY AVENUE**

CONVENE SPECIAL MEETING

Mayor Penrose called the special meeting to order at 5:15 p.m.

ROLL CALL

PRESENT: Councilmembers Brownstone, Rarback, and Ruddock, Vice Mayor Jimenez and Mayor Penrose

OPEN SESSION IDENTIFICATION OF CLOSED SESSION ITEMS

PUBLIC COMMENT ON CLOSED SESSION ITEMS

CLOSED SESSION

CONFERENCE WITH LEGAL COUNSEL—EXISTING LITIGATION (Govt. Code section 54956.9(d)(1))
Name of case: City of Half Moon Bay v. Thomas J. Gearing, et al., – San Mateo Superior Court Civil No. 21-CIV-01560

CONFERENCE WITH LEGAL COUNSEL – LIABILITY CLAIM (Govt. Code section 54956.95)
Claim received July 10, 2023 from Christine (Yanhong) Zolly & the Estate of Z. Liu & A. Zhang c/o Bowles & Verna LLP, which will be made available for public inspection upon request pursuant to Government Code Section 54957.5

CONFERENCE WITH LEGAL COUNSEL—ANTICIPATED LITIGATION (Govt. Code section 54956.9(d)(2))
Conference with legal counsel regarding significant exposure to litigation related to claim listed above (1 potential case)

CONFERENCE WITH LEGAL COUNSEL—EXISTING LITIGATION (Govt. Code section 54956.9(d)(1))
Name of case: Casa Mira Homeowners Assn. et al. v. California Coastal Commission et al. (City of Half Moon Bay, Real Party in Interest), – San Mateo Superior Court Civil No. 19-CIV-04677

CONFERENCE WITH LEGAL COUNSEL—EXISTING LITIGATION (Govt. Code section 54956.9(d)(1))
Name of case: Casa Mira Homeowners Assn. et al. v. California Coastal Commission et al. (City of Half Moon Bay, Real Party in Interest), – San Mateo Superior Court Civil No. 21-CIV-03202

ADJOURNMENT

Mayor Penrose adjourned the meeting at 6:58 p.m.

Respectfully Submitted:

Approved:

Jessica Blair, City Clerk

Deborah Penrose, Mayor



**MINUTES
CITY OF HALF MOON BAY CITY COUNCIL
TUESDAY, SEPTEMBER 19, 2023
ADCOCK COMMUNITY/SENIOR CENTER, 535 KELLY AVENUE**

CALL TO ORDER / ROLL CALL

Mayor Penrose called the meeting to order at 7:03 p.m. and led the Pledge of Allegiance.

ROLL CALL

PRESENT: Councilmembers Brownstone, Rarback, and Ruddock, Vice Mayor Jimenez, and Mayor Penrose

APPROVAL OF AGENDA

MOTION

Councilmember Brownstone moved and Councilmember Rarback seconded a motion to approve the Agenda. The question was called and the motion carried unanimously.

PROCLAMATIONS AND PRESENTATIONS

HISPANIC HERITAGE MONTH PROCLAMATION

Community Services Analyst Acosta presented the proclamation to Uriel Hernandez Najera and Cornelio Valladares Vara, farmworkers displaced during the January 23, 2023 event.

MAYOR'S ANNOUNCEMENTS OF COMMUNITY ACTIVITIES

Mayor Penrose announced the meeting with Ray Muller, Board of Supervisors, on September 21, 9:30 a.m.; Village of Coastsides presentation of ET at the Library on September 21, 5:30 p.m.; Summers End Music Festival on September 23; Corn Hole Tournament on September 24; and the 50th Annual Pumpkin Weigh-Off on October 9.

REPORT OUT FROM RECENT CLOSED SESSION MEETING

City Attorney Engberg announced that Council met in Closed Session and unanimously directed staying neutral in the appeal process in the case of Casa Mira Homeowners Assn. et al. v. California Coastal Commission et al. (City of Half Moon Bay, Real Party in Interest), – San Mateo Superior Court Civil No. 19-CIV-04677.

CITY MANAGER UPDATES TO COUNCIL

SUMMERS END CONCERT

Recreation Supervisor Behle invited the community to the 4th Annual Summers End Music Festival on September 23, 2023.

STORMWATER PREPAREDNESS UPDATE

Management Analyst Nichols provided tips to prepare and stay safe for the rainy season and announced a volunteer opportunity for Coastal Clean-Up Day on September 23.

PUBLIC FORUM

The following individuals addressed the Council:

- Claire Toutant
- Guido Ciardi
- Brian Shields
- Linda Goldstein
- Shauna Pickett-Gordon
- Joanne Rokosky

1. CONSENT CALENDAR

The Consent Calendar consisted of followings items:

- 1.A WAIVE READING OF RESOLUTIONS AND ORDINANCES**
- 1.B RECEIPT OF LEGISLATIVE POSITION LETTERS**
- 1.C RESOLUTION OF SUPPORT AND SUBMITTAL OF A GRANT APPLICATION FOR MEASURE A/W HIGHWAY PROGRAM FUNDING OR THE HIGHWAY 1 SOUTH CORRIDOR STUDY**
- 1.D SUSTAINABILITY PURCHASING AND PRACTICES POLICY 2023 UPDATE**
- 1.E AMENDMENT 1 TO PROFESSIONAL SERVICES AGREEMENT WITH RINCON CONSULTANTS INC. FOR HOUSING ELEMENT ENVIRONMENTAL REVIEW**

MOTION

Councilmember Brownstone moved and Councilmember Rarback seconded a motion to approve the Consent Calendar. The question was called and the motion carried unanimously.

2. ORDINANCES AND PUBLIC HEARINGS

None.

3. RESOLUTIONS AND STAFF REPORTS

3.A PICKLEBALL DISCUSSION

Assistant City Manager Doughty and Recreation Supervisor Behle presented the staff report.

The following individuals addressed the Council:

- Elaine Raddy
- Kate Livingston
- Liz Pesh
- Nancy Marsh

The Council asked questions of staff and discussed the item.

3.B FINANCIAL REPORT FOR THE QUARTER ENDED ON JUNE 30, 2023

Finance Manager Stiles and City Manager Chidester presented the staff report.

The Council asked questions of staff and discussed the item.

MOTION

Councilmember Brownstone moved and Councilmember Ruddock seconded a motion to accept the Financial Report for the quarter ended June 30, 2023 and schedule budget meetings prior to midyear. The question was called and the motion carried unanimously.

3.C AGREEMENT FOR LAW ENFORCEMENT SERVICES WITH THE COUNTY OF SAN MATEO SHERIFF'S OFFICE – AMENDMENT SIXTEEN

Assistant City Manager Doughty and Management Analyst Wei presented the staff report.

Council discussed the item.

MOTION

Councilmember Brownstone moved and Councilmember Rarback seconded a motion to authorize the City Manager to execute Amendment Sixteen to the Agreement for Law Enforcement Services with the County of San Mateo Sheriff's Office under the new Rates/Payments schedule. The question was called and the motion carried unanimously.

3.D AGREEMENT FOR PUBLIC SAFETY COMMUNICATION SERVICES WITH COUNTY OF SAN MATEO

Assistant City Manager Doughty and Management Analyst Wei presented the staff report.

The Council asked questions of staff and discussed the item.

MOTION

Councilmember Brownstone moved and Councilmember Rarback seconded a motion to adopt a resolution authorizing the City Manager to execute an agreement between the City of Half Moon Bay and the County of San Mateo for public safety communications services for the period of July 1, 2022, through June 30, 2025. The question was called and the motion carried unanimously.

FOR FUTURE DISCUSSION / POSSIBLE AGENDA ITEMS

Councilmember Brownstone suggested consideration of a public safety parcel tax for the November 2024 ballot. Mayor Penrose seconded the recommendation.

CITY COUNCIL REPORTS

Vice Mayor Jimenez referred to the Mercury News article on the event on Saturday.

Councilmember Rarback discussed the presentation at the senior center regarding home electrification. Mayor Penrose suggested a presentation from PCE on rebates.

Councilmember Ruddock discussed the recent One Shoreline meeting regarding protecting the airport from flooding and sea level rise. She stated she attended the City County Association of Governments at which the grant application period was announced and an update on the equity policy was presented. She suggested receiving a presentation on the State's plan to have utilities on a progressive fixed monthly rate scale. Mayor Penrose suggested inviting the CPUC to address the Council.

Councilmember Brownstone requested staff look into the public speaker's request for modifications to the Housing Element.

ADJOURNMENT

Mayor Penrose adjourned the meeting at 9:05 p.m.

Respectfully Submitted:

Approved:

Maggie Rodriguez, Assistant City Clerk

Deborah Penrose, Mayor

BUSINESS OF THE COUNCIL OF THE CITY OF HALF MOON BAY

AGENDA REPORT

For meeting of: **October 17, 2023**

TO: Honorable Mayor and City Council

VIA: Matthew Chidester, City Manager

FROM: Jessica Blair, Communications Director / City Clerk
Maggie Rodriguez, Assistant City Clerk

TITLE: **RESOLUTION DENOUNCING HATE SPEECH**

RECOMMENDATION:

Adopt a resolution denouncing hate speech and crimes and reaffirming the City's commitment to safeguard the civil rights, safety, and dignity of all community members.

FISCAL IMPACT:

There is no fiscal impact associated with this item.

STRATEGIC ELEMENT:

This action supports the *Inclusive Governance* Element of the Strategic Plan.

BACKGROUND:

Recently, several cities and agencies across the state have experienced a new form of Zoom-bombing. City Clerks from around the Bay Area have reported accounts of City Council meetings being disrupted and derailed during public comment by individuals using the platform to espouse anti-Semitic rhetoric. This is obviously unacceptable, hurtful, and goes against the Council's continued resolution of being "United Against Hate."

The City of Monterey reported that at their September 19, 2023, City Council meeting, white supremacists used fake names including those of famous Nazis to espouse hateful and ignorant speech. Similar incidents were reported over the past month in San Carlos, Pacifica, Atherton, Sacramento, Walnut Creek, San Mateo, and Millbrae, among others, in addition to some San Mateo County and C/CAG meetings.

Staff presented on this topic at the October 3, 2023 City Council meeting to receive direction from the Council as to how they would like staff to handle any potential similar comments at a Half Moon Bay meeting. During that discussion, staff was directed to bring back a resolution denouncing hate and reaffirming the City's commitment to a diverse, safe community.

ATTACHMENT:
Resolution

Resolution No. C-2023-

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HALF MOON BAY DENOUNCING
HATE SPEECH AND CRIMES AND REAFFIRMING THE CITY'S COMMITMENT TO SAFEGUARD
THE CIVIL RIGHTS, SAFETY, AND DIGNITY OF ALL COMMUNITY MEMBERS**

WHEREAS, Half Moon Bay is made up of individuals, both native born and immigrants, whose collective cultures, religions, backgrounds, orientations, abilities, and viewpoints join to form a healthy community that prides itself on being a place that welcomes persons and families of all walks of life regardless of how long they have lived here, what they believe in, or where they came from; and

WHEREAS, it is the City Council's desire to ensure that all residents, regardless of country of origin, participate in civic life and daily activities without fear of being ridiculed, attacked, arrested, or detained based solely on ethnicity, beliefs, or immigration status; and

WHEREAS, compassion, education, cooperation, respect, and kindness are everyday practices that nurture and embrace the understanding of differences / acceptance between people; and

WHEREAS, the City wants to reassure its residents and visitors that Half Moon Bay is a place that celebrates diversity and inclusion; and

WHEREAS, the City will not tolerate any prejudice, racism, bigotry, antisemitism, hatred, bullying, or violence towards any groups within our community; and

WHEREAS, the City rejects any attempt to intimidate, threaten, or otherwise marginalize members of our community; and

WHEREAS, the City Council wishes to declare that Half Moon Bay is a safe place for everyone, including vulnerable communities regardless of race, ethnicity, gender identity, sexual orientation, religion, socioeconomic status, or country of origin; and

WHEREAS, the City assures its vulnerable communities that the City supports them, will do all it can to maintain and improve their quality of life, and will not tolerate acts of hate-based discrimination, bullying, or assault; and

NOW, THEREFORE, BE IT RESOLVED THAT the City Council of the City of Half Moon Bay hereby affirms our commitment to removing systemic barriers by working together against hate and by embracing the strength of diversity to build an inclusive and equitable community for all.

.....

I, the undersigned, hereby certify that the foregoing Resolution was duly passed and adopted on the 17th day of October 2023 by the City Council of Half Moon Bay by the following vote:

AYES, Councilmembers:

NOES, Councilmembers:

ABSENT, Councilmembers:

ABSTAIN, Councilmembers:

ATTEST:

APPROVED:

Jessica Blair, City Clerk

Deborah Penrose, Mayor

BUSINESS OF THE COUNCIL OF THE CITY OF HALF MOON BAY

AGENDA REPORT

For meeting of: **October 17, 2023**

TO: Honorable Mayor and City Council

VIA: Matthew Chidester, City Manager

FROM: Jessica Blair, Communications Director / City Clerk

TITLE: **RECEIPT OF LEGISLATIVE POSITION LETTERS**

RECOMMENDATION:

Receive and file position letters for Senate Bill 4, Senate Bill 244, Senate Bill 381, Senate Bill 423, Assembly Bill 363, and Assembly Bill 1439.

FISCAL IMPACT:

There is no fiscal impact associated with this item.

STRATEGIC ELEMENT:

This action supports the *Inclusive Governance* Element of the Strategic Plan.

DISCUSSION:

Annually, the City adopts a Legislative Platform to allow staff to send position letters regarding various bills / issues of interest to the City. The 2023 Legislative Platform was adopted by the City Council on April 4, 2023. The platform provides staff direction and allows the City staff, on the Council's behalf, to respond in support of or opposition to bills and other legislative and administrative actions. The City Council has delegated its authority to the Mayor and / or City Manager to sign position letters consistent with the legislative platform. Townsend Public Affairs monitors legislation for the City and communicates frequently with staff on bills. Occasionally, the League of California Cities sends action alerts for bills affecting municipalities. Staff reviews those alerts as well and takes action on any that align with the City's Legislative Platform.

In the spirit of transparency, when position letters are sent by the City, staff includes them in a City Council agenda packet for viewing by the Council and the community.

ATTACHMENT:

Position Letters: SB 4, SB 244, SB 381, SB 423, AB 363 and AB 1439



October 5, 2023

The Honorable Gavin Newsom
Governor of California
1021 O Street, 9th Floor
Sacramento, CA 95814

**Re: SB 381 (Min) Electric bicycles: study
City of Half Moon Bay – Request for SIGNATURE**

Dear Governor Newsom,

On behalf of the City of Half Moon Bay, I write to respectfully request your **SIGNATURE** on SB 381 (Min) which would require the Mineta Transportation Institute at San Jose State University to conduct a study on electric bicycles and the safety of riders and pedestrians by January 1, 2026.

Half Moon Bay is a small city located in California's central coast. Micro mobility modes of transportation such as skateboards, bicycles, and electric bicycles are popular in our City as a means of easy and healthy active transportation. Unfortunately, we see an uptick in pedestrian and bicycle involved injuries and constant dangers, largely due to the proliferation of electric bicycles. While the City supports new modes of transportation that reduce traffic congestion, improve vehicular flow, and improve air quality, public safety and quality of life measures need to be considered.

Recently, our City Council agenzized discussions on E-bikes and has actively sought community input on where they should be allowed, and which classes of E-bikes should be allowed in certain areas.

The first step toward addressing these concerns in a thoughtful way that maintains and encourages alternative forms of transportation involves data collection and analysis. SB 381 will provide the missing link to inform common sense public safety measures to protect residents and promote clean transportation.

Thank you for your consideration, and again, I respectfully request your SIGNATURE on SB 381.

Sincerely,

Deborah Penrose

Deborah Penrose
Mayor
City of Half Moon Bay



October 5, 2023

The Honorable Gavin Newsom
Governor of California
1021 O Street, 9th Floor
Sacramento, CA 95814

Re: SB 244 (Eggman) Right to Repair Act
City of Half Moon Bay – Request for SIGNATURE

Dear Governor Newsom,

On behalf of the City of Half Moon Bay, I write to respectfully request your **SIGNATURE** on SB 244 (Eggman) which would create a right to repair for certain consumer appliances and electronic products, allowing owners and independent repair providers to obtain from a qualifying product's manufacturer, on fair and reasonable terms, the documentation, parts, software, and tools needed to repair the product.

SB 244 would make it easier and cheaper to get our consumer electronics and appliances fixed. Restrictions on repair have direct costs to consumers when they have to pay exorbitant prices to have devices repaired through manufacturer-authorized networks or replace the product entirely. These restrictions also ripple out into the economy, hurting local, regulated repair shops, contributing to our growing e-waste crisis, and stifling the practicality of product owners to resell their property if they choose to do so.

This is a commonsense measure that will benefit small business owners, consumers, and the environment. Thank you for your consideration, and again, I respectfully request your SIGNATURE on SB 244.

Sincerely,

Deborah Penrose

Deborah Penrose

Mayor

City of Half Moon Bay



October 5, 2023

The Honorable Gavin Newsom
Governor of California
1021 O Street, 9th Floor
Sacramento, CA 95814

**Re: AB 363 (Bauer-Kahan) Pesticides: neonicotinoids for nonagricultural use:
reevaluation: control measures
City of Half Moon Bay – Request for SIGNATURE**

Dear Governor Newsom,

On behalf of the City of Half Moon Bay, I write to respectfully request your **SIGNATURE** on AB 363 (Bauer-Kahan) which would prohibit, beginning January 1, 2025, the sale, possession, or use of a pesticide containing one or more neonicotinoid pesticides, as defined, for any nonagricultural use on nonproduction outdoor or ornamental plants, trees, or turf, except by state certified applicators and state licensed pest control dealers. Additionally, this bill would require the Department of Pesticide Regulation (DPR) to evaluate the potential impacts of neonicotinoid pesticide uses on pollinating insects, aquatic ecosystems, and human health, as specified.

According to a coalition of supporters, "Neonics broadly contaminate California's environment, threatening the collapse of entire ecosystems... On any given day, neonics are found in the bodies of half the U.S. population and a recent study found neonics in the bodies of over 95% of 171 pregnant women tested in California and four other states... While the DPR has proposed restrictions on neonic uses in agriculture to protect pollinators, the agency has so far not addressed neonic use in non-agricultural settings and has focused solely on risks to honeybees. This bill would address upwards of 20% of total neonic use in the state."

The above statements are cause for serious concern. This bill would be a step in the right direction to addressing critical health and safety needs of the people of California, as well as our rich wildlife including both plants and animals.

Thank you for your consideration, and again, I respectfully request your SIGNATURE on AB 363.

Sincerely,

Deborah Penrose

Deborah Penrose
Mayor
City of Half Moon Bay



October 5, 2023

The Honorable Gavin Newsom
Governor of California
1021 O Street, 9th Floor
Sacramento, CA 95814

**Re: SB 4 (Wiener) Planning and zoning: housing development: higher education institutions and religious institutions
City of Half Moon Bay – Request for SIGNATURE**

Dear Governor Newsom,

On behalf of the City of Half Moon Bay, I write to respectfully request your **SIGNATURE** on SB 4 (Wiener) which would make a housing development project “use by right” on land owned by an independent institution of higher education or a religious institution, as specified.

Numerous faith-based organizations within California have surplus land situated in non-residential zoned parcels that could accommodate additional multifamily housing units. Under current law, however, a religious institution would have to partner with a developer to undergo a long and costly process to re-zone the land for residential development.

SB 4 provides an innovative approach to housing production by streamlining affordable housing developments for these institutions via a by-right approval process, and we especially appreciate the affordability requirements set forth in this bill.

The City of Half Moon Bay is committed to helping foster the development of affordable housing in our community, especially with many lower-income farmworkers and other essential workers living in the city. The bottom line is Californians need more accessible and affordable housing. The growing trend of homelessness and a lack of workforce housing proximate to job locations to due

to a lack of affordable housing is simply unacceptable. SB 4 seeks to address these issues by finding creative solutions for housing production.

Thank you for your consideration, and again, I respectfully request your SIGNATURE on SB 4.

Sincerely,

Deborah Penrose

Deborah Penrose
Mayor
City of Half Moon Bay



October 5, 2023

The Honorable Gavin Newsom
Governor of California
1021 O Street, 9th Floor
Sacramento, CA 95814

**Re: AB 1439 (Garcia) Low-income housing tax credit: farmworker housing.
City of Half Moon Bay – Request for SIGNATURE**

Dear Governor Newsom,

On behalf of the City of Half Moon Bay, I write to respectfully request your **SIGNATURE** on AB 1439 (Garcia), which would require the California Tax Credit Allocation Committee to consider amending the regulatory scoring system for allocations of the Low-Income Housing Tax Credit (LIHTC) to award the maximum points to farmworker housing projects under the housing needs category, and an initial five points beyond required thresholds in the site amenities category.

As you know – despite farmworkers' huge economic contribution to the state, their living conditions are horrific. Many farmworkers find themselves living in motel rooms or sharing a living space with several other people.

Half Moon Bay is made up of a significant amount of farm workers and agricultural laborers who not only provide vital services to the state and nation through their labor intense jobs, but who are also active and well-respected members of the community. The City has a number of farmworker housing developments and there are several more actively being constructed or planned.

This bill could result in real tangible benefits for the well deserving farmworkers in Half Moon Bay and across the state. Thank you for your consideration on this important bill, and again, I respectfully request your signature on AB 1439.

Sincerely,

Deborah Penrose
Mayor
City of Half Moon Bay



October 5, 2023

The Honorable Gavin Newsom
Governor of California
1021 O Street, 9th Floor
Sacramento, CA 95814

Re: SB 423 (Wiener) Land use: streamlined housing approvals: multifamily housing developments.

City of Half Moon Bay – Request for VETO

Dear Governor Newsom,

On behalf of the City of Half Moon Bay, I write to respectfully request your **VETO** on **SB 423 (Wiener)**.

SB 423 extends the sunset associated with SB 35 (Statutes of 2017) and would pre-empt local discretionary land use authority by making approvals of multifamily developments ministerial actions under a number of circumstances.

We have concerns with many of the bill's provisions, even in its current form as presented to you:

- Diminishment of Housing Opportunity Sites for Affordable Housing: SB 35 requires relatively little affordable housing as part of market-rate development in terms of the number of units and/or depth of affordability. This encourages developers to bypass collaborating with local jurisdictions to secure funding so that projects can include more affordable units in line with the commitments made in state-certified Housing Elements. We encouraged the drafters of this legislation to modify the requirements such that all projects located on housing opportunity sites seeking SB 35 processing allowances must include affordable units equivalent in number and depth of

Office of the City Council

501 Main Street, Half Moon Bay, CA 94019 650 726 8250 www.hmbcity.com

affordability as specified in a local jurisdiction's Housing Element. Without such a modification, SB 35 and 423 are not consistent with State housing law.

- Applicability to the Coastal Zone: SB 423 would now make SB 35 developments applicable in the coastal zone under specific circumstances. While we appreciate that these coastal zone provisions were narrowed, we still have concern about by-right development in these areas. Specifically, we appreciate the reference to wetlands, but wetlands are merely one type of ESHA found in the Coastal Zone. All coastal resources, including ESHA should be acknowledged.
- Semi-rural Areas and Access to Basic Services: Coastal San Mateo County has very limited transit service, a severe childcare shortage, and no hospital. The context for multifamily development needs to take this into account, and SB 35 is too blunt of a tool to do so. In contrast, the City is carefully planning housing for the local workforce, including farmworkers, service workers, teachers, and older adults in locations and formats that will reduce VMT, support multi-generational living environments, and provide the wrap-around services that our low-income residents need. Our low-income local workforce also relies on cars to get to work and manage errands. While SB 35's parking reductions are appropriate in areas where transit and services are conveniently concentrated in urban settings, that is not the context for semi-rural Half Moon Bay and many other communities throughout the State.

Half Moon Bay has been a wonderful example of a coastal community that has done everything it can to develop affordable and deeply affordable housing, especially for our farmworker community. While we commend the Author for being a strong affordable housing advocate, we feel that SB 423 brushes aside sensitive environmental review standards, will exacerbate the local jobs-housing mismatch already present in many coastal communities, and needed to revisit the parking provisions laid out in SB 35.

Thank you for your consideration, and again, I respectfully request your **VETO** on SB 423.

Sincerely,

Deborah Penrose

Deborah Penrose
Mayor
City of Half Moon Bay

BUSINESS OF THE COUNCIL OF THE CITY OF HALF MOON BAY

AGENDA REPORT

For meeting of: **October 3, 2023**

TO: Honorable Mayor and City Council

VIA: Matthew Chidester, City Manager

FROM: Maz Bozorginia, Public Works Director/City Engineer

TITLE: **CONTINUATION OF EMERGENCY SEYMOUR OUTFALL REPAIR WORK PURSUANT TO PUBLIC CONTRACT CODE SECTION 22050 – UPDATE #1**

RECOMMENDATION:

Review and authorize by motion and four-fifths vote, the continuation of the emergency actions to be taken with respect to the Seymour Outfall repairs, in compliance with applicable provisions of Public Contract Code Section 22050.

FISCAL IMPACT:

There is no fiscal impact with receiving this informational update. The FY 2023-24 Capital Improvement Program includes funding the Seymour Watercourse Erosion and Coastal Stabilization Project CIP (0608) which is the funding source for the emergency work. This emergency repair is on the City's disaster recovery list with FEMA and CalOES. Staff continues to seek reimbursement for storm related costs including restoration funding.

STRATEGIC ELEMENT:

This action supports the *Infrastructure and Environment* and *Healthy Communities and Public Safety* Elements of the Strategic Plan.

BACKGROUND:

The Seymour Watercourse and Outfall is a man-made drainage feature located directly west of the westerly terminus of Seymour Street and approximately 1,000 feet south of the City's Poplar Beach parking lot. Between the Seymour Watercourse and parking lot is the closed San Mateo County Landfill which is owned and managed by the County. The bluffs in this area have been eroding for many years and are particularly vulnerable to erosion during high volume storm events. In 2017, the City designed and solicited bids for a repair project to address damage along the watercourse. Cazadoro Construction, Inc. was selected as the lowest responsible bidder and completed the improvements on time and on budget. The improvements were monitored over the last several years and had been functioning well until the 2022/23 winter storms.

On October 3, 2023, the City Council adopted a resolution authorizing the City Manager to execute a construction contract for emergency Seymour Outfall repairs with Cazadoro Construction, Inc. in the amount of \$223,215 and an additional 10% contingency (\$22,000) for a total emergency fund of \$245,215 to cover the necessary repair cost. The emergency coastal development permit (PDP-23-075) was also issued on October 3, 2023, and provided as an informational update to the Half Moon Bay Planning Commission at their regular meeting on October 10, 2023. As part of the emergency permit, a follow-up Coastal Development Permit submittal is required within 60 days of the work. Staff are concurrently working on the application to consider additional monitoring and follow-up actions.

Pursuant to Section 22050 of the Public Contract Code, the City Council waived the requirement for competitive bidding in this case of emergency to facilitate a timely necessary repair. Due to insufficient time to competitively bid the project, immediate action was needed to respond to the emergency. Section 22050 also requires a status update on progress at the next City Council meeting with a four-fifths approval to continue the work until the repairs are completed. This is the first update on the emergency work.

DISCUSSION:

The emergency repairs started on October 4, 2023, the day after the Council approved the construction contract. The first order of work was to prepare the site and area, including posting of construction signage to notify the public, installation of stormwater best management practices (BMPs), safety and environmental protection fencing. As of the close of business on October 11th, all fallen trees and wood debris has been removed from the impacted channel and headcut areas. Five undercut and dead trees were also cut back to their stump to minimize additional damage from future precipitation. The timber materials removed from the project site will be reused in for the timber and rock slope protection improvements at the headcut. Maintenance of the rock “check dams” are also being repaired.



Image 1 – Public Trail Detour South of Seymour Bridge

In the next few days, placement of the timber and rock will commence in preparation of the final protective rock layer that will be overlayed on top of the timber reinforcement. It is anticipated that the construction will be completed by Friday, October 20th, followed by demobilization of the construction equipment and crews. Biological monitoring and oversight continue as necessary to ensure all permits and best practices are followed. Reporting to regulatory agencies will also be completed.



Image 2 – Compacted Base Rock at Seymour Watercourse Headcut

ATTACHMENTS:

None

BUSINESS OF THE COUNCIL OF THE CITY OF HALF MOON BAY

AGENDA REPORT

For meeting of: **October 17, 2023**

TO: Honorable Mayor and City Council

VIA: Matthew Chidester, City Manager

FROM: Maz Bozorginia, Public Works Director/City Engineer

TITLE: **AMENDMENT NO. 3 TO THE MAINTENANCE AGREEMENT WITH CALTRANS FOR MAINTENANCE RESPONSIBILITIES FOR THE PROPOSED EASTSIDE PARALLEL TRAIL NORTH – SEGMENT 4 (CIP NO. 619)**

RECOMMENDATION:

Adopt a resolution authorizing the City Manager to execute Amendment No. 3 to the Maintenance Agreement with Caltrans for maintenance responsibilities for the Eastside Parallel Trail North – Segment 4 (CIP No. 619).

FISCAL IMPACT:

By approving the amendment, the City will assume responsibility for maintenance and repair of the improvements for the Eastside Parallel Trail North – Segment 4 project. Funding for this effort will need to be programmed as part of the City's operating budget for future years.

The Capital Budget for design and construction of the Eastside Parallel Trail North – Segment 4 is comprised of the following amounts and sources:

Source	Amount
SMCTA	\$1,295,000
MTC	\$350,000
City (General Fund)	\$35,000
Total	\$1,680,000

STRATEGIC ELEMENT:

This recommendation supports the following Elements of the Strategic Plan: *Infrastructure and Environment, Healthy Communities and Public Safety, and Inclusive Governance*.

BACKGROUND:

The City's adopted Capital Improvements Program (CIP) includes projects to extend the Multi-Modal Trails throughout City limits adjacent to Hwy 1. The City has previously completed the

construction of the multi-modal trail parallel to Highway 1 from Wavecrest Road to Roosevelt Blvd; a total distance of 3 miles.

The City's adopted Bicycle and Pedestrian Master Plan (2019) calls for the extension of the Eastside Parallel Trail for the final 0.3 miles to the northern City limits which will connect to the newly constructed San Mateo County Trail (Coronado Avenue in El Granada to the northern City Limits). The City's project includes a Class I multi-use path that will be an 8-ft wide asphalt path plus 2 feet of decomposed granite on each side. The proposed trail is located on the east side of Highway 1 extending the existing path from its northern terminus at Roosevelt Boulevard to the northern City limits at Mirada Road (approximately 0.3 miles).

The majority of funding for the project was established through grants from the San Mateo County Transportation Authority (SMCTA) and the Metropolitan Transportation Commission (MTC) for a total grant amount of \$1,645,000. The City's local match from general funds for the project is \$35,000, for a total project budget of \$1,680,000.

DISCUSSION:

On June 13, 2023, the City of Half Moon Bay Planning Commission adopted the Initial Study/Mitigated Negative Declaration and associated Mitigation Monitoring and Reporting program as well as the Coastal Development Permit allowing construction of the project. Staff is currently working to obtain all remaining regulatory permit approvals, including the encroachment permit from Caltrans.

In order for Caltrans to issue the final encroachment permit, the City is required to accept the responsibility for the maintenance of certain improvements for the project. The original maintenance agreement between Caltrans and the City went into effect on July 1, 1980, with subsequent amendments (Amendment No. 1 – 12/6/2010; Amendment No. 2 – 8/20/2019) for other city-initiated projects within the state right of way (ROW).

The current proposed amendment, which would be the third, includes maintenance responsibilities for the trail, including structural integrity of the pedestrian/bicycle bridge, boardwalk, landscaping, and paved and soft surfaces. The terms of the amendment are similar to the previous amendments in scope. This amendment adds this project area to the City's maintenance responsibilities along the state ROW.

There is a cost associated with ongoing maintenance, which will need to be considered and programmed in the City's future operating budget. Items such as landscaping and weed abatement are minor inclusions into the operating budget; whereas the bridge structures would cost more but would be less frequent.

ATTACHMENTS:

1. Resolution
2. Draft Caltrans Maintenance Agreement Amendment No. 3

RESOLUTION NO. C-2023-_____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HALF MOON BAY AUTHORIZING THE CITY MANAGER TO EXECUTE AMENDMENT NO. 3 TO THE MAINTENANCE AGREEMENT WITH CALTRANS FOR MAINTENANCE RESPONSIBILITIES FOR THE EASTSIDE PARALLEL TRAIL NORTH – SEGMENT 4 (CIP NO. 619)

WHEREAS, the City and Caltrans have entered into an Agreement for maintenance of State Highways in the City of Half Moon Bay, effective July 1, 1980; and

WHEREAS, the City and Caltrans executed Amendment No. 1 to the Agreement on December 6, 2010, defining the City’s responsibilities for maintenance and repair of certain sidewalk, trail, landscaping, and other improvements constructed by the City within the median islands and outside the roadway of the State Route 92 and State Route 1; and

WHEREAS, the City and Caltrans executed Amendment No. 2 to the Agreement on August 20, 2019, for the City to assume responsibility for maintenance and repair of the sidewalks, crosswalks, landscaping and entry monuments as part of the Highway 1 Operational and Safety Improvements – South project; and

WHEREAS, Caltrans has presented to the City Amendment No. 3 to the Maintenance Agreement to include construction of improvements for the Pacific Coast Bicycle Connectivity Project on the east side of Highway 1 from Roosevelt Blvd to Mirada Road; and

WHEREAS, staff has negotiated the terms of Amendment No. 3 with Caltrans to establish the process, terms and conditions governing the maintenance of the project area; and

WHEREAS, the approval of Amendment No. 3 is required prior to Caltrans’ issuance of the final permit for construction of the City’s Pacific Coast Bicycle Connectivity project, and

NOW, THEREFORE, BE IT RESOLVED THAT the City Council of the City of Half Moon Bay hereby authorizes the City Manager to execute Amendment No. 3 to the Maintenance Agreement with Caltrans for maintenance responsibilities for the Eastside Parallel Trail North – Segment 4 (CIP No. 619).

I, the undersigned, hereby certify that the foregoing Resolution was duly passed and adopted on the 17th day of October 2023 by the City Council of Half Moon Bay by the following vote:

AYES, Councilmembers:

NOES, Councilmembers:

ABSENT, Councilmembers:

ABSTAIN, Councilmembers:

ATTEST:

Jessica Blair, City Clerk

APPROVED:

Deborah Penrose, Mayor

AMENDMENT NUMBER 3
AGREEMENT FOR MAINTENANCE OF STATE HIGHWAYS
IN THE CITY OF HALF MOON BAY

This Amendment Number 3 to Agreement for Maintenance of State Highways in the City of Half Moon Bay is made and entered into by and between The State of California, acting by and through the Department of Transportation, hereinafter referred to as (“STATE”), and City of Half Moon Bay, a municipal corporation, hereinafter referred to as (“CITY”) and collectively referred to as “PARTIES”.

WITNESSETH:

WHEREAS, an “Agreement for Maintenance of State Highways in the City of Half Moon Bay”, hereinafter referred to as “AGREEMENT”, as provided for in section 130 of the Streets and Highway Code, was executed by STATE on July 1, 1980; and

WHEREAS, PARTIES executed Amendment Number 1 to AGREEMENT on October 21, 2010, to modify Section I and J; and

WHEREAS, PARTIES executed Amendment Number 2 to AGREEMENT on August 1, 2019, to modify Section J; and

WHEREAS, AGREEMENT by its terms provides that it may be amended at any time upon mutual consent of the parties; and

WHEREAS, STATE Encroachment Permits are requested by CITY for construction of improvements at Pacific Coast Bicycle Connectivity Trail on the east side of State Route 1 from Roosevelt Blvd to Mirada Road, within the jurisdictional limits of CITY; and

WHEREAS, the parties hereto now desire to amend AGREEMENT as provided herein.

NOW, THEREFORE, the parties agree to amend AGREEMENT as follows:

1. Page 6 of 8 of AGREEMENT is hereby deleted and replaced by Page 6 (Rev. 1) of 8.
2. CITY requests STATE Encroachment Permit No. _____ to construct bike trail on the east side of State Route 1 from Roosevelt Blvd to Mirada Road shall be added to Note 1 under Section J DELEGATION OF MAINTENANCE and shall become a part of AGREEMENT for all purposes.
3. This Amendment No. 3 to AGREEMENT shall become effective on _____, 20____ and shall remain in full force and effect until amended or terminated as provided for in AGREEMENT. In all other respects, AGREEMENT, as amended by Amendment Number 1 and 2, shall remain in full force and effect.

THE CITY OF HALF MOON BAY

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

By: _____
MATTHEW CHIDESTER
City Manager

By: _____ Date _____
LEAH BUDU
Deputy District Director
Maintenance

ATTEST:

By: _____
JESSICA BLAIR
City Clerk

J. DELEGATION OF MAINTENANCE

The specific maintenance function indicated below is hereby delegated to the CITY. This delegation of maintenance function set forth herein does not include areas and functions of which the control and maintenance rest with the CITY under the terms of executed Freeway Agreements and/or Freeway Maintenance Agreements, if any.

Route No.	Length Miles	Description of Routing	Program Delegated
1(A)	0.6	The Cabrillo Highway from 500 feet south of Kelly Avenue (PM 28.6) to north of Main Street (PM 29.2), a length of approximately 0.6 mile.	HM2C HM2B (See Notes 1, 2, 3, 4)
1(B)	5.7	The Cabrillo Highway from South City Limit (PM 26.0) to 500 feet south of Kelly Avenue (PM 28.6), and from north of Main Street (PM 29.2) to North City Limit (PM 32.3)	HM2C HM2B (See Notes 1, 2, 3, 4)
92	0.7	State highway from Route 1 to approximately 0.7 mile east of Route 1, a length of approximately 0.7 mile.	HM2C HM2B (See Notes 1, 2, 3, 4)

TOTAL AUTHORIZED EXPENDITURE \$0.00

Note 1: CITY, at CITY expense, shall provide for the identified maintenance program functions, descriptions of which are provided in Section I herein, for the highway improvements within the limits of highway shown. These highway improvements were constructed by CITY under the following STATE-issued Encroachment Permits:

- 0405-NSN-1252 (STATE Cooperative Agreement No. 4-1876-C): Rehabilitate and widen Route 92 from Route 1 to 0.7 mile east of Route 1
- 0406-NLC0198 (Cooperative Agreement 4-2328): Route 1 Median landscaping from North Main Street to approximately 500 feet south of Kelly Ave.
- 0409-NMC 1578: Bike Trail on the west side of Route 1 from Seymour St. to Poplar St. and from Route 92 to Kehoe Ave.
- Encroachment Permit No. _____: Bike Trail on the east side of Route 1 from Roosevelt Blvd to Mirada Rd. City maintains, at City expense, the structure integrity of the pedestrian/bicycle trail bridge and boardwalk.

Note 2: Except as otherwise provided for in this Agreement, no maintenance program functions are delegated to CITY beyond the limits shown.

Note 3: All landscaping and the pedestrian/bicycle trail constructed under the above reference Encroachment Permits and within the highway limits shown shall be removed by CITY, at CITY expense, to the satisfaction of STATE should this Agreement be terminated, except if approved otherwise by STATE.

11-18-10
2

BUSINESS OF THE COUNCIL OF THE CITY OF HALF MOON BAY

AGENDA REPORT

For meeting of: **October 17, 2023**

TO: Honorable Mayor and City Council

VIA: Matthew Chidester, City Manager

FROM: Maz Bozorginia, Public Works Director/City Engineer

TITLE: **SAM BUDGET AMENDMENT REQUEST – RESERVE FUNDS**

RECOMMENDATION:

Adopt a resolution approving the Sewer Authority Mid-Coastside Reserve Fund Budget request to replenish necessary reserves without waiving its prior protest votes related to IPS projects.

FISCAL IMPACT:

The fiscal impact to the City's sewer fund associated with this action is \$163,806. The City has enough funds in the in the Sewer Enterprise (Capital Fund 06) to cover this cost. Rate increases were approved as part of the 2020 Sewer Rate Study and additional increases may be necessary in the future given ongoing cost escalations and needed improvements to the Sewer Authority Mid-Coastside (SAM) treatment plant.

STRATEGIC PLAN:

This action supports the *Fiscal Sustainability* and *Inclusive Governance* Elements of the Strategic Plan.

BACKGROUND:

At the regular meeting of the SAM Board on September 11, 2023, the General Manager presented a request to the board for additional funding to replenish reserve funds that have been utilized to address obligated costs due to damages to the system from the Winter 2022/23 storms.

After board discussion, a resolution was agreed upon for SAM's Member Agency's to fund the Emergency Reserve shortfall of \$266,351 on the flow-based allocation of the FY 2023/24 Operations & Maintenance Budget as follows:

City of Half Moon Bay	Granada Community Services District	Montara Water & Sanitary District
\$ 266,350.66	\$ 266,350.66	\$ 266,350.66
61.50%	19.05%	19.45%
\$ 163,805.66	\$ 50,739.80	\$ 51,805.20

On September 28, 2023, the SAM General Manager submitted a request for Reserve Funds to the Member Agency Managers, in the City's case to the Public Works Director. That memo is attached to this report (Attachment 2).

DISCUSSION:

Due to the 2022/23 Winter Storm damage, SAM had to authorize approximately \$1.6 million in costs from the operating and maintenance budget and thus had to use a portion of reserve funds to meet "must pay" obligations of the Authority.

On April 22, 2013, the SAM Board at that time adopted a Reserve Policy requiring an emergency reserve of \$1,250,000 to ensure adequate cash is available to stabilize and avoid sudden budget impacts in a particular year from material, unplanned repairs or replacements that require immediate attention to continue operations. The policy also highlighted that if and to the extent the reserve is used, a plan for replenishment will be presented by the SAM Manager to the Board within 60 days, which is what is being presented with this report.

Staff recommends the council approve the reserve fund request from SAM in order to maintain the appropriate reserve cash balance as specified in the adopted SAM Reserve Policy. SAM staff continues to seek reimbursement from insurance coverage as well as FEMA and CalOES on storm related damages. Any funds received will replenish fund balances and would be reflected in potential offsets for the future FY 2024/25 Operating and Maintenance Budget to be presented to council at the end of the current fiscal year, or by June 30, 2024.

ATTACHMENTS:

- 1) Resolution
- 2) SAM Request for Reserve Funds Memo

Resolution No. C-2023-

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HALF MOON BAY APPROVING THE SEWER
AUTHORITY MID-COASTSIDE (SAM) RESERVE FUND BUDGET REQUEST TO REPLENISH
NECESSARY RESERVES WITHOUT WAIVING ITS PRIOR PROTEST VOTES RELATED TO IPS
PROJECTS**

WHEREAS, on April 22, 2013, the SAM Board adopted a Reserve Policy requiring an emergency reserve of \$1,250,000 to ensure adequate cash is available to stabilize and avoid sudden budget impacts in a particular year from material, unplanned repairs or replacements that require immediate attention to operate; and

WHEREAS, the SAM Reserve Policy requires the SAM manager to present a plan for replenishment to the Board within 60 days; and

WHEREAS, due to the 2022/23 Winter Storms, SAM had to authorize approximately \$1.6 million in costs from the operating and maintenance budget as well as a portion of reserve funds to meet obligatory costs necessary to continue operation of the treatment plant; and

WHEREAS, City of Half Moon Bay representatives have reviewed and provided input on the proposed Reserve Fund replenishment request; and

WHEREAS, the SAM Board on September 11, 2023, received an update from SAM staff and provided direction to fund the Emergency Reserve Shortfall of \$266,351; and

WHEREAS, the City's share per the flow-based allocation of FY 2023/24 is \$163,806; and

WHEREAS, there are sufficient funds in the City's Sewer Enterprise Capital Fund 06 to cover this additional budgetary request.

NOW, THEREFORE, BE IT RESOLVED THAT the City Council of the City of Half Moon Bay approves the Sewer Authority Mid-Coastside Reserve Fund Budget request to replenish necessary reserves without waiving its prior protest votes related to IPS projects.

I, the undersigned, hereby certify that the foregoing Resolution was duly passed and adopted on the 17th day of October 2023 by the City Council of Half Moon Bay by the following vote:

AYES, Councilmembers:

NOES, Councilmembers:

ABSENT, Councilmembers:

ABSTAIN, Councilmembers:

ATTEST:

Jessica Blair, City Clerk

APPROVED:

Deborah Penrose, Mayor

September 28, 2023

Page 1

**SEWER AUTHORITY MID-COASTSIDE**

TO: Member Agency Managers
FROM: Kishen Prathivadi, General Manager
SUBJECT: Request for Reserve Funds

Background and Discussion/Report

The Board adopted Resolution 2-2013 on April 22, 2013, which addresses SAM's Reserve Policy. The adopted policy requires SAM to maintain an Operating Reserve as well as an Emergency Repair Reserve.

The Operating Reserve target is defined as cash reserves equal to two months of the fiscal year budgeted operating expenses.

The Emergency Repair Reserve target is set at \$1,250,000 with the stipulation that to the extent it is utilized, the GM will present a plan to replenish within sixty (60) days.

Attached is the present Operating Reserve Worksheet.

Due to the Winter Storm Damages of approximately \$1.6M, which were funded under emergency authorization from the Board per SAM's procurement policy, and other non-project capital expenditures of \$0.5M, SAM has had to use a part of the reserve funds to meet "must pay" obligations of the Authority.

As of this date, nine months after the January 2023 storms that gave rise to the need for emergency repairs, the reserve funds have not been replenished, and the amount now on reserve is less than the Board policy required amount by approximately \$263,000, with a "must pay" obligation to meet all expenses coming due in the next 4-6 months.

September 28, 2023

Page 2

SAM has reached out to our insurance company as well as FEMA for funding/reimbursing the Winter Storm Damage expenses, but the status of reimbursement (eligibility, timing and amount) for the approximate \$ 1.6M in storm expenses incurred by SAM, per prior Board authorization, is still not known. Therefore, as per the adopted policy, if the reserve is used, a plan for replenishment needs to be presented to the Board within 60 days.

This was discussed at the SAM Board Meeting on Sept 11, 2023.

After the completion of Board discussion, a resolution was agreed upon for SAM's Member Agency's to fund our Emergency Reserve shortfall of \$266,350.66 based on each Member Agency's Flow Based allocation of the FY 23-24 O&M Budget.

The calculation is as follows:

City of Half Moon Bay	Granada Community Services District	Montara Water & Sanitary District
\$ 266,350.66	\$ 266,350.66	\$ 266,350.66
61.50%	19.05%	19.45%
\$ 163,805.66	\$ 50,739.80	\$ 51,805.20

Since we intend to track these funds outside of the regular monthly assessments, we kindly ask that you remit a separate check to SAM covering this amount only, along with your October 2023 O&M Assessments. If this is not possible, please remit this separate payment at the earliest date your internal accounting practices allow.

Thank you,



Kishen Prathivadi, General Manager

Attachments:

1. Adopted Resolution 2-2013 for SAM Reserve Funds Policy
2. Operating Reserve Worksheet

RESOLUTION NO. 2-2013A RESOLUTION ESTABLISHING SEWER AUTHORITY MID-COASTSIDE
RESERVE FUNDS POLICY

RESOLVED, by the Board of Directors of the Sewer Authority Mid-Coastside, San Mateo County, California, that:

WHEREAS, the Board has determined that sound financial management policy should include specific guidelines for accumulating and managing Authority reserve funds, and;

WHEREAS, purposes of reserve funds include but are not limited to operating costs, provision for emergencies and other unanticipated expenses, financing of repair and replacement of Authority facilities, and financing the construction of new facilities, all as necessary to fulfill purposes of the Authority, and;

WHEREAS, the Board has established by Resolution 2-2001 a Sewer Authority Mid-Coastside Reserve Funds Policy;

NOW, THEREFORE, IT IS ORDERED, as follows:

1. The existing Reserve Funds Policy established by Resolution 2-2001 is hereby repealed.
2. The Sewer Authority Mid-Coastside Reserve Funds Policy, dated April 22, 2013, attached hereto is hereby adopted as the policy of the Authority.

* * * * *

I hereby certify that the foregoing is a full, true and correct copy of a Resolution duly passed and adopted by the Board of Directors of the Sewer Authority Mid-Coastside at a meeting thereof held on the 22nd day of April, 2013 by the following vote:

AYES: Kowalczyk, Alifano, Woren, Harvey, Boyd, Lohman

NOES: NONE

ABSENT: NONE

ABSTAIN: NONE



Secretary
Sewer Authority Mid-Coastside

SAM Reserve Policy

Statement of Purpose and Use

SAM reserves shall be comprised of the following:

Operating Reserve

1. **Objective:** To ensure that adequate cash is available when needed to pay SAM's normal and recurring operating costs.
2. **Target:** An operating and cash flow reserve equal to two months of the fiscal year budgeted operating expenses.
3. **Use:**
 - a. Payment of budgeted operating expenditures.

Emergency Repair Reserve

1. **Objective:** To ensure that adequate cash is available to stabilize and avoid sudden budget impacts in a particular year from material, unplanned repairs or replacements that require immediate attention to continue operations.
 2. **Target:** An emergency reserve of \$1,250,000. If and to the extent the reserve is used, a plan for replenishment will be presented by the SAM Manager to the Board within 60 days.
 3. **Uses:**
 - a. A repair or replacement resulting from an event causing sudden, significant failure of facilities that threatens continuation of operations.
 - b. Any repair or replacement which was scheduled to commence in a future fiscal year, but is critical to complete earlier than planned in order to insure continuation of operations, with Board approval.
1. Interest earned on the Operating Reserve will accrue to the Operating Reserve; interest earned on the Emergency Repair Reserve will accrue to the Emergency Repair Reserve.
 2. SAM will assess member agencies as necessary to maintain the minimum balance in each reserve.
 3. At the end of each fiscal year, reserves in excess of the amounts listed above shall be returned to the member agencies within 90 days of the end of the fiscal year.
 4. Each reserve shall be invested in accordance with SAM investment policy.
 5. In addition to the reserves referenced above, the Board may establish one or more replacement funds into which annual revenues would be deposited over a determined number of years to pay for capital expenditures anticipated to be needed in connection with the repair or replacement of existing capital facilities to an approximately serviceable level.

The Board may also establish one or more project funds into which annual revenues would be deposited over a determined number of years to pay for capital expenditures anticipated to be needed in connection with a project or projects approved by the participating member agencies. For purposes hereof, a "project," as defined in the SAM joint powers agreements, is one that is new in form and function.

Approved: April 22, 2013

Operating Reserve Summary

Total Operating Reserve Required Balance:	2,487,504.50
Current Cash Availble	1,781,348.55
Pending AR Deposits < 90 Days	919,301.56
Funds Required: Short Term	(479,496.27)
Net Funds Available:	2,221,153.84
Operating Account Suggested Balance:	2,487,504.50
Over/(Under) Suggested Level	(266,350.66)

Operating Reserve Worksheet

Emergency Repair Reserve Required Balance:	1,250,000.00	
2 Times Monthly Operating Budget:	1,237,504.50	
Total Operating Reserve Required Balance	2,487,504.50	
Main Account (09/07/2023):	1,124,732.92	
Payroll Account (09/07/2023):	146,633.08	
Money Market (09/07/2023):	523.32	
Current LAIF Balance: (8/31/2023):	509,459.23	1,781,348.55
Pending AR Deposits: Current (09/07/2023):	762,066.58	
Pending AR Deposits: 30-60 (09/07/2023):	157,234.98	
Pending AR Deposits: 60-90 (09/07/2023):	-	919,301.56
Pending AR Deposits: 90-120 (09/07/2023):	-	
Pending AR Deposits: >120 (09/07/2023):	-	919,301.56
Less Outstanding AP Checks (09/07/2023):	313,180.91	
Less Outstanding Payroll Checks (09/07/2023):	1,256.33	
Less: Pending ACH Transactions - AP/Payroll	131,000.00	
Less: Other Pending Payments	-	
Less: Outstanding AP	34,059.03	479,496.27
Available Funds:	2,221,153.84	
Available Funds Less >90 AR:	2,221,153.84	
Operating Account Suggested Balance:	2,487,504.50	
Over/(Under) Suggested Level	(266,350.66)	

BUSINESS OF THE COUNCIL OF THE CITY OF HALF MOON BAY

AGENDA REPORT

For meeting of: **October 17, 2023**

TO: Honorable Mayor and City Council

VIA: Matthew Chidester, City Manager

FROM: Maz Bozorginia, Public Works Director/City Engineer
Denice Hutten, Associate Engineer

**TITLE: INTRODUCTION OF AN ORDINANCE AMENDING TITLE 13 “WATER AND SEWER”
BY ADDING CHAPTER 13.22 “FATS, OIL, GREASE AND SAND”**

RECOMMENDATION:

Conduct a public hearing and introduce on first reading an ordinance amending Title 13 (Water and Sewer) of the Half Moon Bay Municipal Code, adopting a new Chapter 13.22 entitled “Fats, Oil, Grease and Sand.”

FISCAL IMPACT:

There is no fiscal impact associated with holding this Public Hearing. Once the ordinance is in effect, Fat Oil and Grease (FOG) inspection fees are to be paid by the discharger as set by the Master Fee Schedule. The existing FY 2023-24 Master Fee Schedule specifies an annual fifty-five-dollar (\$55) FOG Certification fee. Once the Ordinance is effective, FOG dischargers would pay that fee to certify their operation annually. The Master Fee Schedule is reviewed and updated annually. An analysis for cost recovery of this program will be considered prior to the next update to cover the cost of this program per the Master Fee Schedule.

STRATEGIC ELEMENT:

This action supports the *Healthy Communities and Public Safety* Elements of the Strategic Plan.

BACKGROUND:

In 2006, the State Water Resources Control Board approved Board Order 2006-0003-DWQ requiring all public wastewater systems greater than one (1) mile in length to develop a Sanitary Sewer Master Plan and report Sanitary Sewer Overflows. The order also requires owners of public wastewater systems experiencing FOG build-ups to prepare and implement a FOG “source control” program to reduce the amount of FOG discharged into the Sanitary Sewer System.

The City’s sewer collection system has experienced FOG-related blockages and sanitary sewer overflows; City staff have documented excessive FOG build-up in many of the City’s sewer pipes

and facilities. To address FOG-related issues in the sewer collection system, the City has developed this Municipal Code amendment to Title 13, entitled “Water and Sewer” by adding Chapter 13.22, entitled “Fats Oil Grease and Sand.”

The new Chapter provides the City the ability to implement and oversee a FOG program including:

- Formalizing the legal authority to oversee compliance
- FOG plan review, permitting and design standards
- Inspection and enforcement of the FOG Ordinance
- Overview of performance measures
- Collection of Fees to administer the FOG Control Program

Other jurisdictions, such as San Francisco, San Mateo, Belmont, and Foster City have initiated similar ordinances and FOG control programs that require FOG waste discharge permitting and payment of FOG inspection fees.

FOG enters the sanitary sewer system through sinks, dishwashers, and other equipment connected to the sanitary sewer plumbing. To provide for effective FOG “source control,” the new ordinance applies to food service establishments (FSEs), commercial and industrial businesses, and other entities with potential to introduce FOG and insoluble waste into the City’s sewer collection system.

On September 12, 2023, City staff held a public outreach meeting to present information and answer questions about the new ordinance. Notice of the informational meeting was mailed to over 90 food service establishments and auto repair shops in the City’s Collection Service Area. While the notice was mailed two weeks in advance of the meeting--in English and in Spanish--and also noticed in the local Chamber newsletter and Community e-news, there was minimal attendance with only one restaurant represented.

On October 03, 2023, City staff presented a publicly noticed FOG workshop to City Council. Following the workshop presentation, Council recommendations included developing a robust outreach program for educating residential kitchens in FOG management and considering incentives for dischargers who consistently comply with source control regulations. Since the workshop, City staff have updated the FOG website to include friendly suggestions for residential FOG management. Incentives might be considered when the Master fee schedule is updated.

DISCUSSION:

A brief summary of each of the proposed Chapter Articles is provided below.

Proposed Section	Proposed Title	Additional Details
Article 1	General Provisions	The general provisions spell out the objectives and applicability of the Ordinance and also provides a section of definitions.
Article 2	Prohibitions and Regulations	This section lists prohibitions, regulations, and Best Management Practices. Prohibitions regarding discharge of FOG, yellow grease, food scraps through grinders, emulsifiers into the sewer collection system, and the 25% rule. Requirements include Best Management Practices (BMPs), installation of a Grease Control Devices (GCD) for Pre-Treatment, and a FOG Waste Discharge Permit.
Article 3	Grease and Sand/Grit Control Devices	Article 3 covers GCD installation requirements, GCD type and sizing, maintenance and operation including record keeping. The section also lays out how to apply for an exception to GCD requirements
Article 4	Inspections and Compliance	This section covers the right of entry for inspections and provides authority to require effluent sampling, if needed. The provision defines how to achieve FOG compliance and spells out the steps for non-compliance.
Article 5	Remedial Repair and Abatement	Article 5 identifies the steps for determining responsible party in the event of FOG-related SSOs, and cost recovery pursuant to Title 4 of the Municipal code.
Article 6	Administration	This section establishes that the City's FOG Control Program will administer the requirements of the chapter and that FOG dischargers must obtain a FOG Waste Discharge Permit to discharge wastewater into the City's collection system. The section also establishes fees to be determined by Master Fee schedule including future fee schedule updates The section provides for FOG wastewater discharge permit ("WDP") annual renewal, conditions of the permit, non-transferability, and record keeping requirements.

The chart above provides a high-level overview of the proposed Ordinance. A comprehensive summary of the sections will be provided as part of the first reading presentation. A copy of the proposed Ordinance is also attached.

Once adopted, rollout of the FOG program will involve additional outreach with the affected businesses and restaurants, especially during the first year where staff will be gathering information on existing facility plumbing as well as educating affected owners about the new permitting procedures. If City Council introduces and approves the Ordinance as proposed, a second reading of the Ordinance will be placed on the agenda at Council's next scheduled meeting, which is November 7, 2023.

ATTACHMENT:

Draft Ordinance

Chapter 13.22

FATS, OILS, GREASE AND SAND

Sections:

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ARTICLE I. GENERAL PROVISIONS

13.22.100 Purpose

The purpose of this chapter is to facilitate maximum beneficial use of the City's sewer services and facilities while preventing blockages and overflows of the sewer lines resulting from discharges of fats, oils, grease (FOG), sand and other insoluble waste into the public sewer. This chapter specifies FOG and insoluble waste discharge requirements and prohibitions for food service establishments (FSEs), commercial and industrial businesses, and other entities with potential to introduce FOG and insoluble waste into the City's public sewer collection system.

The chapter provides for City inspections and enforcement and requires FOG and insoluble waste dischargers to participate in the City's FOG Control Program and obtain a FOG Waste Discharge Permit as a condition of waste discharge into the City's public sewer collection system.

The provisions set forth in this chapter allow the City to meet applicable standards designed to ensure compliance with federal, state, and local laws and regulations.

The objective is to eliminate FOG and insoluble waste-related sanitary sewer obstructions, blockages and overflows; improve sanitary sewer manhole, pipe and lift station conditions; decrease sewer maintenance and treatment costs; prevent residential and commercial property damage and protect the environment.

13.22.110 Applicability

This section applies to all "food service establishments" (FSE), "food manufacturer/processors" (FM/P), commercial and industrial businesses and other entities with potential to discharge wastewater containing fats, oils, grease, sand or other insoluble waste to the city sanitary sewer system including, but not limited to, restaurants, grocery stores, meat markets, hotels, factory and office building cafeterias, public and private schools, hospitals, commercial day care centers, and churches, located within the City's public sewer collection system.

Commercial and Industrial businesses covered by this section include, but are not limited to, oil, sand, grit and insoluble waste dischargers such as automotive repair businesses, car washes, and commercial trash enclosures within the City's public sewer collection system.

This Chapter shall become effective on the effective date of this Chapter and is intended to complement, rather than supersede, the provisions of City building codes and regulations applicable to installation and operation of grease capturing equipment.

13.22.120 Definitions

The following definitions shall apply to this chapter. Where terms are not defined, the definitions in Chapter 13.12 shall apply.

- A. **Best Management Practices (BMPs)** means operational activities, prohibitions, maintenance procedures, and other management practices to prevent or reduce the direct or indirect introduction of FOG and insoluble waste into the public sewer. BMPs shall implement the regulations and prohibitions of this Chapter, state and federal law, and any authorizations and permits issued by the City of Half Moon Bay to control discharge and disposal of FOG and insoluble waste.
- B. **Change in Operations** means any change in the ownership, food types or operational procedures that have the potential to change the amount of FOG discharged.

- C.
- D. **Collection System** means portions of the public sewer consisting of all pipes, sewers and conveyance systems conveying wastewater to the publicly owned treatment works (POTW), excluding privately owned sewer service lateral line connections.
- E. **Commercial and Industrial Businesses** means entities engaged in business for profit and entities engaged in manufacture, service and repair. For purposes of this section, Commercial and Industrial businesses that have potential to introduce FOG and insoluble waste into the City's collection system would include, but not be limited to, car washes. Dental offices and facilities with trash enclosures not associated with a FOG producer will be handled under the NDWSCP facilitated by Sewer Authority Mid-Coast.
- F. **Director** means the Public Works Director, or such director's designee.
- G. **Fats, Oils and Grease (FOG)** means grease, oil, fat or other ether soluble matter derived from animal and/or plant sources that contain multiple carbon chain triglyceride molecules, and shall include each of the following two types:
- i. Dispersed grease, which means grease which is not floatable grease;
 - ii. Floatable grease, which means grease which floats on the surface of quiescent sewage water or other liquid or which floats upon dilution of the liquid with water and includes any waste containing quantities or concentrations of dispersed biodegradable fats, oils, and greases.
- H. **FOG Control Program (FOGCP)** means the City's program to administer the requirements of this Section and the General Waste Discharge Requirements of the State Water Resources Control Board Order No. 2022-0103-DWQ.
- I. **FOG Wastewater Discharge Permit (FOG WDP)** means a permit issued by the City to a person or entity subject to the requirements of this Chapter authorizing the wastewater discharger or permittee to discharge wastewater into the City's public sewer collection system subject to and in compliance with the terms, conditions, and criteria of the FOG Control Program as set forth in this Chapter.
- J. **Food Manufacturer/Food Processor (FM/P)** means any entity utilizing the City's public sewer collection system for operation in a permanently constructed structure, maintained, and used or operated for the purpose of storing, preparing, serving, or manufacturing, packaging, or otherwise handling food for consumption by the public or for sale to other entities, its members, or employees.
- K. **Food Service Establishment (FSE)** means a non-residential wastewater discharger that engages in activities of preparing, serving, or otherwise making available food for consumption by the public or on the premises, including, but not limited to, restaurants, commercial kitchens, caterers, hotels and motels, schools, hospitals, prisons, correctional facilities, nursing homes, care institutions, and any other facility preparing and serving food for public consumption.
- A limited food preparation establishment is not considered an FSE when engaged only in reheating, hot holding, or assembly of ready to eat food products, provided that there is no wastewater discharge containing FOG.
- L. **Food Grinder** or garbage grinder or garbage disposal means any device installed in the plumbing or sanitary sewage system for the purpose of grinding food waste or food preparation byproducts for the purpose of disposing into the City's public sewer collection system.
- M. **Grease Control Device (GCD)** means any Grease Interceptor, Grease Trap, or other mechanism, device, or process, which is attached to, or is applied to, wastewater plumbing fixtures and lines, the purpose of which is to trap or collect or treat FOG-laden wastewater prior to its discharge

into the City sewer system. “Grease Control Device” also includes any other City approved method to reduce FOG. Grease Control Devices must be sized in accordance with the California Plumbing Code and this Chapter.

- N. **Grease/Sand Interceptor** means a City approved multi-compartment device that is required to be located, as according to the California Plumbing Code, between a wastewater discharger and the discharger’s connection to the City sewer system. These devices primarily use gravity to separate FOG and sands from the wastewater as it moves from one compartment to the next. Grease and sand Interceptors must be cleaned, maintained, and have the FOG and solids removed and disposed of in accordance with the terms and conditions of this section and the City’s FOG Waste Discharge Permit.
- O. **Grease Trap** means a City-approved Grease Control Device that is used to serve individual fixtures. Grease Traps must be cleaned, maintained, and have the FOG and solids removed and disposed.
- P. **Limited Food Preparation Establishment** A FSE that engages only in reheating, hot holding, or assembly of ready to eat food products.
- Q. **Property Owner** means a person or entity owning property where a Grease Interceptor is present that is or has potential to serve one or more FSEs.
- R. **Remodeling** means a physical change or operational change that potentially increases the amount of FOG, sand or solid waste discharged to the City’s sewer system by the wastewater discharger.
- S. **Public sewer collection** means the network City owned and operated pipes, pumping stations, and appurtenances that convey sewage from private connections to the wastewater treatment plant.
- T. **Waste Discharger, or Discharger** means any owner, tenant, entity, or person receiving public sewer collection service from the City.
- U. **Waste Hauler** means any person or entity that collects the contents of a Grease Control Device for the purpose of transporting it to a recycling or disposal facility. A Waste Hauler may also provide Grease Control Device maintenance services.
- V. **Yellow Grease** means used cooking oil, used vegetable oil, recycled vegetable oil, or waste vegetable oil. In restaurants, it is often used oil from deep fryers and griddles.

ARTICLE 2. PROHIBITIONS AND REGULATIONS

13.22.200 Prohibitions

Every owner, tenant, entity, or person receiving public sewer collection service from the City shall have a duty to not cause, permit or allow the accumulation of FOG in the City sewer system. Such persons and entities shall use industry best management practices and City-approved methods to reduce FOG accumulation in the City public sewer collection System and shall adhere to the following prohibitions:

- A. Disposal of Fats, Oils and Grease, or any food waste containing Fats, Oils and Grease, directly into drains leading to the sewer system is prohibited.
- B. Discharge of Yellow Grease, or any waste or mixed material mixed with Yellow Grease, into the sanitary sewer system from a food service establishment is prohibited. No Yellow Grease from a food service establishment shall be mixed with grease trap or grease interceptor waste.

- C. Introduction of any additives into the wastewater collection system for the purpose of emulsifying FOG or biologically or chemically treating any substance introduced into any wastewater system for purpose of treatment or pretreatment of wastewater, unless a specific written authorization by the Public Works Director is obtained, is prohibited.
- D. Disposal of insoluble waste from trash or materials enclosure into the sanitary sewer system without an approved oil and sand separator is prohibited.
- E. Installation of food grinders (or garbage grinders) in any new construction or renovation of a structure designed to house a FSE or FM/P is prohibited. All FSEs that undergo a change in operations or remodeling shall remove any existing food grinders concurrent with such change or remodeling, except as otherwise expressly allowed by the Public Works Director.
- F. Discharge of wastewater from commercially operated dishwashers or food grinders (or garbage grinders) to sewer pipes conveying wastewater to an interceptor or any other grease capturing equipment is prohibited unless such connections or modifications to existing units are approved and issued a building permit by the City.
- G. Discharge of wastewater at temperatures in excess of 140 degrees Fahrenheit to or through any grease capturing equipment is prohibited.
- H. Operation of sand and grease interceptors/traps if the unit has accumulated waste and/or solids, including FOG, food solids, sand or other insoluble materials, accounting for 25 percent or more of its wetted depth measured from the static water level to the interior tank bottom, with FOG and solids accumulation, exceeding 25 percent of the total operating depth of the grease interceptor/trap is prohibited.
- I. Discharge of any FOG or any other solid materials removed from the grease control device to the public sewer collection system is prohibited. Grease removed from grease interceptors shall be waste hauled to an approved disposal site as part of the operation and maintenance requirements for grease interceptors.
- J. Connection of non-grease-laden sources of wastewater to a sewer line intended for grease interceptor service is prohibited.

13.22.210 Best Management Practices (BMPs) Required

All FSEs, commercial and industrial businesses and other entities with the potential to introduce FOG or insoluble waste into the City's public sewer collection system shall implement Best Management Practices (BMP) in their operations, in accordance with the requirements and guidelines established by the City's FOG Control Program, to minimize the discharge of FOG, sand and other insoluble waste to the grease control device and/or the public sewer. This may include facility and kitchen practices and employee training that are essential to minimizing FOG and insoluble waste discharge.

13.22.220 FOG Wastewater Discharge Permit (FOG WDP) Required

- A. All FSEs, commercial and industrial businesses and other entities with the potential to introduce fats, oils, grease, sand or other insoluble waste into the City's public sewer collection system shall participate in the City's **FOG Control Program** as described in Article 6 of this Section.
- B. No person shall discharge, or cause to be discharged, any wastewater from FSEs, commercial or industrial businesses, or other entities, directly or indirectly into the public sewer without first obtaining a **FOG Wastewater Discharge Permit (FOG WDP)** pursuant to this chapter and the City's FOG Control Program.

13.22.230 Pre-Treatment Required

- A. FSEs and commercial and industrial businesses discharging FOG into City's sewer system shall install, operate, properly maintain and service approved types and adequately sized Grease Control Devices (GCD) in accordance with this Section, and any permits, authorizations, rules and regulations issued by the Public Works Director, the FOG WDP outlined in Article 6 of this Section, and applicable building codes and regulations. All fixtures, equipment and drain lines located in food preparation and clean up areas that are potential sources of FOG discharge shall be connected to a Grease Control Device.
- B. All FSEs and business establishments shall properly store and recycle or dispose of Fats, Oils and Grease diverted from their liquid waste streams in accordance with all laws and regulations applicable to such storage, recycling and disposal.
- C. Commercial and industrial businesses discharging sand and grit into City's sewer system shall install, operate, properly maintain and service approved types and adequately sized Sand and Grit Control or Grease Control Devices (GCD) in accordance with this Section, and any permits, authorizations, rules and regulations issued by the Public Works Director, the FOG WDP outlined in Article 6 of this Section, and applicable building codes and regulations.
- D. All wastewater dischargers must at all times comply with the provisions of this Section, all other applicable local, state and federal laws, including but not limited to applicable provisions of the San Mateo County Health and Building and Plumbing Codes, and applicable rules, regulations, permits and authorizations issued by the City of Half Moon Bay.

ARTICLE 3. GREASE AND SAND/GRIT CONTROL DEVICES

13.22.300 Installation of Grease, Oil and Sand Control Devices (Common Areas and Shared Facilities)

- A. Except as provided for in subsection 13.22.380 and 13.22.390 below, any structure designed for or intended to be used for an FSE or FM/P must have an approved grease interceptor/trap installed prior to discharging any wastewater into the City's public sewer collection system.
- B. Property owners of new construction of a commercial structure designed to house multiple tenants on a single parcel shall be responsible to install and maintain a single grease interceptor to serve each individual tenant unless a property owner demonstrates to the Public Works Director that it is not practically possible to install and maintain a single grease interceptor to serve each individual unit located in the structure in which case the Public Works Director has the discretion to approve a plan for such structure providing for more than one grease interceptor or a combination of grease interceptors to service such property, which approval shall be in writing. Said approved plan shall include the minimum number of grease interceptors that can reasonably serve the structure and shall specifically include service for all approved grease interceptors.
- C. The owner of any structure occupied by one or more FSE or FM/P shall be jointly and severally liable with the owner of each FSE or FM/P served by any grease interceptor for the servicing and maintenance of that grease interceptor and for any servicing and maintenance required of any wastewater facility located downstream from said structure to remove any accumulations of FOG therefrom if the owner or FSE is found to be non-compliant with the provisions this Chapter and/or to have contributed to the partial or complete obstruction of a wastewater facility located downstream.
- D. The Public Works Director may require existing FSE or FM/Ps and owners of structures in which such FSE or FM/Ps are located which have been identified as introducing FOG into any portion of the City's public sewer collection system, and which introduction of FOG, in whole or in combination with other FOG contributors, has been responsible for causing the need for the City

to clean such portion of the wastewater system more than once in a single calendar year to install grease interceptors or other FOG equipment as deemed necessary to comply with this section. Such installation shall be completed and operational within 180 days of notice by the Public Works Director.

13.22.310 Grease, Sand and Grit Control Device Type, Sizing and Location

- A. Any food service establishment, or other type of business or establishment where grease or other viscous, obstructing, or objectionable materials may be discharged into a public shall have a grease control device and related plumbing of a size and design approved by the Public Works Director or designee.
- B. Waste discharge from fixtures and equipment in establishments which may contain grease or other objectionable materials including, but not limited to, scullery sinks, pot and pan sinks, food waste disposals, soup kettles, and floor drains located in areas where such objectionable materials may exist, shall be drained into the public sewer collection system through the grease control device unless otherwise approved by Public Works provided, however, that toilets, urinals, wash basins, and other fixtures containing fecal material shall not flow through the grease control device.
- C. Automatic dishwashers may only be connected to grease control devices on a case-by-case basis as approved by the Public Works Director.
- D. Trash enclosures, car washes, automotive repair businesses and other facilities where grit, oil or other objectionable materials may be discharged into a public or private sewage main or disposal system shall have a sand control device and related plumbing of a size and design approved by the Public Works Director or designee.
- E. The City reserves the right to make determinations of grease and sand control device size, adequacy, location and need, based on Building Code requirements and review of relevant information, including, but not limited to grease trap and/or interceptor performance, waste stream characteristics, facility location, maintenance needs, and or inspection needs.
- F. Grease and sand interceptors shall meet the following minimum requirements:
 - i. All FSEs and commercial and industrial entities with the potential to discharge FOG, sand or grit into the City's Public sewer collection Service Area are required to have a minimum 1,000-gallon grease/sand interceptor. Larger interceptors shall be sized according to the latest building/plumbing codes and shall provide at least 30 minutes of retention time.
- G. Grease traps are allowed on a case-by-case basis only. Upon approval of the Public Works Director, grease traps shall meet the following minimum requirements:
 - i. The maximum allowable size of grease trap shall be flow rate of 25 gpm (or 50 lbs grease retention). City will provide the size requirements;
 - ii. Type of grease trap shall be hydromechanical grease device, conforming to ASME A12.14.3 or PDI-G 101 and type/brand shall be approved by the Public Works Department and the City Building Department Official and installed per manufacturer's specifications; and
 - iii. Traps must meet applicable requirements of the State plumbing and building codes.
- H. Each Grease/Sand Interceptor shall be so installed and connected that it shall be at all times easily accessible for inspection, sampling, cleaning and removal of grease, and other matter from all surfaces. The Public Works Director or their agent will approve locations of all Grease/Sand Interceptor by acknowledging and signing the design plans.
- I. Discharger shall not install any device without the approval of the Public Works Director and the issuance of a building permit.

- J. A Grease Control Device should be situated on the wastewater discharger's premises except when such a location would be impractical or cause undue hardship on the wastewater discharger. The City may, subject to the issuance of an encroachment permit by the City, allow the device to be installed in the Public Street or sidewalk area and located so that it will not be obstructed by landscaping or parked vehicles.

13.22.320 Maintenance and Operation of Grease and Sand Control Devices

- A. Maintenance and cleaning of grease and sand interceptors. The 25-percent rule requires that the depth of oil and grease (floating and settled) in a sand or grease interceptor shall be less than 25 percent of the total operating depth of the interceptor. The operating depth of the interceptor is determined by measuring the internal depth from the outlet water elevation to the bottom of the interceptor.
- B. Disposal. In the maintaining and routine cleaning of grease interceptors and any other grease control device, the owner of the FSE or FM/P and the owner of the structure in which it is located, if different from the owner of the FSE or FM/P, shall be jointly responsible for the proper removal and disposal by appropriate means of the captured material. If not performed by personnel under the direct control and direction of any such owner/manager, such removal and haul shall be performed by currently licensed waste disposal haulers.
- C. Outdoor grease and sand interceptors. Maintenance of outdoor grease and sand interceptors shall be performed as frequently as necessary to protect the public sewer collection system against the accumulation of FOG and insoluble wastes. Maintenance shall be performed as determined by inspection and application of the 25-percent rule. Inspection and maintenance shall be performed at least every 90 days.
- D. Indoor grease traps. Maintenance of indoor grease traps shall be performed as frequently as necessary to protect the public sewer collection system against the accumulation of FOG and insoluble wastes. Maintenance shall be performed as required by inspection and/or sampling. Maintenance shall be performed at least every 14 days.
- E. Maintenance process. Maintenance process shall include the following minimum services:
- i. Complete removal of all grease interceptor or trap contents rather than skimming the top grease layer;
 - ii. Thorough cleaning of the grease interceptor or trap to remove grease and scum from inner walls and baffles;
 - iii. Filling cleaned interceptor or trap with cold potable water;
 - iv. Completing waste hauler's section of the grease disposal manifest form and delivery to waste disposal site along with the grease interceptor or trap waste;
 - v. Top skimming, decanting or back flushing of the grease interceptor or trap or its contents for the purpose of reducing the volume of waste to be hauled is prohibited. Vehicles capable of separating water from grease shall not discharge separated water into the grease trap or into the public sewer collection system.
- F. Maintenance modifications. Food service facilities which operate infrequently or only for special events may request a modification to the maintenance schedule specified above. The Public Works Director may authorize a maintenance frequency related to the operation of the food service facility. The food service facility shall submit a request for a modified maintenance schedule which includes all details of operation for the Public Works Director to review.
- G. Disposal. The wastewater discharger shall be responsible for the proper removal and disposal of the grease interceptor or trap waste. All waste removed from each grease interceptor or trap must be disposed of properly at an appropriate facility designed to receive grease interceptor or

trap waste. No grease interceptor or trap waste shall be discharged into any city sanitary or storm sewer system.

- H. Maintenance log. The user shall be responsible for retaining a maintenance log with records of the maintenance of grease interceptors and traps including manifests, permits, permit applications, correspondence, sampling data and any other documentation that may be requested by the City. This log shall include the dates of service, volume of waste removed, waste hauler, and disposal site of waste. These records shall be kept on-site at the location of the grease interceptor or trap for a period of three years and are subject to review without prior notification. Wastewater dischargers shall maintain records on site for a period of at least three (3) years as follows:
- i. Wastewater dischargers with an installed grease control device shall maintain records showing that the control device has been properly maintained and cleaned as required by this section; and
 - ii. Food service establishments shall maintain records showing the following related to all grease hauled off site: date and time material removed off site; volume removed; hauler name; truck license number; type of grease removed; and final destination of material collected.

13.22.380 Exception from Grease Interceptor/Trap Requirements

- A. If the owner of any FSE or FM/P or of any structure in which an FSE or FM/P is located or is to be located demonstrates to the reasonable satisfaction of the Public Works Director that installation of a grease interceptor/trap is not feasible, the Public Works Director may grant an exception allowing such owner to install grease traps or other alternative treatment technology which will in the discretion of the Public Works Director adequately control the release of FOG from the FSE or FM/P or the structure into the public sewer collection system. The FSE or FM/P bears the burden of demonstrating that the installation of a grease interceptor/trap is not feasible. The request for an exemption shall include the following information if relevant:
- i. Evidence of a lack of available exterior space necessary to place an interceptor/trap relative to the location of sewer main and easement;
 - ii. Evidence of a lack of adequate slope for gravity flow between kitchen plumbing fixtures in the FSE or FM/P and the wastewater facilities;
 - iii. Description and specifications of the alternative grease control equipment that will be installed and evidence that the alternative pretreatment technology is equivalent to or better than a Grease Control Device in controlling its FOG discharge;
 - iv. Evidence that the size, available seating or type of food preparation does not generate any significant volume of FOG; and
 - v. The FSE must be able to demonstrate, after installation of the proposed alternative pretreatment, its effectiveness to control FOG discharge through downstream visual monitoring of the public sewer collection system at its own expense.

13.22.390 Waiver from Pretreatment Requirements

- A. A waiver from installation of a Grease or Sand Control Device may be granted to a FSE that has been determined to have negligible FOG discharge and insignificant impact to the City's public sewer collection system. The City's determination to grant or revoke a waiver shall be based upon, but not limited to, evaluation of the following conditions:
- i. City determination of quantity of FOG discharge as measured or as indicated by the size of the FSE based on seating capacity, number of meals served, menu, water usage, amount of

- on-site consumption of prepared food and other conditions that show contribution to FOG discharges;
- ii. City determination that adequacy of implementation of BMP and compliance history are sufficient;
 - iii. City determination that sewer size, slope, condition based on visual information, FOG deposition in the sewer by the FSE, and history of maintenance and sewage spills in the receiving sewer system;
 - iv. City determination that the changes in operations that significantly reduce FOG discharge; and
 - v. Any other condition deemed the City deems reasonably related to the generation of FOG discharges.

ARTICLE 4. INSPECTIONS AND COMPLIANCE

13.22.400 Inspections, Sampling and Right-to-Enter

- A. The City shall have the right to enter and inspect each FSE, commercial or industrial premises, or property owner's common use grease interceptor for announced or unannounced inspections. The City shall have access to all facilities and records necessary for determining compliance with this Chapter. An inspection may include a review of all logs and documentation, inspection of all kitchen facilities, and inspection of any and all Grease and Sand Control Devices and appurtenant plumbing on the premises.
- B. Each person or business subject to this Chapter shall allow the director reasonable access to all parts of the wastewater generating and disposal facilities for the purposes of inspection and sampling during all times the FSE is open, operating, or any other reasonable time. No persons or occupants of premises shall interfere with, delay, resist or refuse entrance to the director attempting to inspect any facility involved directly or indirectly with a discharge of wastewater to the public sewer. In the event of an emergency involving an actual or imminent SSO, the director may access adjoining businesses or properties that share a public sewer with an FSE in order to prevent or remediate the actual or imminent SSO.
- C. In addition to the authority set forth herein, the director may order the sampling of the wastewater discharges of any FSE to ascertain whether the intent of these regulations is being met and the permittee is complying with all requirements. The permittee shall allow access to the FSE premises, during normal business hours, for purposes of sampling the FSE's grease control devices or interceptor, and reviewing all records required to be kept pursuant to Section 13.22.692 of this chapter.
- D. The Director shall have the right to place or order the placement on the FSE's property, or other locations as determined by the director, such devices as are necessary to conduct sampling or metering operations. Where an FSE has security measures in force, the permittee shall make necessary arrangements so that the Director and/or an inspector shall be permitted to enter without delay for the purpose of performing their specific responsibilities.
- E. Additionally, in order for the director to determine the wastewater characteristics of the wastewater discharger for purposes of determining compliance with FOG WDP requirements, the permittee shall make available for inspection and copying by the director all records required to be kept pursuant to Section 13.22.692 of this chapter.
- F. The City or its agent will perform periodic inspections of these facilities and shall notify the user of any additional required maintenance or repairs. Upon written notification by the City

or its agent, the wastewater discharger shall be required to perform the maintenance and produce records of said maintenance to the City within fifteen (15) calendar days.

- G. Upon inspection by the City or its agent, the wastewater discharger may be required to install, at their expense, additional controls to provide a complete system which prevents discharges of FOG and other undesirable materials into the public sewer collection system.

13.22.410 Compliance and Enforcement

- A. Compliance with the FOG Control Program shall be evaluated based on the following criteria:
 - i. All food service establishments that are implementing and documenting BMPs, including employee training and kitchen procedures, and performing and documenting grease and sand retention unit cleaning at the required frequency will be considered to be in compliance with this Chapter.
- B. In the event that a wastewater discharger's grease interceptor or other grease removal device fails a visual inspection, effluent sample analysis or the discharger cannot provide adequate maintenance records, the discharger shall be given written notice of non-compliant condition. Discharger shall take immediate steps to bring the facility into compliance. The discharger will have a maximum of fifteen (15) calendar days from the date of the first notice to respond and correct the violation. If the discharger does not correct the violation within this time, a second violation will be issued. The discharger will have a maximum of ten (10) calendar days from the date of the second notice to respond and correct the violation. When three (or more) violations of the FOG program have been committed and remain uncorrected within the specified time limit, the City may commence enforcement actions pursuant to the provisions of Title 4 (Code Enforcement) of this Code.
- C. An owner of a building, a tenant and/or an agent representing the owner subject to this Chapter who fails to comply with any of requirements of this Chapter shall be subject to enforcement pursuant to the provisions of Title 4 of this Code and any other enforcement provisions authorized by the California Building Code or related Codes.
- D. For failure to pass the FOG inspection due to lack of or ineffective FOG equipment the Public Works Director may require the subject FSE or FM/P to install additional FOG equipment as necessary to resolve the problem.

ARTICLE 5. REMEDIAL REPAIR AND ABATEMENT

13.22.500 Charge for Remedial Repair of City Collection System

- A. When an obstruction and/or sanitary sewer overflow (SSO) occurs, the records of all FSE or FM/P that discharge to the affected sanitary sewer line may be reviewed in order to determine the responsible party. Any FSE or FM/P found to be in noncompliance with the required grease retention unit cleaning frequency shall be deemed a responsible party for cost recovery pursuant to the provisions of Title 4 of this Code, and also subject to Chapter 13.40, herein, as applicable. Cost recovery can include, but not be limited to, the costs of cleaning and abatement. Payment of cost recovery does not preclude further enforcement actions for noncompliance.
- B. In the event that the owner of an FSE or FM/P or the owner of any structure in which an FSE or FM/P is located is found to have contributed to the partial or complete obstruction of a wastewater facility resulting from the discharge of wastewater or waste containing FOG and that the City is required to act immediately to control a public health hazard because of such blockage, such owner shall be required to reimburse the city for all costs of abating such condition pursuant to the provisions of Title 4 of this Code. In situations where there are

multiple owners identified as contributing to FOG causing such obstruction, the Public Works Director will apportion the cost of the cleanup, maintenance or repair costs on a prorated basis, based on each owner's percentage share of the average total sanitary sewer charges for all such owners. Further, should inspection, testing or other sampling activity by the City confirm that any user is contributing excessive FOG (including other harmful ingredients) and is causing the repair or extraordinary maintenance activity to maintain the integrity of the system, the Public Works Director may require retrofitting of the structure with grease interceptors or grease traps, including testing facilities and access thereto sufficient to resolve the problem.

- C. The costs for curing any private sewer lateral failures and sewer system overflows, including cleaning and other maintenance, caused in whole or in part by FOG introduced into the public sewer collection system by any FSE or FM/P, alone or in conjunction with any other party, are the responsibility of the owner of the FSE or FM/P and the owner of any structure in which the FSE or FM/P contributing the FOG to wastewater system is located.
- D. In the event it is determined that a specified entity or entities have been the cause of a sanitary sewer overflow (SSO) and the City has been fined by the State Water Quality Control Board, the property Owner shall be responsible for payment of State Water Quality Control Board fees and fines.

13.22.510 Notice of Abatement

- A. The City has the right to abate any violation of this Chapter and to charge the violating wastewater discharger or responsible person or entity for damages caused by a prohibited discharge of FOG to the City's Public sewer collection system. Provided that the City can demonstrate upon reasonable proof that a FSE or responsible person or entity caused FOG build-up or another violation of this Chapter such that the City's public sewer collection system or appurtenance is damaged or such that a sewer overflow occurs, or that a sewer overflow is imminent, City shall have the right to serve a Notice of Abatement and to charge the discharger or responsible person or entity for all damages and abatement costs resulting from the violation. In cases of a violation of this Chapter that requires abatement, the City shall have the right to immediately enter a FSE premises and abate the violation to prevent further damages or violations.
- B. If the City abates a violation and incurs costs for that abatement, it shall issue a bill for all damages and abatement costs incurred to the discharger or responsible person or entity as soon as practical. With the issuance of a bill for any damages and abatement costs incurred, the City also shall provide the permittee or responsible person or entity with a copy of all evidence that supports the City's determination and a copy of this Chapter. The responsible person or entity shall have the right to appeal the Notice of Abatement and the damages and abatement costs charged by the City in accordance with the provisions of Title 4 of this Code.

ARTICLE 6. ADMINISTRATION

13.22.600 General Provisions

- A. The City's FOG Control Program (FOGCP) shall administer the requirements of this Chapter, the City's FOG policy, and the General Waste Discharge Requirements of the State Water Resources Control Board.
- B. As of the effective date of the ordinance codified in this section, all FSEs, FM/Ps and other entities with potential to introduce FOG, sand or other insoluble waste into the City's

Collection System are required to participate in the City's FOGCP as outlined in this Section.

- C. The City, from time to time, may establish additional standards for the content of the FOGCP by approval of the Public Works Director.
- D. FSE or FM/Ps and other entities with potential to discharge FOG and other insoluble waste into the City's collection system shall require a **FOG Waste Discharge Permit** (FOG WDP) to discharge wastewater into the collection system.
- E. No FSE or FM/P shall discharge any substance of any kind into any portion of the public sewer collection system which is not in conformance with the City's FOGCP and the requirements of the Fog Waste Discharge Permit for that FSE or FM/P.

13.22.605 Fees

The purpose of this section is to provide for the recovery of FOG WDP inspection costs.

- A. Wastewater dischargers shall pay an initial FOG application fee and an annual renewal fee to cover inspection costs of the wastewater discharger facility. At least 30 days prior to the expiration of the FOG WDP, the permittee shall annually re-apply and pay applicable fees for the renewal of the FOG WDP. A permittee shall also pay any delinquent invoices in full prior to any FOG WDP renewal.
- B. Costs incurred by the City as a result of the annual inspections--e.g. follow-up inspections due to non-compliance, any required on-site sampling and analysis--shall be reimbursed to the City by the owner, discharger or FOG DWP permittee.
- C. The City may adopt other fees as the City may deem necessary to carry out the requirements of this chapter.
- D. Fees shall be as established by Resolution adopted by the City Council, as amended from time to time.

13.22.610 FOG Waste Discharge Permit

- A. The FOG Waste Discharge Permit (FOG WDP) is a legally binding agreement issued to a FSE, FM/P or commercial and industrial businesses or other entities subject to the provisions of this Chapter to utilize the City public sewer collection system under the terms, conditions, and criteria of the City's FOGCP. The FOG WDP is prepared and maintained by the City, and its provisions may be modified periodically as required to ensure each wastewater discharger's compliance with the terms and conditions of this Chapter, as they may be amended from time to time. Failure to comply with the FOG WDP terms and conditions will constitute a violation of this section. The FOG WDP must be renewed annually.
- B. In addition to the FOG WDP, the City may also issue specific permit conditions to any FSE, FM/P or commercial and industrial businesses or other entities subject to the provisions of this Chapter. In the event that the City issues specific permit conditions, the basis for those specific permit conditions shall be disclosed in writing and appended to the FOG WDP. Failure to comply with the individual permit conditions will constitute a violation of this Chapter.

13.22.620 FOG Waste Discharge Permit Application and Renewal

- A. Each existing FSE, FM/P or commercial and industrial businesses or other entities subject to the provisions of this Chapter shall submit a FOG Waste Discharge Permit application to the City within sixty (60) days following the effective date of this Chapter.
- B. All newly operational or newly constructed FSEs and FSEs with a change in operations shall submit a FOG WDP Application at least thirty (30) days prior to such change. Any FSE which

fails to submit the required FOG WDP application in a timely manner will be subject to enforcement defined in this Chapter.

- C. Property owners or their designee(s) of commercial properties identified on the FOG WDP shall be responsible for the installation and maintenance of a Grease Interceptor serving multiple FSE that are located on a single parcel. The owner of the parcel containing a common use Grease Interceptor shall submit an application for and be the Permittee under a FOG WDP.
- D. At least 30 days prior to the expiration of the FOG WDP, the permittee shall annually re-apply for the renewal of the FOG WDP.

13.22.640 FOG WDP Conditions

Issuance of a FOG WDP may include, but is not limited to, any of the following conditions or limits:

- A. Limits on discharge of FOG, sand, grit, other solids and other pollutants
- B. Requirements for proper operation and maintenance of grease interceptors and other grease control devices
- C. Sand and Oil interceptor maintenance frequency and schedule
- D. Requirements for implementation of BMPs
- E. Requirements for maintaining and reporting status of BMPs
- F. Requirements for maintaining and submitting logs and records, including waste hauling records and waste manifests including the ultimate disposition of the wastes that contain FOG
- G. Requirements to self-monitor
- H. Requirements for the FSE to construct, operate and maintain, at its own expense, grease control device and sampling facilities
- I. Additional requirements as otherwise determined to be reasonably appropriate by the Public Works Director to protect the City Collection System or as specified by other regulatory agencies
- J. Other terms and conditions which may be reasonably applicable to ensure compliance with this Chapter

13.22.650 FOG WDP Modification of Terms and Conditions

- A. The terms and conditions of an issued FOG WDP may be subject to modification at the sole discretion of the Public Works Director during the life of the FOG WDP based on:
 - i. The permittee's current or anticipated operating data;
 - ii. Changes in the requirements of state or federal regulatory agencies that oversee and monitor the City; or
 - iii. A determination by the Public Works Director that such modification is appropriate to further the objectives of this chapter and all applicable regulations.
- B. A permittee may request modification of the terms and conditions of an issued FOG WDP. Any request shall be in writing stating the requested change and the reasons for the change. The Public Works Director shall review the request, make a determination on the request, and respond in writing.
- C. A permittee shall be informed of any change in the FOG WDP limits, conditions and/or requirements at least 45 days prior to the effective date of the change. Any changes or new conditions in the FOG WDP shall include a reasonable time schedule for compliance.

13.22.680 FOG Waste Discharge Permit Exceptions

- A. A limited food preparation establishment may not be considered an FSE and may be exempt from obtaining a FOG WDP. Exempt establishments shall be engaged only in reheating, hot holding or assembly of ready to eat food products and as a result, there may not be wastewater discharge containing significant amount of FOG.
- B. A limited food preparation establishment is required to follow the BMPs defined for all FSEs. A limited food preparation establishment that discharges FOG in excess of the defined limits may be reclassified as an FSE and required to obtain a FOG WDP at the Public Works Director's discretion.
- C. An exemption from obtaining a FOG WDP may be requested in writing. If the Public Works Director determines that the reasons for the request are valid, an exemption may be granted.

13.22.690 Non-transferability of a FOG WDP

A FOG WDP issued pursuant to this chapter is for a specific FSE, for a specific operation and creates no vested rights. No holder of a FOG WDP shall assign, transfer and/or sell the FOG WDP and/or use the FOG WDP on any premises or for any facilities, operations and/or discharges not expressly encompassed within the FOG WDP. Any FOG WDP that is transferred to a new owner and/or operator and/or to a new facility is in violation of this Chapter is void.

13.22.691 Facilities and drawing submittal requirements

Upon request by the City:

- A. Any FSE may be required to submit two copies of facility site plans, mechanical and plumbing plans and details to show all sewer locations and connections. The submittal shall be in a form and content acceptable to the Public Works Director for review of the existing or proposed grease control device, grease interceptor, monitoring facilities, metering facilities and operating procedures. The review of the plans and procedures shall in no way relieve the FSE of the responsibility of modifying the facilities or procedures in the future as necessary to produce an acceptable discharge, and to meet the requirements of this chapter or the requirements of any other regulatory agency.
- B. The City may require the drawings be prepared by a California Registered Civil, Chemical, Mechanical or Electrical Engineer.
- C. All drawings shall be submitted to Department of Public Works.

13.22.692 Record Keeping Requirements

The permittee shall be required to keep all manifests, receipts and invoices of all cleaning, maintenance, grease removal of/from the grease control device, disposal carrier and disposal site location for no less than three (3) years. The permittee shall, upon request, make the manifests, receipts and invoices available to the director, any inspector and/or any enforcement officer. These records may include:

- A. An on-site maintenance logbook of grease interceptor, grease trap or grease control device cleaning and maintenance practices as described in Section 13.22.320.H.
- B. A record of BMPs being implemented, including employee training.
- C. Copies of records and manifests of waste hauling interceptor contents.
- D. Records of sampling data and sludge height monitoring for FOG and solids accumulation in the grease interceptors.
- E. Records of any spills and/or cleaning of the sewer lateral or public sewer.

- F. Any other information deemed appropriate by the director to ensure compliance with this chapter.

13.22.693 Monitoring and Reporting Conditions

- A. The director may require periodic reporting of the status of implementation of BMPs, in accordance with the FOG control program.
- B. The director may require visual monitoring at the sole expense of the permittee to observe the actual conditions of the FSE's sewer lateral and sewer lines downstream.
- C. The director may require reports for self-monitoring of wastewater constituents and FOG characteristics of the permittee needed for determining compliance with any conditions or requirements as specified in the FOG WDP or this chapter. Monitoring reports of the analyses of wastewater constituents and FOG characteristics shall be in a manner and form approved by the Director and shall be submitted upon request of the director. Failure by the permittee to perform any required monitoring, or to submit monitoring reports required by the director constitutes a violation of this chapter and shall be cause for the city to initiate all necessary tasks and analyses to determine the wastewater constituents and FOG characteristics for compliance with any conditions and requirements specified in the FOG WDP or in this chapter. The permittee shall be responsible for any and all costs and expenses of the city in undertaking such monitoring analyses and preparation of reports.
- D. Other reports may be required, such as compliance schedule progress reports, FOG control monitoring reports, and any other reports deemed reasonably appropriate by the director to ensure compliance with this chapter.

13.22.694 Notification of Spill

- A. In the event a permittee is unable to comply with any FOG WDP condition due to a breakdown of equipment, accidents or human error or the permittee has reasonable opportunity to know that their discharge will exceed the discharge provisions of the FOG WDP or this chapter, the discharger/permittee shall immediately notify the City by telephone at the number specified in the FOG WDP. If the material discharged to the public sewer collection system has the potential to cause or result in sewer blockages or SSOs, the discharger/permittee shall immediately notify the City.
- B. Confirmation of this notification shall be made in writing to the Director at the address specified in the FOG WDP postmarked or emailed no later than two calendar days from the date of the incident. The written notification shall state the date of the incident, the reasons for the discharge or spill, what steps were taken to immediately correct the problem, and what steps are being taken to prevent the problem from recurring.
- C. Such notification shall not relieve the discharger/permittee of any expense, loss, damage or other liability which may be incurred as a result of damage or loss to the City or any other damage or loss to persons or property; nor shall such notification relieve the permittee of any fees or other liability which may be imposed by these regulations or other applicable law.

13.22.695 Falsifying Information or Tampering with Process

It is unlawful to make any false statement, representation, record, report, plan or other document that is filed with the City and/or the Director, or to tamper with or knowingly render inoperable any grease control device, monitoring device or method or access point required under this chapter.

BUSINESS OF THE COUNCIL OF THE CITY OF HALF MOON BAY

AGENDA REPORT

For meeting of: **October 17, 2023**

TO: Honorable Mayor and City Council

VIA: Matthew Chidester, City Manager

FROM: Maz Bozorginia, Public Works Director/ City Engineer
Matt Nichols, Management Analyst

TITLE: **WORKSHOP - E-BIKES AND OTHER ELECTRIC DEVICES ON TRAILS AND PATHS**

RECOMMENDATION:

Receive informational update on the operation of e-bikes and other electric devices (AB 1909) and provide comments and feedback to staff for the preparation of a draft ordinance on City-owned trails and paths.

FISCAL IMPACT:

There is no fiscal impact associated with this workshop.

STRATEGIC ELEMENT:

This action supports the *Healthy Communities and Public Safety* and *Infrastructure and Environment* Elements of the Strategic Plan.

BACKGROUND

Over the past three years, the City of Half Moon Bay has held several public meetings and engaged with stakeholders and trail users to help inform a policy to regulate the use of e-bikes and other devices on the City's paved trails and paths. At the [April 4th, 2023, City Council meeting](#), the Council held a work session where staff presented their findings and recommendations for regulating e-bikes, e-scooters, and e-boards on Half Moon Bay's paved paths and trails. During this workshop, the Council directed staff to draft an ordinance allowing class 1-3 e-bikes, e-scooters, and e-boards, as well as implementing a speed limit on the Naomi Patridge and Eastside Parallel Trails, and prohibiting all classes of e-bikes and other electric devices on the City-owned portion of the Coastal Trail. The majority of public comment during this workshop favored banning e-bikes along the Coastal Trail, citing multiple concerns regarding speed and safety. After the April 4th workshop, staff received various comments and emails from members of the public with additional feedback on the prior workshop, many of which were in favor of allowing electric devices. Those written comments are included as an Attachment to this report.

Since the City adopted Municipal Code Chapter 10.48 in 1983, there have been significant technological changes for bicycles. E-bike usage is increasing and becoming more attractive for commuting and recreational use. E-bike popularity is evident with the State's reclassification from motorized vehicles to a sub-category of bicycles and the recent legislation requiring they be allowed on bike paths. Staff conversations with other agencies indicate a desire for a collaborative effort to consistently regulate the multi-use trails within the Coastsides.

DISCUSSION

In late 2022, California passed [AB 1909, also called the OmniBike Bill](#). This piece of legislation by assemblymember Laura Friedman makes several changes to California's Vehicle Code, one of which is how local jurisdictions may regulate e-bikes on various paths and trails. This assembly bill was approved without much public outreach of the resulting changes, which surprised a number of jurisdictions including the city.

In mid-2023, City staff became aware of AB 1909, which removes language from section 21207.5 of the California State Vehicle Code (CVC) that previously allowed jurisdictions to regulate the use of class 1, 2, and 3 electric bicycles on bicycle paths and trails. Due to these restrictions, the Council's previous recommendations appear to be inconsistent with state law. Staff is here tonight to seek additional feedback and comments on the operation of e-bikes and other electric devices on the City-owned trails and paths.

ATTACHMENTS:

Public Comments received after April 4, 2023, Council workshop

From: [REDACTED]
To: [Matthew Nichols](#)
Subject: E-bike Ordinance
Date: Sunday, August 27, 2023 8:21:48 AM

[CAUTION]: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

In researching for a up coming trip to Francis Beach, I discovered that HMB has approved banning e-bikes from the use of the coast trail.

Not wanting to break any laws but also wanting to enjoy the scenic views I am unable to find out if this ordinance has been put into place yet. Nor can I find a map of a alternative route that is allowed.

I hope you can give us the information that we need to abide to any ordinance that may be in place during our trip coming up in September.

Sincerely,
Shannon Jackson

Sent from my iPhone

From: Maureen <[REDACTED]>
Sent: Thursday, April 6, 2023 8:29 PM
To: Matthew Nichols
Subject: E-bikes

Follow Up Flag: Follow up
Flag Status: Completed

[CAUTION]: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Just eliminated seniors from enjoying the coastal trails. HMB must think it is the young people paying the high property taxes on the coast.
Very disappointing.

Sent from my iPhone

From: [Jessica Blair](#)
To: [Matthew Nichols](#)
Subject: FW: Allow E-Bikes on Coastal Trail
Date: Tuesday, April 18, 2023 7:46:53 PM



Jessica Blair, MMC
Communications Director / City Clerk
501 Main Street, Half Moon Bay, CA 94019
(650) 726-8271
www.hmbcity.com

From: Deborah Penrose <DPenrose@hmbcity.com>
Sent: Tuesday, April 18, 2023 5:46 PM
To: Jessica Blair <JBlair@hmbcity.com>
Subject: Fwd: Allow E-Bikes on Coastal Trail

Fyi

Deborah B. Penrose
Mayor of Half Moon Bay
501 Main Street,
Half Moon Bay, CA 94019
(650) 454-5891
dpenrose@hmbcity.com

Begin forwarded message:

From: Kirsten Hagen <[REDACTED]>
Subject: Allow E-Bikes on Coastal Trail
Date: 18 April 2023 at 5:24:58 pm GMT-7
To: DPenrose@hmbcity.com, jjimenez@hmbcity.com, hrarback@hmbcity.com,
DRuddock@hmbcity.com, rbrownstone@hmbcity.com

[CAUTION]: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello City Council Members,

I was surprised and disappointed to hear that you plan to approve an ordinance banning e-bikes from the coastal trail. As I understand it, the recent poll requesting public feedback, which I participated in, indicated that 65% of the respondents are in agreement with allowing e-bikes and having a speed limit. Also, the city staff recommendation was to allow e-bikes and to have speed limits. Yet I read that you requested the ordinance be re-written to not allow e-bikes.

I strongly request that you re-consider and come up with a solution that does not disallow certain citizens from using the west-side coastal trail just because we choose to ride a certain type of bike. I ride an e-bike because I love spending time on the coastal trail (and elsewhere), and I find that riding an e-bike allows me to enjoy the beauty of my chosen home area much more. I ride more, get outside more, exercise more because I have an e-bike. On busy, traffic-ky weekends, we ride our bikes to get around and avoid adding more cars to the roads. We love our bikes and we love the coastal trail!

I support having speed limits for all modes of transportation on the coastal trail, and have no problem slowing to pass people and alerting them in advance to my presence. I feel that is fair, and allows everyone to safely use the trail. E-bikes are no more dangerous than regular bikes!

Shuttling e-bike riders to the East-side Naomi Patridge Trail is not an adequate solution and is unfair to e-bike riders, who have the same right to enjoy the area as every one else. We're not just focused on getting to our destination. We are out on the West-side trail because we enjoy the beauty AND because we enjoy the ride.

Please re-consider this decision and allow **everyone** to use the coastal trail.

Thank you,
Kirsten

Kirsten Hagen

A black rectangular redaction box covering the signature area.

From: [Jessica Blair](#)
To: [Matthew Nichols](#)
Subject: Fwd: E-bikes
Date: Thursday, April 27, 2023 9:07:36 PM

Begin forwarded message:

From: Deborah Penrose <DPenrose@hmbcity.com>
Date: April 27, 2023 at 9:06:56 PM PDT
To: Jessica Blair <JBlair@hmbcity.com>
Subject: Fwd: E-bikes

Deborah B. Penrose
Mayor of Half Moon Bay
501 Main Street,
Half Moon Bay, CA 94019
(650) 454-5891
dpenrose@hmbcity.com

Begin forwarded message:

From: Comcast <[REDACTED]>
Subject: E-bikes
Date: 14 April 2023 at 11:05:58 am GMT-7
To: DPenrose@hmbcity.com

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sender and know the content is safe.

Hi,

I want to express how disappointed I am to hear that you have banned ALL e-bikes from the coastal trail in HMB. I have a class 1 e-bike and don't use assist on flat roads. The coastal trail was my reason for buying it. It's a favorite trail but there are a couple of steep sections. Especially where the broken bridge is. I see regular bike riders going much faster than I go - and showing less consideration for

pedestrians.

There are plenty of people who cannot enjoy the trail due to age or physical limitations- without assistance from their class 1 e-bike. I completely understand banning the other bikes that are more like motor bikes.

Frances Collins
HMB resident

From: [Jessica Blair](#)
To: [Matthew Nichols](#)
Subject: Fwd: Mountain Biking and Trail-Building Destroy Wildlife Habitat!
Date: Thursday, April 27, 2023 9:07:48 PM

Begin forwarded message:

From: Deborah Penrose <DPenrose@hmbcity.com>
Date: April 27, 2023 at 9:07:07 PM PDT
To: Jessica Blair <JBlair@hmbcity.com>
Subject: Fwd: Mountain Biking and Trail-Building Destroy Wildlife Habitat!

Deborah B. Penrose
Mayor of Half Moon Bay
501 Main Street,
Half Moon Bay, CA 94019
(650) 454-5891
dpenrose@hmbcity.com

Begin forwarded message:

From: Mike Vandeman <[REDACTED]>
Subject: Re: Mountain Biking and Trail-Building Destroy Wildlife Habitat!
Date: 14 April 2023 at 9:42:09 am GMT-7
To: Deborah Penrose <DPenrose@hmbcity.com>

[CAUTION]: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

At 09:16 AM 4/14/2023, you wrote:

Thank you for your comments Mike. I will pass them along to staff.

Thanks!

Deborah B. Penrose
Mayor of Half Moon Bay
501 Main Street,
Half Moon Bay, CA 94019
(650) 454-5891
dpenrose@hmbcity.com

On 14 Apr 2023, at 9:05 am, Mike Vandeman <[REDACTED]> wrote:

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The major harm that mountain biking does is that it greatly extends the human footprint (distance that one can travel) in wildlife habitat. E-bikes multiply that footprint even more. Neither should be allowed on any unpaved trail. Wildlife, if they are to survive, MUST receive top priority!

What were they thinking??? Mountain biking and trail-building destroy wildlife habitat! Mountain biking is environmentally, socially, and medically destructive! There is no good reason to allow bicycles on any unpaved trail!

Bicycles should not be allowed in any natural area. They are inanimate objects and have no rights. There is also no right to mountain bike. That was settled in federal court in 1996: <https://mjvande.info/mtb10.htm>. It's dishonest of mountain bikers to say that they don't have access to trails closed to bikes. They have EXACTLY the same access as everyone else -- ON FOOT! Why isn't that good enough for mountain bikers? They are all capable of walking....

Why do mountain bikers always insist on creating illegal trails? It's simple: they ride so fast that they see almost nothing of what they are passing. Therefore, they quickly get bored with any given trail and want another and another, endlessly! (In other words, mountain biking is inherently boring!)

A favorite myth of mountain bikers is that mountain biking is no more harmful to wildlife, people, and the environment than hiking, and that science supports that view. Of course, it's not true. To settle the matter once and for all, I read all of the research they cited, and wrote a review of the research on mountain biking impacts (see <https://mjvande.info/scb7.htm>). I found that of the seven studies they cited, (1) all were written by mountain bikers, and (2) in every case, the authors misinterpreted their own data, in order to come to the conclusion that they favored. They also studiously avoided mentioning another scientific study (Wisdom et al) which did not favor mountain biking, and came to the opposite conclusions.

Mountain bikers also love to build new trails - legally or illegally. Of course, trail-building destroys wildlife habitat - not just in the trail bed, but in a wide swath to both sides of the trail! E.g. grizzlies can hear a human from one mile away, and smell us from 5 miles away. Thus, a 10-mile trail represents 100 square miles of destroyed or degraded habitat, that animals are inhibited from using. Mountain biking, trail building, and trail maintenance all increase the number of people in the park, thereby preventing the animals' full use of their habitat. See <https://mjvande.info/scb9.htm> for details.

Mountain biking accelerates erosion, creates V-shaped ruts, kills small animals and plants on and next to the trail, drives wildlife and other trail users out of the area, and, worst of all, teaches kids that the rough treatment of nature is okay (it's NOT!). What's good about THAT?

To see exactly what harm mountain biking does to the land, watch this 5-minute video: <http://vimeo.com/48784297>.

In addition to all of this, it is extremely dangerous: https://mjvande.info/mtb_dangerous.htm.

The latest craze among mountain bikers is the creation of "pump tracks" (bike parks). They are alleged to teach bicycling skills, but what they actually teach are "skills" (skidding, jumping ("getting air"), racing, etc.) that are appropriate nowhere! If you believe that these "skills" won't be practiced throughout the rest of the park and in all other parks, I have a bridge I'd like to sell you! ..

For more information: <https://mjvande.info/mtbfaq.htm>.

The common thread among those who want more recreation in our parks is total ignorance about and disinterest in the wildlife whose homes these parks are. Yes, if humans are the only beings that matter, it is simply a conflict among humans (but even then, allowing bikes on trails harms the MAJORITY of park users -- hikers and equestrians -- who can no longer safely and peacefully enjoy their parks).

The parks aren't gymnasiums or racetracks or even human playgrounds. They are WILDLIFE HABITAT, which is precisely why they are attractive to humans. Activities such as mountain biking, that destroy habitat, violate the charter of the parks.

Even kayaking and rafting, which give humans access to the entirety of a water body, prevent the wildlife that live there from making full use of their habitat, and should not be allowed. Of course those who think that only humans matter won't understand what I am talking about -- an indication of the sad state of our culture and educational system.

--

Machine-Free Trails Association

I am working on creating wildlife habitat that is off-limits to humans ("pure habitat").
Want to help? (I spent the previous 8 years fighting auto dependence and road
construction.)

Wildlife must be given top priority, because they can't protect themselves from us.

Please don't put a cell phone next to any part of your body that you are fond of!

Stop obeying dictators and incompetent leaders from this time forward! Please share
this message as widely as possible!

<https://mjvande.info>

To not receive email from me, just reply and ask to be removed.

--

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<https://mjvande.info>

To not receive email from me, just reply and ask to be removed.

From: noreply@civicplus.com
To: [Matthew Nichols](#)
Subject: Online Form Submittal: Proposed E-bike Ordinance Feedback Form
Date: Saturday, May 6, 2023 8:40:22 PM

[CAUTION]: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Proposed E-bike Ordinance Feedback Form

Comments: I am completely against the banning of electric bicycles of all classes on the city owned coastal trail. I am older and regularly ride my e-bike on the trail to Kelly from Miramar without incident. I under stand disallowing class 3 but, road bike go the same speed as class 1&2. Richard Wright

Email not displaying correctly? [View it in your browser.](#)

BUSINESS OF THE COUNCIL OF THE CITY OF HALF MOON BAY

AGENDA REPORT

For meeting of: **October 17, 2023**

TO: Honorable Mayor and City Council

VIA: Matthew Chidester, City Manager

FROM: Maz Bozorginia, Public Works Director/City Engineer
Veronika Vostinak, Public Works and Sustainability Programs Manager

TITLE: **DRAFT CLIMATE ACTION AND ADAPTATION PLAN (PHASE 1)**

RECOMMENDATION:

- 1) Receive an update on the Draft Climate Action and Adaptation Plan Phase 1; and
- 2) Provide direction and feedback to staff for final draft preparation of the Phase 1 Plan

FISCAL IMPACT:

There is no fiscal impact associated with receiving this update.

STRATEGIC ELEMENT:

This action supports the *Infrastructure and Environment* and *Healthy Communities and Public Safety* Elements of the Strategic Plan.

BACKGROUND:

California continues to lead the fight against climate change at the State, county, and local levels. The State passed the following legislature establishing ambitious statewide greenhouse gas (GHG) reduction goals:

- **Senate Bill 32 (SB 32)**, 2016 - established the goal of reducing GHG emissions 40% below 1990 levels by 2030
- **Assembly Bill 1279 (AB 1279)**, 2022 - established the goal of achieving carbon neutrality by 2045 at the latest and maintaining net negative emissions from that point forward.

The City Council has identified environmental sustainability as one of the top five priorities since FY 2019-20. In response to this commitment, the City Council adopted the City's first Sustainability Implementation Plan (SIP) in November 2019 to prioritize staff projects for FY 2019-20 and 2020-21. In September 2020, the City Council adopted an updated SIP prioritizing sustainability-related projects and programs through FY 2023-24.

Between October 2019 and January 2020, staff completed the Climate Action and Adaptation Plan (CAAP) Outreach Pilot Project, funded by a \$60,000 grant from the San Mateo County Office of Sustainability (OOS) as part of the SB-1 Caltrans Adaptation Planning Grant. Staff worked with local community-based organizations (CBOs) to conduct 15+ climate change outreach events to youth, senior, and Latinx populations. Events included focus groups, movie screenings, mural paintings, climate change presentations, workshops, a virtual reality experience, and facilitated discussions. The input gathered from these events was then presented to the City Council on January 21, 2020. Building on this momentum and continuing to foster relationships with the community, staff have conducted an additional 20+ events in order to continue gathering input throughout the development of the plan.

Drafting the City's first CAAP was identified as a priority in the Sustainability Implementation Plan for FY 2020-21. Following the City Council meeting, staff issued a request for proposals (RFP) on January 28, 2020, for a CAAP-writing consultant. Due to economic hardships related to the COVID-19 pandemic, staff postponed executing a contract and pursued alternative options to develop the CAAP without depending solely on a consultant. Due to limited staff time and City Council direction to focus on building electrification and reach codes for FY20-21 and FY21-22, staff focused on outreach, development, and adoption of the Building Electrification Ordinance and the Electric Vehicle (EV) and Photovoltaic System (PV) Reach Code.

Due to available resources and limited budget, staff drafted Phase One of the CAAP which focused on mitigation measures focused on GHG emission reduction. Staff leveraged the resources available through the City's participation in the Regional Integrated Climate Action Planning Suite (RICAPS), including technical assistance from consultants (DNV and Rincon) to update the City's community greenhouse gas emission inventory and identify impactful GHG mitigation measures.

The first draft of CAAP Phase One was published on the City's website on December 22, 2022. Additional drafts with minor refinements to the plan were published in March and August 2023. The most recent draft that is being presented at this meeting is available here: <https://www.half-moon-bay.ca.us/DocumentCenter/View/6187/DRAFT-CAP>

In September 2023, staff began work on Climate Action and Adaptation Plan Phase Two with assistance from Integral Consulting. Phase Two will be a complementary planning document focused on Climate Adaptation or responding to and preparing for the impacts of climate change, such as higher heat, increased storms, increased wildfire risk, sea level rise, and coastal erosion.

DISCUSSION:

Half Moon Bay understands the importance of laying out a framework for enhancing Half Moon Bay's resilience to climate change impacts. This draft CAAP describes the process Half Moon Bay will embark on to develop a climate change resiliency plan moving forward. The draft CAAP identifies strategies the City and community can take together to reduce Half Moon Bay's GHG emissions to match the State's ambitious goal of reaching at least 40% emission reduction

below 1990 levels by 2030 as an interim step toward achieving carbon neutrality well before 2045.

Transportation

In 2019, transportation was the most significant GHG emission contributor, accounting for 61% of total GHG emissions in Half Moon Bay. The primary contributors were gasoline-powered on-road vehicles (85%), diesel-powered on-road vehicles (10%), and gasoline- and diesel-powered off-road equipment (5%).

To address these emissions by 2030, the plan identifies ways the City can aim to:

- Increase active transportation mode share from 5% to 9%
- Implement public and shared transit programs to increase public transit mode share from 0.1% to 4%
- Increase passenger zero-emission vehicle (ZEV) adoption from 3% to 33%
- Increase commercial zero-emission vehicle (ZEV) adoption from 0% to 27%
- Increase bus zero-emission vehicle (ZEV) adoption from 0% to 23%
- Electrify or otherwise decarbonize 5% of off-road equipment

Specific actions outlined in the plan include improving bike and pedestrian infrastructure, collaborating with schools for safe routes, expanding public transit, developing EV charging plans, encouraging ZEV car sharing, advocating for disincentives for single-passenger driving, and partnering with transit providers to electrify buses. The plan also aims to foster walkable and transit-oriented development. The plan anticipates 44% of total GHG reductions by 2030 from these transportation measures.

Building Energy

In 2019, building energy related GHG emissions constituted 30% of Half Moon Bay's total emissions. This category encompasses emissions from natural gas consumption, electricity usage, and stationary combustion of other fuels. Natural gas use contributed 85% to building energy emissions, comprising residential, commercial, municipal, and district sectors, including methane leakage during delivery. Electricity consumption accounted for 15% of building energy emissions, covering residential, commercial, and municipal sectors, along with transmission and distribution losses.

To address these emissions by 2030, the plan identifies ways the City can aim to:

- Electrify new construction
- Electrify 20% of existing residential buildings
- Electrify 17% of existing commercial buildings
- Reduce "District" natural gas usage 35% below forecasted 2030 levels
- Continue to provide carbon-free electricity options to the community and maintain PCE opt-out rates of less than 3%

Specific actions outlined in the plan include developing ordinances for electrification, compliance programs, cost-effectiveness studies, educational campaigns, and industry partnerships. The plan anticipates 29% of total GHG reductions by 2030 from these building energy measures.

Solid Waste

In 2019, solid waste GHG emissions accounted for 9% of total 2019 GHG emissions in Half Moon Bay. 19,672 tons of solid waste were sent to landfills, accounting for 92% of solid waste emissions. GHG emissions from landfills located within the community accounted for one percent of solid waste emissions.

Solid waste GHG emissions result from organic material decomposing in the anaerobic conditions present in a landfill and releasing methane—a 28 times more potent GHG than CO₂. Organic materials (e.g., paper, plant debris, food waste) generate methane within the anaerobic environment of a landfill, while non-organic materials (e.g., metal, glass) do not.

To address these emissions by 2030, the plan identifies ways the City can aim to:

- Reduce community-wide landfilled organics 75% by 2025; and inorganic waste 35% by 2030 (from 2014 levels)
- Increase local organics diversion through community composting
- Support opportunities to reduce single-use plastics
- Implement policies to increase organics and traditional recycling at public events

Half Moon Bay plans to meet the requirements of SB 1383 through Municipal partnerships with local community organizations and businesses as well as regional collaboration to procure compost and maintain high-quality compost. This core strategy to reduce waste to landfills will be strengthened through supportive actions to increase zero waste education and advocacy, and the expansion of local organics diversion through community composting. The plan anticipates 27% of total GHG reductions by 2030 from these solid waste measures.

Waste and Wastewater

Water and wastewater GHG emissions account for less than 1% of total emissions in Half Moon Bay. Water emissions are generated from the electricity required to convey and process water used by the population of Half Moon Bay. In 2019, Half Moon Bay consumed over 480 million gallons of water, with an associated 696,121 kWh of electricity used for water transportation and conveyance. Wastewater emissions are generated by the process used to treat wastewater, which generates short-lived climate pollutants, including methane, some of which is captured for digester gas.

Though GHG emissions from water and wastewater make up a very small percentage of Half Moon Bay's total GHG emissions, they are connected to critical sustainability and climate change adaptation issues. As snowpack starts to dwindle, Californians have started moving towards permanent changes to conserve water as the State is projected to experience more frequent and longer periods of limited water supply. Measures and actions to reduce GHG

emissions from the water sector through water conservation intersect with strategies that allow Half Moon Bay to adapt to the effects of climate change.

Conclusion

The draft CAAP demonstrates a path of ambitious actions the City and community can take together to mitigate climate change impacts, looking specifically towards California's 2030 and 2045 GHG emission reduction goals. While the City can lay the policy groundwork to provide Half Moon Bay residents with the necessary tools to work towards the success of these measures, meaningful action and progress will ultimately rely on community-wide behavioral change. Community participation in these strategies will be critical to ensure that significant progress can be made towards reducing GHG emissions citywide.

Next Steps

Any guidance, input, or direction provided by the City Council during this workshop will be incorporated by staff in the development of the final draft of the CAAP (Phase 1). The completed draft will be subsequently presented for consideration and adoption by the Council in early 2024.

ATTACHMENTS:

None

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DRAFT

Executive Summary

Cities are on the front lines when it comes to climate change. Cities are also leading the world in reducing carbon emissions through aggressive policies and adopting clean technologies. Half Moon Bay's Climate Action Plan (CAAP) Phase One aims to reduce carbon emissions at least 40 percent below 1990 levels by 2030, an interim step toward achieving carbon neutrality well before 2045.

Half Moon Bay has already made significant progress in its climate action efforts. Between 2005 and 2019, Half Moon Bay reduced its emissions by 23,713 metric tons of carbon dioxide equivalents (MT CO₂e) to achieve 24 percent below 2005 levels. To achieve at least a 40 percent reduction by 2030, Half Moon Bay would need to reduce total emissions by about 22,121 MT CO₂e, significantly increasing the scale and speed of reductions. This "bending of the carbon curve" is essential to meeting the goal of carbon neutrality before 2045 and avoiding worsened climate change impacts.

To meet this goal, this CAAP provides a roadmap to reduce emissions in four sectors: 1) energy and water, 2) transportation and land use, 3) solid waste, 4) and food and consumption. The CAAP identifies critical actions that need to be accomplished within the next decade to stay on pace with achieving our goals.

This CAAP also focuses on our municipal operations as well as issues and activities in the community, including how residents, organizations, and businesses can contribute to Half Moon Bay's emission reduction goals. It provides an ambitious, community-focused platform to advance policies that enhance quality of life and wellbeing, embrace smart city innovation, and improve social equity. We engaged experts and community leaders to plan the best path forward for Half Moon Bay, and we hope you will join us on this journey.

Half Moon Bay understands the importance of laying out a framework for enhancing Half Moon Bay's resilience to these impacts. This CAAP describes the process Half Moon Bay will embark on to develop a climate change resiliency plan moving forward.

The community's investment to support the CAAP will be many times greater than Half Moon Bay's own costs. Half Moon Bay will need to support residents' and businesses' efforts to find funding to decarbonize their buildings, vehicles, and lifestyles. At the same time, Half Moon Bay should discourage carbon-emitting activities through fee-based systems or carbon taxes to shift community investment away from fossil fuels to clean technologies.

To ensure full implementation of the CAAP, an interdepartmental team of City staff, in collaboration with civic and business leaders, must be assembled to maintain momentum and ensure accountability. Staff will provide annual progress reports and will prepare an update to the CAAP after five years.

This CAAP provides a pathway to accelerate our historical success. It is also a call to action for residents, community organizations, and businesses to actively participate in our transition to a low-carbon future and clean economy. In this process, we will foster a vibrant economy, increase our resiliency, and support Half Moon Bay's vision for a livable and sustainable community for all generations.

Introduction

Why a Climate Action and Adaptation Plan?

The City of Half Moon Bay is pleased to present its first phase of the Climate Action and Adaptation Plan (CAAP). This CAAP is designed to be a blueprint of our community's response to challenges posed by climate change and is a living document that reflects the ongoing efforts and challenges our community faces as the impacts from climate change grow more frequent, severe, and urgent.

Our city cannot solve the climate crisis alone. This CAAP documents how Half Moon Bay plans to collaborate with our partners in county, state, and federal governments, along with community organizations and local businesses. In order to create new programs, services, and policies that will support our community in taking actions that reduce greenhouse gas (GHG) emissions.

Building on a Foundation

Over the past five years, Half Moon Bay has established itself as a leader in environmental sustainability.

In 2018, the City completed construction of the new Half Moon Bay Library, a LEED Platinum^a and Zero Energy (ZE) Certified^b building, the first of its kind in San Mateo County. The library has become a beloved jewel in the community and won an AIA Green Building Award. Its photovoltaic system provides electricity for cooling, hydronic radiant floor heating, and electric vehicle charging stations. The library also includes regenerative features such as drought-tolerant plantings, bio-swales, and permeable pavers.

In 2019, The City Council declared a climate emergency to request regional collaboration for a mobilization effort to restore a safe climate. To act on this, the City Council established Environmental Sustainability as one of the five City Council priorities, which led to the creation of a new Sustainability Division within Public Works. Additionally, the City Council approved its first Sustainability Implementation Plan outlining how the City's sustainability staff would prioritize projects within each fiscal year while the staff drafted this CAAP. The Sustainability Implementation Plan was readopted in 2020 to establish priorities through 2024. Environmental Sustainability has been reaffirmed as one of the Five City Council priorities each year during the City Council's priority setting workshops.

Building on this work, Half Moon Bay was one of the first cities to adopt and expand upon the County's model ordinance aimed at removing single use plastics and bioplastics when the City adopted the Disposable Foodware Ordinance in November 2020. The Ordinance required that all food service businesses prioritize reusables wherever practicable, and any disposable items distributed must be fiber-based and compostable. Half Moon Bay continued to be a leader in plastic pollution reduction legislation by being the second City in the County^c to include a requirement for restaurants to provide reusables for on-premises dining when the Ordinance was readopted in 2022.

Finally, in February 2022, the City paved the way by adopting a Building Electrification Ordinance that requires new construction to be all-electric. It became the first City in the nation to codify a requirement to cap and/or

^a Through US Green Building Council

^b Through International Living Future Institute (ILFI)

^c Following Pacifica

decommission any natural gas or propane connections to buildings no later than January 1, 2045. Simultaneously, the City began work to electrify all its municipal buildings by 2025, including receiving funding from Pacific Gas and Electric (PG&E) to replace an existing gas water heater with an electric heat pump water heater at the City's corporation yard.

Our work is just getting started. With the development of this CAAP, the City aims to continue its leadership, in partnership with the community and local community-based organizations (CBOs), to significantly reduce GHG emissions and adapt to the climate impacts threatening our community.

Vision for a Better Future

If the year was currently 2045, here's what we'd like to say: We have reduced our carbon emissions 85% below 2005 levels. All of our energy comes from renewable sources and is reliable. Mobility options, including shared and active transportation are zero carbon. Traffic congestion and air pollution are significantly reduced. Nearly all of our waste is reused, repurposed, or recycled. All community members have reliable access to affordable, clean water.

We have created a culture of awareness and action. We utilize smart technology and principles to advance efficiency in our energy, water, waste, and transportation systems and infrastructure.

Environmental, economic, and social needs are considered and are in balance. Our prosperous economy and quality of life have benefited from this transformation. We are now connected, equitable, and resilient.

Benefits of Climate Action and Adaptation

Beyond the direct benefit of a more stable climate, many climate actions generate additional benefits, such as the ones listed below.

Public Health

Actions to mitigate climate change can improve air quality, physical and mental health, and access to healthy food.

Research suggests that living within 50 to 200 meters of major roadways can trigger asthma symptoms among adults and children and contribute to the development of asthma in children.¹ Consequently, actions aimed at cutting gasoline consumption, reducing traffic congestion, taking vehicles off the road, and transitioning to an all-electric City vehicle fleet can reduce the risk of cardiovascular disease, chronic and acute respiratory illnesses, cancer, and preterm births for those located near busy roads.

Actions that encourage active modes of transportation can reduce obesity and the risk of non-communicable diseases, improve mental health, and diminish the cost of public health services. Green infrastructure projects have been shown to increase recreational opportunities and physical fitness exercises such as dog walking or jogging.²

Denser, transit-oriented neighborhoods increase local access to essential services and nutritious food sources. Increased intake of more climate-friendly foods, such as whole grains and vegetables, can reduce the risk of chronic diseases. Adaptation actions that mitigate urban heat island effects, such as planting shade trees, lessen potential health risks to sensitive populations.

Health benefits from climate action bring tangible healthcare savings as well. The cost of reducing CO2 emissions is less than the medical costs of treating the health effects of climate change.³

Enhanced Resilience

Actions that address climate change and planning for its impacts can also bolster resilience to other hazards. Climate actions also can enhance community cohesion – the networks of formal and informal relationships among neighbors that foster a mutually supporting community.

- One study showed a direct link between increased vegetation and the use of outdoor spaces for social activity.⁴
- Another study found that even small amounts of greenery increased the safety of urban areas.⁵
- A survey of residents in many different types of neighborhoods found that the more that neighborhoods were walkable and neighbors knew each other, the more likely neighborhood residents were to participate politically, trust others, and be socially engaged.⁶

Reduced Traffic Congestion

Climate actions can reduce traffic congestion. Cities such as New York, Stockholm, and London have implemented congestion pricing—charging tolls to travel in designated urban areas during peak travel times to reduce traffic volume.

Locally, the San Mateo Transportation Authority provided funding for the City of Half Moon Bay and the County of San Mateo to collaborate on a Transportation Demand Management (TDM) Plan for the Coastsides. The TDM plan will include actionable TDM strategies tailored to the Coastsides and promote cohesiveness between existing and planned transportation improvements and regional and local growth patterns. The plan will also aim to increase transportation equity, specifically focusing on the Coastsides's vulnerable residents, workers, and visitors.

Equity and Inclusion

Climate action can foster a more equitable and inclusive community.

City-driven climate action approaches have the potential to increase equity and inclusion in both the planning process as well as in long-term outcomes. To realize this promise, planners must begin by considering how to integrate equity and inclusion from the beginning of determining the CAAP planning process. This includes partnering with socially vulnerable communities.

Recognizing the importance of public participation and equity in the City's planning processes, the City received grant funding from the County of San Mateo Office of Sustainability (OOS) to begin the planning process by conducting robust public outreach in collaboration with three community-based organizations (CBOs), Ayudando Latinos a Soñar (ALAS), Senior Coastsiders, and Youth Leadership Institute (YLI).

Economic Stability and Growth

Climate action can boost the local economy through local projects, programs, and jobs.

Investments in the construction, manufacturing, clean technology, green infrastructure, and civil engineering sectors not only provide businesses with growth opportunities. They also create skilled, well-paying “green” jobs for the community. For example, many jobs in the renewable energy and energy efficiency sector are in installation, maintenance, and construction—making them inherently local and influential to the local economy. Cities can partner with workforce development organizations, business incubators, B-corporations, and green businesses to build a diverse workforce pipeline for these fields.

Studies have shown that energy efficiency investments create more jobs than those in fossil fuel industries—the estimate is approximately eight jobs per \$1 million invested, compared to approximately three jobs per \$1 million invested in fossil fuel industries.⁷ Investments in climate action and adaptation can also save Half Moon Bay money. A study by the University of California Transportation Center estimated that maintenance of electric vehicles (EVs) would cost only 50 percent to 75 percent of the average maintenance cost of a conventional vehicle.⁸

The sectors most likely to benefit from climate actions and policies are those related to household spending, such as housing, wholesale, and retail. Manufacturers of energy efficiency equipment and appliances and renewable energy generation equipment also benefit.⁹

Carbon Sequestration

Many actions that address climate vulnerability and risk also reverse emissions of GHGs into the atmosphere.

Shade trees absorb or sequester carbon dioxide from the atmosphere. Studies show that a young tree sapling can sequester anywhere from 1.0 to 1.3 pounds of carbon each year, while a 50-year-old tree can sequester over 100 pounds annually.¹⁰ Restoration of wetlands can both sequester carbon and be implemented in a way that may protect shoreline communities and habitats from sea-level rise and storm surges. Healthy soils on farmland also play an essential role in absorbing carbon.

Actions to sequester carbon in trees, soils, and vegetation can minimize stormwater runoff and increase the biodiversity of plants and animals. Biodiversity is critical to the health of the City’s parks and other open spaces. Natural area conservation protects natural resources and environmental features that sequester carbon, reduce stormwater runoff, promote infiltration, prevent soil erosion, and increase ecosystem biodiversity.

Municipalities with urban forests should consider end-of-life practices for trees to ensure the carbon embedded in the tree is maintained after a tree is cut down. Some options include: using the tree for lumber for local construction, upcycling a dead tree into park benches or furniture, or converting it into biochar.

CAAP Overview

Highlights of this CAAP

Since local governments began adopting climate action plans a decade ago, there has been a lot of progress related to climate protection. This CAAP builds on those efforts and includes the following innovative elements:

- Incorporates **new global, state, and local policies** and climate targets, including **carbon neutrality**.
- Documents **climate change impacts here in San Mateo County** and previews what we need to plan for.

- Identifies our **community partners** and how we plan to work together to achieve our goals.
- Provides more ways for **individuals, community groups, and businesses** to get involved.
- Focuses on equity, or how to **ensure everyone benefits, especially the most vulnerable community members**.

The Role of Equity

We cannot address climate change without also addressing equity.

Commonly, climate change disproportionately threatens those who are the least responsible for generating pollution, the most vulnerable to its impacts, and the least able to adapt. This is true globally, and it is also true in Half Moon Bay. Many climate change impacts, such as health impacts, will disproportionately affect socially vulnerable populations. (See sidebar for the definition of “social vulnerability.”) That’s why the Half Moon Bay City Council emphasized the need to take health, socio-economic, and racial equity into account in policymaking and climate solutions at all levels in their 2019 climate emergency declaration.¹¹

According to Local Governments for Sustainability (ICLEI), an international organization of local and regional governments, climate equity ensures that all people have the opportunity to benefit equally from climate solutions, while not taking on an unequal burden of climate impacts.¹² Since greenhouse gas contribution typically increases with income¹³ – this CAAP asks those more responsible for contributing GHG emissions to do more to reduce those emissions. Simultaneously, the CAAP outlines ways to assist low-income community members in accessing carbon-free energy and technologies. When all community members have the same ability to plan for and shape their futures, the result is a healthier and more resilient community.

However, achieving this vision requires hard work and intention. Half Moon Bay recognizes the importance of proactively including socially vulnerable groups and those who have traditionally been underrepresented in planning processes to participate in the development of this CAAP. During this process, Half Moon Bay engaged community partners (ALAS, Senior Coastsiders, YLI, and others) to increase community awareness of topics related to Climate Action and Adaptation Planning as well as climate change more broadly, environmental hazards, and disaster preparedness. The project also built community government relationships and increased community participation and understanding of government processes.

By partnering with these community organizations, the City was able to increase involvement and input from typically underrepresented populations in the CAAP planning process. The project:

1. Increased capacity of community leaders and community members to engage in climate planning and climate issues;
2. Built relationships between the City and socially vulnerable constituencies;
3. Increased community-government collaboration and inclusive planning practices;
4. Gathered community perspective about current and historical climate conditions and hazards;
5. Developed a baseline of social and infrastructure challenges that will worsen as climate change progresses;
6. Engaged over 735 participants;
7. Developed a set of community priorities and concerns to guide the planning process;

8. Developed a set of Climate Action and Adaptation Planning engagement resources, in English and Spanish;
9. Developed outreach, education, and engagement approaches for youth, older adults, and the Latino community that can be adapted for other populations.

The city benefited from community leadership, knowledge, and approaches throughout the process. Through the investment in building relationships and supporting tailored engagement, the City gained able partners who can complement planning efforts and contribute to developing inclusive solutions on an ongoing basis.

As Half Moon Bay implements the programs and policies that result from this CAAP, we will continue to seek support and feedback from the diverse group of community stakeholders. Moving forward, Half Moon Bay will continue to evaluate programs and policies using key performance metrics that encourage equitable engagement and impact.

How the CAAP Came Together

This phase one of our Climate Action and Adaptation Plan (CAAP) was developed in partnership with the City/County Association of Governments of San Mateo County (C/CAG) and the County of San Mateo Office of Sustainability through the San Mateo County Energy Watch program and its Regionally Integrated Climate Action Planning Suite (RICAPS) initiative. RICAPS is co-funded by C/CAG and PG&E.

RICAPS assists member jurisdictions, and other interested local governments in developing climate action plans that are consistent with California Environmental Quality Act (CEQA) guidelines. This includes the CEQA Guidelines Amendments effective December 28, 2018, and the Bay Area Air Quality Management District (BAAQMD)'s CEQA Air Quality Guidelines (updated May 2017). RICAPS tools include a Menu of Measures, forecasting tool, climate action plan template, and technical assistance from DNV GL and Rincon, environmental consultants. By combining resources, RICAPS promotes high-quality climate action plans that can be used to meet regulatory requirements and support planning efforts to reduce GHG emissions. (More information about these partners is found in [Appendix E](#).)

The template and Half Moon Bay's climate strategy are based on the ICLEI — Local Governments for Sustainability (ICLEI) 5-Milestone process.¹⁴ To ensure equity when developing the CAAP, Half Moon Bay used the Equitable, Community-Driven Climate Preparedness Planning framework from the Urban Sustainability Directors Network and resources in [Appendix D](#): "Best Practices for Community Collaboration and Sustainability Planning" as a guide.¹⁵

Document Roadmap

IMPACTS OF CLIMATE CHANGE ON HALF MOON BAY

See how climate change is already affecting Half Moon Bay and the rest of San Mateo County and what we anticipate in the future.

GOALS & TARGETS

Learn how Half Moon Bay's GHG emissions are calculated and about the goals we have set for reducing those emissions.

STRATEGIES & ACTIONS

Read about Half Moon Bay's four focus areas. Within each one, learn about progress to date, overarching strategies, and actions that will move the strategies forward.

IMPLEMENTATION

See how we plan to implement the CAAP, including the timeframe of priority actions, who we plan to collaborate with, who is responsible for accomplishing actions, and how we plan to track progress.

Strategies and Focus

Transportation

This includes public transit, commuting, and how we use land. Opportunities to reduce GHG emissions include reducing the number of miles we drive alone in cars, shifting away from fossil fuel vehicles, and increasing housing near transit.

Energy & Water

This includes energy that is used in community and public facilities, as well as in water treatment and transportation. This strategy addresses opportunities to reduce energy use, shift from natural gas to electricity, and reduce water consumption.

Waste

This includes emissions from solid waste generation and disposal. The primary goal is to reduce emissions by encouraging the community to reduce waste. The secondary goal is to divert it from the landfill through recycling and composting.

Food & Consumption

This includes the goods and services we buy from outside San Mateo County. This strategy explores how to reduce food waste, shop locally, and curb unnecessary air travel.

Impacts of Climate Change on Half Moon Bay

Climate Science 101

Climate change presents one of the most significant challenges of our time. As levels of greenhouse gas (GHG) emissions increase in the atmosphere, the Earth's climate system is being destabilized. GHG emissions are invisible and include: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and three man-made gasses: hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

As more greenhouse gasses are trapped inside the Earth's atmosphere, more of the sun's energy is trapped as heat, which means temperatures keep getting hotter. The world has already become nearly 1°F warmer since 1880, and we're seeing extreme consequences, including more intense storms, greater wildfire risk, and rising sea levels.

Although we're already seeing the impacts of climate change, there's a range of how relatively mild or devastating the future impacts might be, depending on how aggressively we take action to address it (see Impacts of Climate Change, Future Projections section). Scientists have laid out four pathways, or scenarios, based on future GHG emissions levels. The paths range from the very optimistic to the highly pessimistic. The strategies laid out in this CAAP are in alignment with the most optimistic pathway. For more information about the four pathways, see Appendix B.4.

What's Already Being Experienced

Climate change has already affected and will continue to affect Half Moon Bay and San Mateo County.

Climate change will have many different effects on society and the natural world. Plant and animal species are adapting to changing environments by migrating to new areas. As species move, they bring diseases with them to farms and human populations. Some species become extinct due to human-caused climate change or human activities such as habitat destruction or toxic pollution.

The region's annual maximum temperature increased by 1.7°F from 1950-2005.

Coastal fog, which is critical to the Coastside's climate and ecosystems, is less frequent than ever before. The sea level has risen over 8 inches in the last century.

The forceful 2015-2016 El Niño weather pattern, which was one of the three largest in history, resulted in unprecedented outer coast beach erosion due to winter wave energy that was more than 50% greater than a typical winter.

The 2012-2016 statewide drought led to the most drastic moisture shortages in the last 1,200 years, resulting in a 1-in-500-year low in the Sierra snowpack. This drastically reduced snowpack resulted in \$2.1 billion in economic losses, 21,000 jobs lost statewide in agricultural and recreational sectors, and continuing exhaustion of groundwater sources.

Future Projections

Even if considerable efforts to reduce greenhouse gas (GHG) emissions are conducted, Half Moon Bay will likely see substantial temperature increases by 2050. By 2100, the temperature rise will be dependent on the emissions scenario. (For more information about the four emissions scenarios, see Appendix B.4.)

Precipitation on the Coastsides will continue to vary each year. The differences between wet and dry years are projected to become more extreme and damaging in the coming decades. If no action is taken to combat climate change, the Sierra snowpack, a critical source of water for the State, will decrease by an average of 64 percent by the end of the century.

As temperature increases, it is anticipated to cause longer and more intense California droughts, posing major problems for government operations, water supplies, ecosystems, agriculture, and recreation.

Studies suggest that even with significant emissions reductions, it is inevitable that there will be at least 6 feet of sea-level rise over the next several centuries due to the delayed effects of climate change.

Impacts in San Mateo County

Following are some of the key climate impacts that San Mateo County has already seen and will likely see in the future.

Rising Temperatures

The Bay Area's average annual maximum temperature increased by 1.7°F (0.95°C) from 1950 to 2005. Even with significant efforts to mitigate climate change, the Bay Area will likely see annual mean warming of approximately 3.3°F by mid-century and as much as 4.4°F under the high-emissions scenario. By the end of the century, temperatures could rise by 4.2°F to 7.2°F.¹⁶

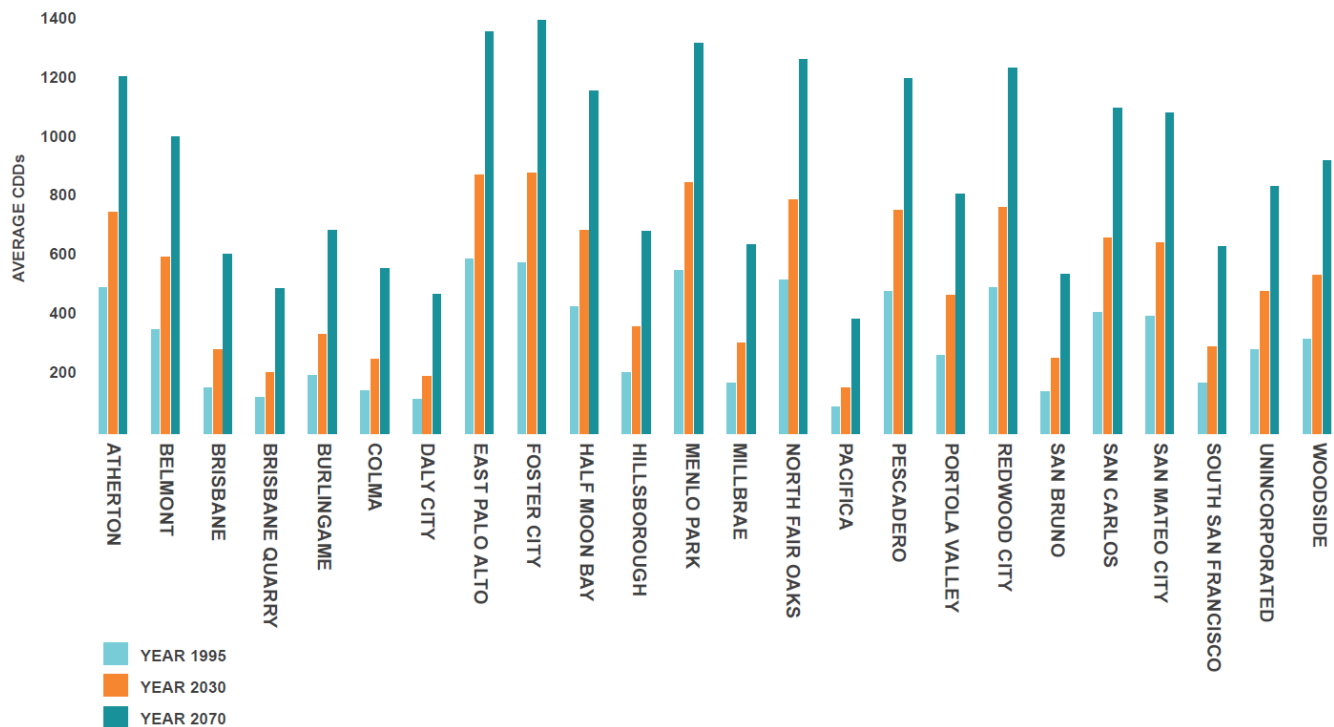
Extreme heat events occur when air temperatures reach or exceed 100°F. Across San Mateo County, air temperatures are expected to increase by an average of 5°F between 1995 and 2070 due to climate change. In the baseline year of 1995, approximately nine percent of the people in vulnerable communities in the county were at risk from the impacts of more than two high-heat days per year. By 2030, nearly three times as many people will be at risk. By 2070, four times as many will be at risk. The greatest increases in the number of high heat days from 1995 to 2070 are projected to occur in Atherton, East Palo Alto, Foster City, Menlo Park, North Fair Oaks, and Redwood City.

Only 10 percent of homes in the Bay Area currently have air conditioning.¹⁷ Warming trends across San Mateo County are expected to cause more people to install and use air conditioning, resulting in increased GHG emissions. As air conditioning adoption grows, the largest increase in summer energy demand is expected in coastal cities.

The amount and location of new air conditioning needed can be predicted through a metric called "cooling degree days" (CDD). This value quantifies how much the air temperature exceeds 65°F on a single day or period of days. As the temperature rises above 65°F outside, occupants inside get increasingly uncomfortable. They will typically turn on air conditioning if it is available, so a larger CDD indicates a higher likelihood of increased energy consumption to cool homes and businesses.

In some San Mateo County communities, CDDs are projected to double or triple between present day and 2070. It is projected that the county's southeast, central-east, and coastal areas will be impacted most dramatically, with the greatest percentage increases expected to occur in Pacifica, Daly City, and Brisbane Quarry. By 2070, the number of CDDs in Daly City will have nearly increased to the number of CDDs in North Fair Oaks in the baseline year of 1995.

Figure 1. Average Cooling Degree Days (CDD) by Jurisdiction



Sea-Level Rise

The San Francisco Bay Area is one of the nation's hotspots for sea-level rise. Based on the San Francisco tide gauge, the average sea level in the Bay Area has risen 8 inches in the past 100 years.¹⁸ Impacts of sea-level rise and coastal bluff erosion are already seen in Half Moon Bay, especially following large storms and king tides. Sea-level rise and coastal erosion will continue to affect public health facilities, and access to emergency medical services could be impaired. Flood events can lead to physical injury, illness, or disease (e.g., vector-borne diseases such as West Nile virus), and they can also cause loss of income and disruption of employment.

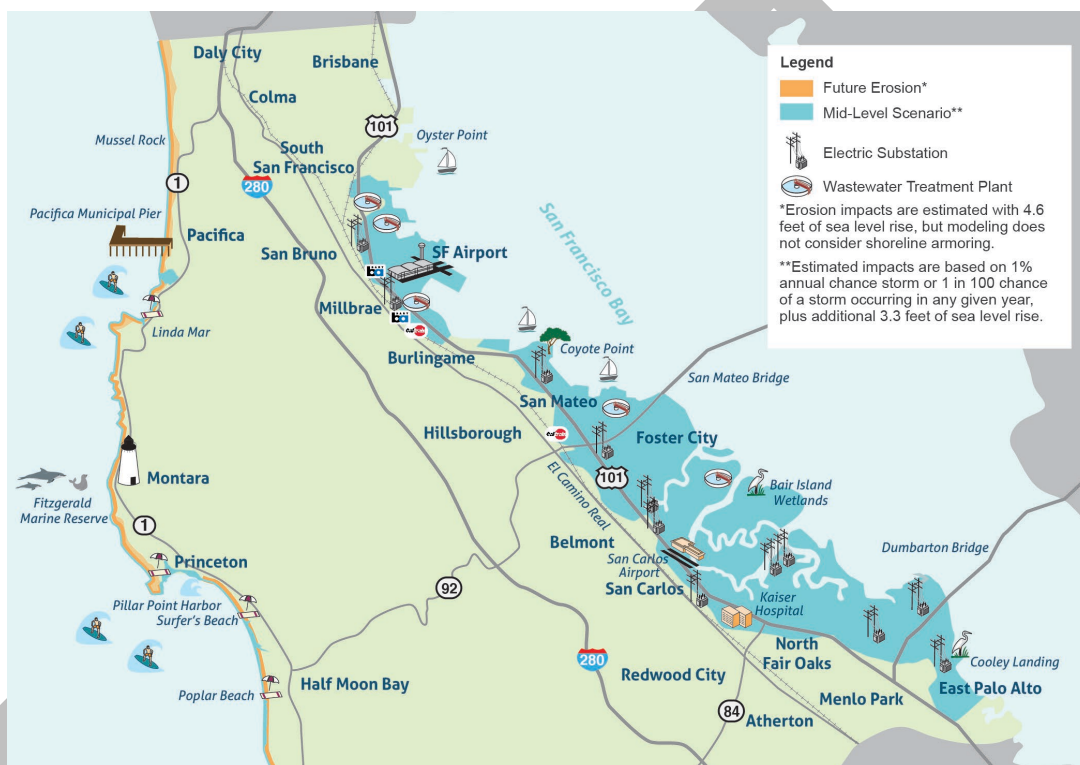
In 2018, the County of San Mateo finalized a [*Sea-Level Rise Vulnerability Assessment*](#)¹⁹ for the County in coordination with cities, agencies, businesses, community groups, and others. Sea-level rise impacts include flooding, increased wave action, rising groundwater tables and saltwater intrusion, increased erosion (i.e., landward shoreline retreat), and changes in sediment supply.

The economic value of San Mateo County property at risk from sea-level rise exceeds that of any other county in the Bay Area. The assessed value of parcels in the study area exposed to near-term (present-day) flooding exceeds \$1 billion, and the assessed value of parcels exposed to erosion and flooding in the long term (50 to 100

years) totals roughly \$39.1 billion. In addition, the built and natural infrastructure meant to protect people and properties from flooding could be lost or severely affected, including more than 7,000 acres of wetlands (over 80 percent of all wetlands assessed) and as much as 24 miles of floodwalls and levees.

When population projections are considered, San Mateo County is one of six counties with more than 100,000 people in the nation (and the only one on the West Coast) that will be affected by three feet of sea-level rise.

Figure 2: Projected Sea-Level Rise (3.3 feet and 1 percent Annual Chance Storm) and Erosion (4.5 feet and 1 percent Annual Chance Storm) - San Mateo County Shoreline²⁰



The model projects that a flood with a one percent chance of occurring will affect a slightly greater area in 2070 than in 2030. The impacts of flooding will worsen over time and substantially impact public transit infrastructure and the communities that rely on it.

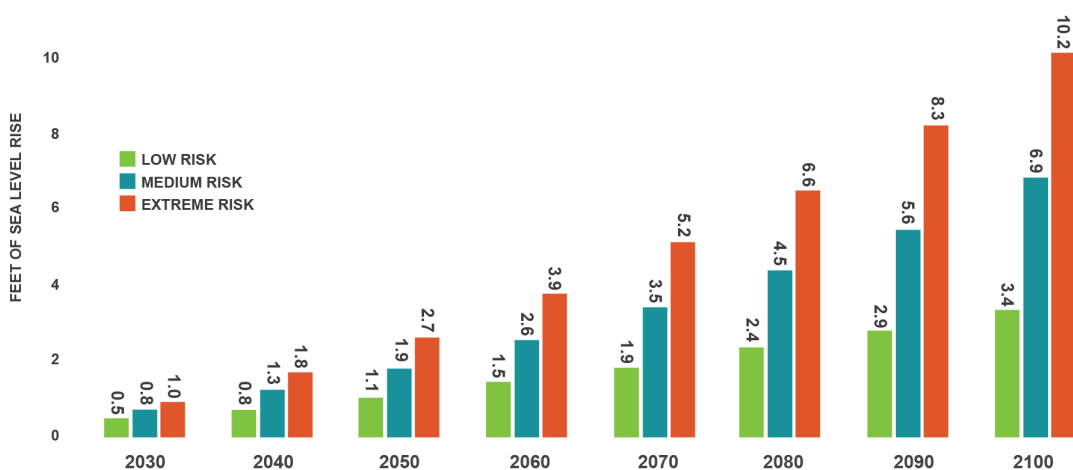
In addition to directly affecting properties, sea-level rise can also substantially impact mobility due to delays in travel times and risks to transportation infrastructure such as electrical transfer stations and EV charging areas. El Niño events have the potential to exacerbate the effects of sea-level rise by increasing water levels by as much as one foot above normal, and on average create 30 percent larger winter wave energy.

In 2018 the [California Ocean Protection Council \(OPC\)](#) released updated *Sea-Level Rise Guidance*, which uses “probabilistic-based”^d projections and lays out an approach for developing adaptation strategies. The OPC

^dProbabilistic-based projections “associate a likelihood of occurrence (or probability) with sea-level rise heights and rates and are directly tied to a range of emissions scenarios.”

recommends using the projections included below in Figure 3. Low-risk projections should be used for short-lived infrastructure that is readily adaptable, such as trails. Medium-risk projections should be used for less adaptive, more vulnerable projects such as housing developments. Extreme risk projections should be used for larger and more complex infrastructure projects such as roads, wastewater treatment plants, and hazardous waste sites.

Figure 3: San Francisco 2018 Probabilistic Sea-Level Rise Projections²¹



In 2019 the San Mateo County Board of Supervisors adopted a *Sea-Level Rise Policy for County-Owned Assets*, requiring all new and existing facilities to consider and plan for sea-level rise impacts. Sea-level rise impacts include higher permanent and flood water levels, erosion, and rising groundwater levels.

Increased Fire Risk

Most Californians are not aware of recent statistics that suggest California is home to the worst air quality in the nation, with over 90 percent of Californians breathing unhealthy air. According to the California air resources board, unhealthy levels of ozone (smog) and particulate matter annually contribute to 19,000 premature deaths and 9,400 hospital admissions for respiratory and cardiovascular disease. Wildfires exacerbate air quality problems, causing temporary large increases in outdoor airborne particles and substantial increases in gaseous air pollutants such as carbon monoxide.

Socially vulnerable residents may be more affected by wildfires if they have existing health issues, less access to social services and the internet, and fewer economic resources to respond.

Fire risk is a reflection of the accumulation of wood or fuels in a forest combined with changes in the length and frequency of the fire season due to warmer climates, changing precipitation, lower humidity, higher winds, and soil drying from droughts. Fire suppression in the area has increased as fuel reserves have built up in unmanaged forests and woodlands. In 2020, this threat hit close to home when the CZU Lightning Complex Fire burned over 86,000 acres across San Mateo and Santa Cruz counties, including the Coastsides in the communities of Pescadero. Residents of threatened areas were evacuated to Half Moon Bay High School to receive services, and beaches in the City were closed to ensure roads were clear for evacuees and emergency personnel.

Climate change is expected to increase the frequency, intensity, and duration of wildfire events impacting San Mateo County. Wildfires can claim lives, destroy property, force mass evacuations, and expose large populations to unhealthy levels of smoke for days to weeks at a time. Between 1995 and 2030, the model projects an

increased wildfire risk in San Mateo County from nine to 13.4 percent. In addition, by 2070, the projected burn area nearly doubles to 25 percent. Simulations of large wildfires using statistical models developed for the Fourth California State Climate Assessment²² show that the probability of a large fire—which burns more than 1,000 acres – in San Mateo County increases rapidly with a warming climate, with an eight-fold increase in the probability of a large wildfire by 2070. By 2070, the chance that large wildfires or those over 1,000 acres will occur increases to 4 percent per year.

Increased Frequency and Intensity of Storms

The Bay Area's largest winter storms will likely become more intense and potentially more damaging in the coming decades. Flooding is a substantial threat on the Coastsides and is expected to increase as a result of climate change. According to flood modeling that integrates the impacts of sea-level rise and inland flooding throughout the County, a flood with a one percent chance of occurring in 2030 would increase to a two percent chance of occurring under 2070 climate conditions. The higher probability of extreme flooding means that creeks and municipal storm sewers are more likely to be overwhelmed, potentially resulting in damage to infrastructure and even loss of life. The largest individual storms are becoming more intense with climate change. In addition, more frequent "whiplash" events that swing from extremely dry to extremely wet conditions in California could become the new normal.

Decreased Availability and Quality of Water

The 2012-2016 California drought led to the most severe moisture deficits in the last 1,200 years and a 1-in-500-year low in Sierra snowpack. The record low snowpack resulted in \$2.1 billion in economic losses and exacerbated an ongoing trend of ground water overdraft.²³ While the total amount of precipitation in the Bay Area is not projected to change significantly (models project an additional 2 to 5 inches), the amount and timing of water available as drinking water may change. Under a high emissions scenario, average Sierra Nevada snowpack is projected to decline by nearly 20 percent in the next two to three decades, 30 percent to 60 percent in mid-century, and over 80 percent in the late century.²⁴ Rising bay water and groundwater levels will also increase salinity intrusion and subsurface flooding inland. Climate change will require improved storm water management in the Bay Area as extreme storm events increase in size and frequency.

Decreased Fog

Coastal fog, critical to the Half Moon Bay and the Bay Area's climate, has decreased as much as 33 percent in some areas over the past 60 years.²⁵ Across the state of California, fog is expected to decline by an additional 12-20 percent by 2070.²⁶ In addition to being affected by changes in local and global atmospheric patterns due to climate change, fog is reduced in urban areas due to urban land use and pollution. Warmer nighttime temperatures, as a result of impervious surfaces and the urban heat island effect, can reduce fog, highlighting the importance of land use policies and urban tree canopies in maintaining fog cover and thus lowering temperatures. Our plants and wildlife on the Coastsides depend on fog, and redwood forests obtain as much as a third of their water from fog.

Increased Impact on Energy Systems

The Bay Area electrical grid is vulnerable to power outages during wind and wildfire events such as Public Safety Power Shutoffs (PSPS) – planned power outages to prevent occurrences of electrical equipment starting wildfires.²⁷ In 2019, Half Moon Bay saw multiple PSPS events spanning one to three days at a time, leaving residents and businesses without power, internet, or reliable phone service.

Many of our natural gas pipelines are located along waterways and will be impacted by flooding from sea-level rise and extreme storm events. California's transportation fuel sector, which distributes oil from refineries to end users, will be increasingly exposed to extreme weather events such as flooding and wildfire.

Financial Impact of Climate Change

As climate-related natural disasters become more frequent and intense, disaster response and relief costs are anticipated to increase. With flooding, storms, droughts, wildfires, and other climate-related natural disasters becoming more common, flood insurance and flood prevention costs will grow.²⁸

The San Mateo County Health System, in accordance with the Centers for Disease Control, serves several functions to reduce health risks related to climate change. These include informing cities about the risk to public health from climate change, creating tools that support decision-making and capacity building related to mitigating adverse health outcomes from climate change, and serving as a credible leader in planning for the public health impacts of climate change. Half Moon Bay intends to work with the San Mateo County Health System to mitigate public health dangers and maintain or improve long-term health by encouraging residents and workers to be part of the solution.

Research shows that individuals who live in mixed-use and walkable communities have a 35 percent lower risk of obesity. Another study estimates that the walking associated with transit use saves an individual \$5,500 over the course of their life by reducing obesity-related medical costs. Half Moon Bay and the San Mateo County Health System will support programs that promote more walkable and bikeable cities, which not only promote healthier lifestyles, but also decrease reliance on vehicles that contribute to climate change.

Climate change is anticipated to impact public buildings, storm water infrastructure, transportation infrastructure, community services, and land-use planning and development. Climate damage to homes and businesses could negatively impact the economy and reduce Half Moon Bay's income from property and sales taxes, not to mention damage the quality of life for all community members. If Half Moon Bay allocates resources and invests in climate-protecting strategies now, it will be insurance against some of the most costly effects of a hotter planet in the future.

Goals and Targets

The Goal

To put California on the path to a low-carbon future, the California Air Resources Board (CARB) approved the *Climate Change Scoping Plan* in 2008. The plan directed the State to reach 1990 emissions levels by 2020. Municipal governments were asked to reduce their emissions by at least 15 percent by 2020 compared with current levels (2008 levels or earlier). This prompted many cities to adopt community-wide emissions reduction targets of at least 15 percent below 2005 levels.

In 2015, Governor Brown issued Executive Order B-30-15 to set the 2030 emissions target (40 percent less than 1990 levels by 2030). It was codified by California Senate Bill 32 (SB 32). CARB followed up with an updated *California's 2017 Climate Change Scoping Plan*.²⁹ In response, Half Moon Bay is joining other municipalities in adopting community-wide emissions reduction targets of at least 40 percent below 1990 levels by 2030.

In September 2018, Governor Brown issued California Executive Order B-55-18, setting the goal of achieving carbon neutrality as soon as possible (by 2045 at the latest), and maintaining net negative net emissions from that point forward. The following year, the San Mateo County Board of Supervisors committed to achieving carbon neutrality well before 2045.³⁰

In 2022 California passed the California Climate Crisis Act, also known as AB 1279. This bill prompts California to achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045, and achieve and maintain net negative greenhouse gas emissions thereafter, and to ensure that by 2045, statewide anthropogenic greenhouse gas emissions are reduced to at least 85% below the 1990 levels.

With this CAAP, Half Moon Bay commits to working with the County of San Mateo and other local governments in San Mateo County to reach the goal of carbon neutrality well before 2045.

Carbon Neutrality

The basic definition of carbon neutrality is taking action to reduce greenhouse gas (GHG) emissions to zero – and then “offsetting” an equivalent amount of any remaining emissions. This carbon neutrality target is based on the Paris Agreement, which calls for preventing the average global temperature from rising more than 2°C (3.6°F) above pre-industrial levels and pursuing efforts to keep warming below 1.5°C (2.7°F). According to the Intergovernmental Panel on Climate Change (IPCC), holding temperature rise below 1.5°C will mean global emissions of CO₂ will need to decline 45 percent from 2010 levels by 2030 and reach net zero by 2050. U.S. cities that have adopted aggressive targets of reducing emissions by 80 to 100 percent by 2050 or sooner include Boulder, Minneapolis, New York City, Portland, San Francisco, and Washington D.C. Palo Alto's goal is an 80 percent reduction by 2030, and Menlo Park has committed to reaching carbon neutrality by 2030.

Governor Brown's 2018 executive order called on the California Air Resources Board (CARB) to develop an implementation framework and accounting to track progress over time.³¹ In particular, this framework needs to address how to account for the embodied emissions in the food, goods, and services we purchase that aren't covered by generation-based GHG inventories. (See Greenhouse Gas (GHG) Emissions Inventories for more information.) While Half Moon Bay will await State guidance on how to account for these emissions reductions, we will work to reduce consumption-based emissions in the meantime. (See Strategies & Actions, Food and Consumption section for specific strategies³².)

Greenhouse Gas Emissions Inventory

Community Greenhouse Gas (GHG) inventories measure the GHG emissions generated by residents and businesses operating in the community, as well as municipal operations. Inventories are developed based on established protocols and best practices. They include identifying specific activities that generate GHG emissions and collecting summary data on those activities for a calendar year. Then, the City uses science-based GHG emissions factors to convert the collected data into an accounting of GHG emissions produced through all the identified activities. Inventories measure GHG emissions in units of metric tons of carbon dioxide equivalent, or MT CO_{2e}.

GHG Inventory Protocols

There are various inventory protocols to guide communities in accurately and consistently measuring GHG emissions.^e Consistent with the California Office of Planning and Research's (OPR) guidance, Half Moon Bay's inventory relies on the Local Governments for Sustainability U.S. Community Protocol for Accounting and Reporting Greenhouse Gas Emissions (Version 1.2), and are consistent with the methodologies used by other cities in San Mateo County and throughout the State of California.³³

This inventory is a **generation-based GHG inventory**, which includes emissions generated from GHG emitting sources within the City including transportation (on-road and off-road vehicles), building energy (electricity consumption, natural gas consumption, and stationary combustion of multiple fuels), solid waste (methane emitted from organic waste decomposition in landfills), water, and wastewater. Not all activities that generate GHGs within a City are included in a GHG emissions inventory. Activities that city policies cannot influence are generally excluded from the inventory. For example, emissions from cars passing through a city, whose origins and destinations are both outside of city limits, are excluded because a local government cannot influence this emissions source.

Consumption-based GHG inventory – This measurement method offers an alternative approach for quantifying emissions within a community, quantifying consumption of goods and services (including food, clothing, electronic equipment, etc.) by residents of a city, with emissions reported by consumption category. Though consumption-based GHG inventories are sometimes considered more holistic (for example, the 2015 San Mateo County consumption-based inventory resulted in emissions that were 35% higher than the generation-based inventory), this CAAP does not use this methodology because of a lack of data availability and hurdles in conducting life-cycle calculations based on the limited data (for example, a breakdown in types of food consumed/ household). Even so, Half Moon Bay recognizes the importance of including measures and actions that take on consumption-based emissions through actions like sustainable procurement and green business development. Explore consumption-based greenhouse gas inventories and access the carbon footprint calculator at: <https://coolclimate.berkeley.edu/inventory>.

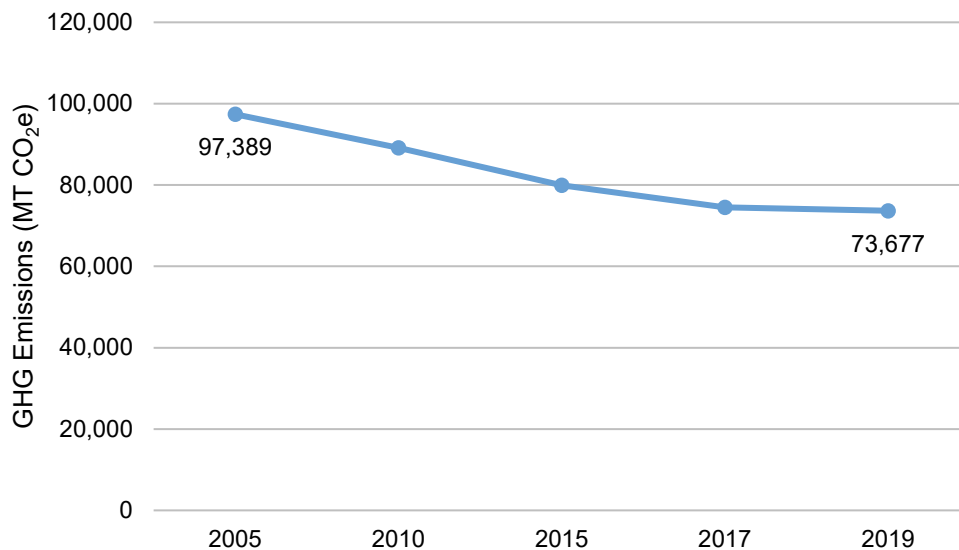
^e Two common types of GHG emission inventories are a consumption-based inventory and a generation-based inventory.

Greenhouse Gas Emissions in Half Moon Bay

In 2019, Half Moon Bay's GHG emissions totaled 73,677 MT CO₂e from the transportation, building energy, solid waste, water, and wastewater sectors. The year 2019 was selected to represent current emissions for this CAAP because it was the most recent year with complete and accurate data available. As shown in Figure 4, these emissions represent a 24 percent decrease in emissions compared to 2005 emissions levels (97,389 MT CO₂e). This reduction exceeds the City's goal of reducing GHG emissions to 1990 levels by 2020 (15 percent below 2005 levels).^f

Half Moon Bay's 2019 GHG inventory total of 73,677 MT CO₂e is equivalent to the emissions generated from driving **188,874,586 miles** in an average gasoline-powered vehicle or driving around Earth **7,585 times**.^g

Figure 4: Half Moon Bay Annual GHG Emissions Over Time: 2005-2019



As shown below in Figure 5 and Table 1, GHG emissions from on-road transportation made up the largest portion of the community's GHG emissions, accounting for about 58 percent of total GHG emissions in the City. Building natural gas consumption (including stationary combustion of multiple fuels) made up the second highest portion of the community's GHG emissions, accounting for about 25 percent of total GHG emission in the City. Solid waste contributed about nine percent of the total GHG emission in the City, followed by building electricity consumption which contributed about four percent of GHG emissions in the City. The remaining community GHG emissions

^f The City of Half Moon Bay previously conducted a comprehensive 2005 GHG emissions inventory which can be used as a baseline for GHG emissions reduction target setting. The Governor's Office of Planning and Research's General Plan Guidelines recommends using a 2005 GHG emissions inventory for comparison to state GHG emissions reduction goals, by estimating that 2005 GHG emissions levels were 15% higher than 1990 levels. The GHG emissions reduction targets and forecast provided below uses this as a basis for GHG emissions reduction pathways. Source: Governor's Office of Planning and Research. 2017. General Plan Guidelines. Chapter 8: Climate Change. Available: https://opr.ca.gov/docs/OPR_C8_final.pdf. Accessed June 26, 2022.

^g Conversion to miles driven calculated using the U.S. EPA Greenhouse Gas Equivalencies Calculator, retrieved from <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>. Conversion to times around the Earth calculated using distance around the Earth at the Equator (i.e., 24,901 miles) from the National Geographic Society at <https://education.nationalgeographic.org/resource/equator>.

result from off-road transportation (ex. construction vehicles and lawn and garden equipment), wastewater, and water consumption.

Data interpretation from Half Moon Bay’s GHG emitting sectors is discussed in further detail in the sections below.

Figure 5: 2019 Half Moon Bay GHG Emissions by Sector

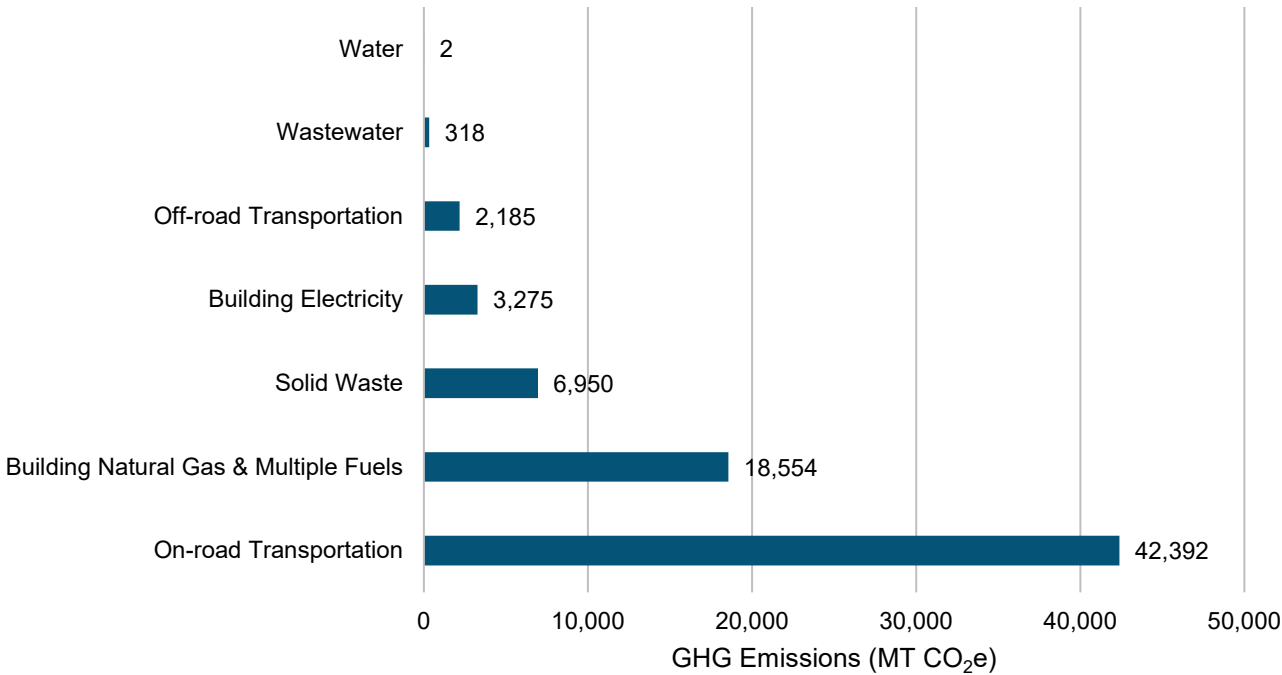


Table 1: Half Moon Bay 2019 GHG Emissions Inventory Summary by Sector

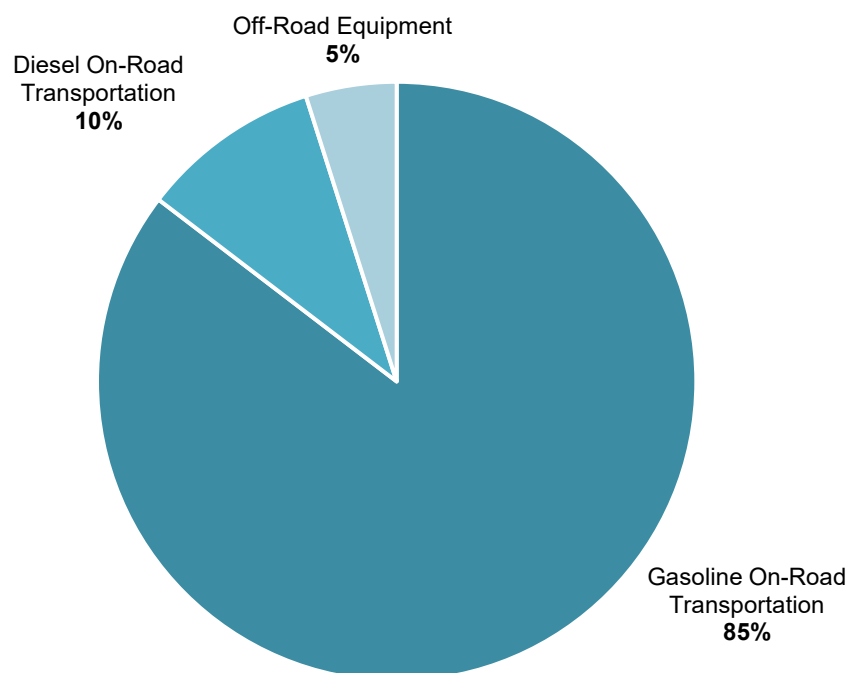
SECTOR	GHG EMISSIONS (MT CO ₂ e)	PERCENT OF TOTAL EMISSIONS (%)
Transportation		61%
On-road Transportation	42,392	58%
Off-road Equipment	2,185	3%
Building Energy		30%
Electricity		4%
Residential Electricity	1,038	1%
Commercial Electricity	437	1%
Direct Access Electricity	1,642	2%
T&D Losses	159	<1%
Natural Gas & Multiple Fuels		25%
Residential Natural Gas	10,451	14%
Commercial and District Natural Gas	3,984	5%
Methane Leakage (Natural Gas)	4,053	6%
Stationary Sources (Multiple Fuels)	67	<1%
Solid Waste		9%
Solid Waste Disposal	6,366	9%
Landfills	584	1%
Wastewater		<1%
Wastewater Treatment	318	<1%
Water		<1%
Water Use	2	<1%
TOTAL	73,677	100%

TRANSPORTATION GHG EMISSIONS

In 2019, transportation GHG emissions from gasoline and diesel consumption accounted for 61 percent of total 2019 GHG emissions in Half Moon Bay. As shown in Figure 6 below, gasoline-powered on-road vehicles traveling within the jurisdictional boundary of Half Moon Bay (most of which are passenger vehicles) accounted for 85 percent of transportation emissions; diesel-powered on-road vehicles traveling within the jurisdictional boundary of Half Moon Bay accounted for ten percent of transportation emissions; and gasoline- and diesel-powered off-road equipment (such as lawn, garden, and construction equipment) accounted for five percent of total transportation emissions.

Transportation GHG emissions for on-road transportation were calculated by multiplying the total vehicle miles traveled (VMT) by the GHGs emitted per mile by fuel type. For on-road transportation, fuel types included gasoline, diesel, and electricity (to power zero-emissions vehicles, or ZEVs). Off-road transportation emissions were calculated by multiplying fuel consumption by equipment type and the GHGs emitted by each fuel type, which included gasoline, diesel, and natural gas.

Figure 6: Transportation GHG Emissions by Fuel Type & Sector (% Sectoral Emissions)

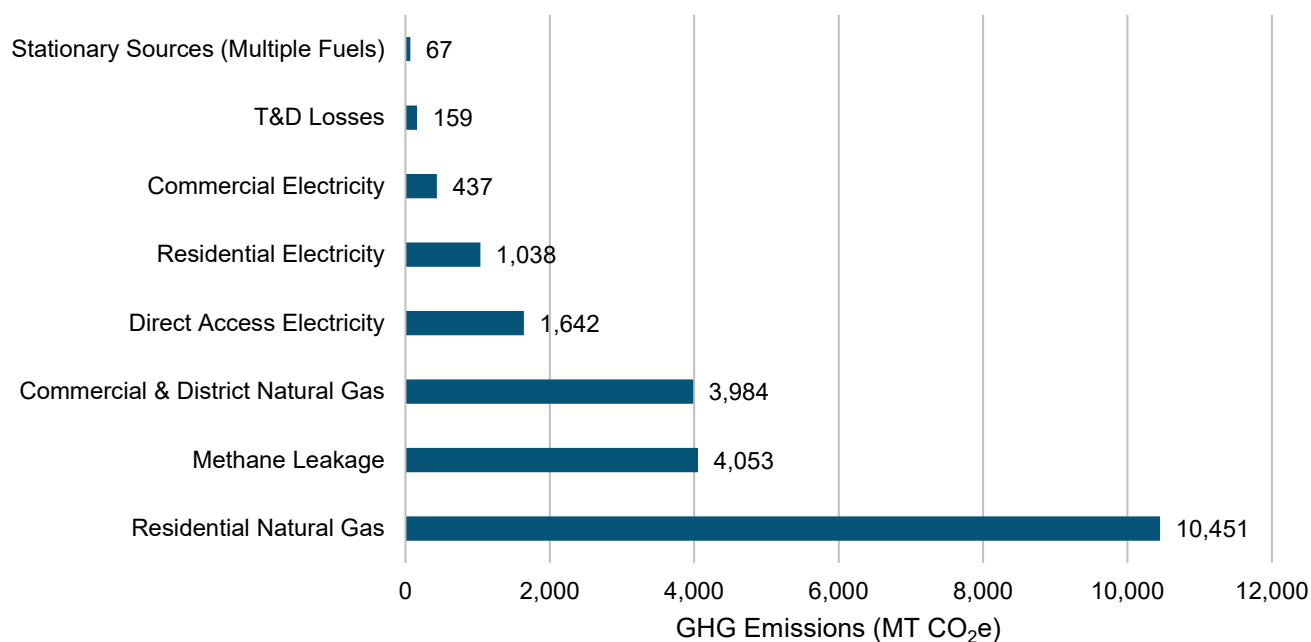


BUILDING ENERGY GHG EMISSIONS

In 2019, building energy GHG emissions accounted for 30 percent of total 2019 GHG emissions in Half Moon Bay. This sector includes GHG emissions from natural gas consumption, electricity consumption, and stationary combustion of other fuels. In 2019, the Half Moon Bay community consumed 4,632,263 therms of natural gas. This natural gas consumption accounted for 85 percent of building energy emissions and includes natural gas consumption from the residential sector (i.e., single and multifamily housing), commercial sector (i.e., businesses), municipal operations, and districts (e.g., park districts and schools) along with GHG emissions from methane leakage. Natural gas methane leaks occur during delivery to buildings and at associated end-uses in the community. The Half Moon Bay community also consumed 47,646,960 kilowatt hours (kWh) of electricity. This electricity consumption accounted for 15 percent of building energy emissions and includes electricity consumption from the residential sector, commercial sector, municipal operations, and direct access customers along with GHG emission from transmission and distribution (T&D) losses. Direct access customers are end-use customer that buy electricity on the wholesale electricity market, rather than from PG&E or Peninsula Clean Energy (PCE). T&D losses arise from electricity lost during delivery to the buildings and at associated end-uses in the community. Industrial natural gas and electricity usage was excluded from Half Moon Bay's GHG inventory because the City does not have jurisdictional control over these sources. Lastly, stationary combustion of other fuels within the community accounted for less than one percent of building energy emissions.

Over the years, electricity has accounted for a smaller percentage of Half Moon Bay's total GHG emissions compared to natural gas. Since 2016, residential and commercial electricity accounts have switched from PG&E to PCE, which has a lower emissions factor because PCE sources electricity from a larger share of renewable and carbon-free sources than PG&E. Building GHG emissions by sector and fuel type are displayed below in Figure 7.

Figure 7: Building GHG Emissions by Sector and Fuel Type (MT CO₂e)



SOLID WASTE GHG EMISSIONS

In 2019, solid waste GHG emissions accounted for nine percent of total 2019 GHG emissions in Half Moon Bay. 19,672 tons of solid waste were sent to landfills accounting for 92 percent of solid waste emissions. GHG emissions from landfills located within the community accounted for one percent of solid waste emissions.

Solid waste GHG emissions result from organic material decomposing in the anaerobic conditions present in a landfill and releasing methane—a GHG that is 28 times more potent than CO₂. Organic materials (e.g., paper, plant debris, food waste) generate methane within the anaerobic environment of a landfill, while non-organic materials (e.g., metal, glass) do not. Table 2 includes the approximate breakdown of the materials Half Moon Bay sent to landfills in 2019, based on a 2014 waste characterization study conducted by CalRecycle. Materials that do not release GHGs as they decompose are included in the “Inert, non-organic Material” category. The 2014 waste stream was used because it is the baseline for future progress tracking for organics disposal reductions under Senate Bill 1383.^h

^h Senate Bill 1383 (SB 1383) requires the California Air Resources Board (CARB) to set specific emission reduction standards for short-lived climate pollutants such as methane. SB 1383 also establishes requirements for compost procurement, food rescue, and reduction of compostable materials disposed in landfills as a means of methane and other short-lived climate pollutant reduction. Source: <https://calrecycle.ca.gov/organics/slcp/>

Table 2: Estimated Waste Composition (2014 waste composition estimate)ⁱ

WASTE TYPE	WASTE SHARE
Food	27.5%
Inert; non-organic	22.2%
Coated Paper	17.0%
Mixed Organics	6.4%
Lumber	5.5%
Textiles	4.9%
Mixed Residue	2.8%
Leaves and Grass	2.6%
Construction/Demolition	2.4%
Corrugated Boxes	2.4%
Newspaper	2.2%
Office Paper	2.0%
Branches	1.8%
Medical Waste	0.1%
Sludge/Manure	0.1%
Total	100%

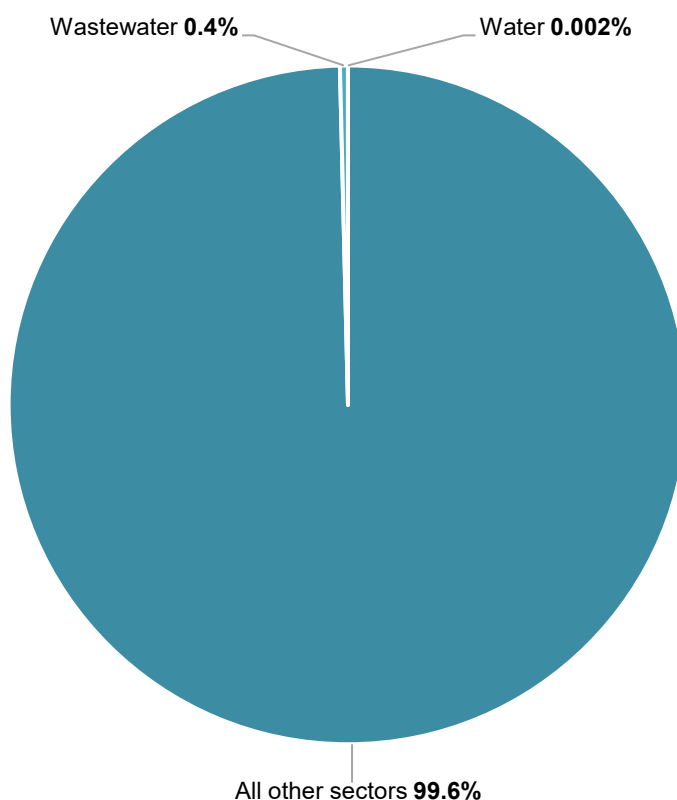
WATER AND WASTEWATER GHG EMISSIONS

Water and wastewater GHG emissions account for less than 1 percent of total emissions in Half Moon Bay, as shown in Figure 8. Water emissions are generated from the electricity required to convey and process water used by the population of Half Moon Bay. In 2019, Half Moon Bay consumed over 480 million gallons of water, with an associated 696,121 kWh of electricity used for water transportation and conveyance. Wastewater emissions are generated by the process used to treat wastewater, which generates short lived climate pollutants, including methane, some of which is captured for digester gas.

Though GHG emissions from water and wastewater make up a very small percentage of Half Moon Bay's total GHG emissions, they are connected to critical sustainability and climate change adaptation issues. As snowpack starts to dwindle, Californians have started moving towards permanent changes to conserve water as the State is projected to experience more frequent and longer periods of limited water supply. Measures and actions to reduce GHG emissions from the water sector through water conservation intersect with strategies that allow Half Moon Bay to adapt to the effects of climate change.

ⁱ 2014 baseline established using CalRecycle data: <https://www2.calrecycle.ca.gov/WasteCharacterization/>

Figure 8: Water and Wastewater Emissions (% Total Emissions)



Future Emissions: GHG Emissions Forecasts

GHG forecasts provide an estimate of Half Moon Bay's GHG emissions in the future, based primarily on projected population and job growth in the City. Forecasting helps track trends and progress for the City and allows the City to identify how much it needs to reduce emissions to meet its future GHG emissions reduction targets. GHG emissions forecasts for Half Moon Bay were developed using the 2019 inventory for 2030, 2040, and 2045.

The City developed two forecasts to contextualize how emissions will change and better understand the reduction actions that Half Moon Bay must take. The first forecast is a **business-as-usual (BAU) forecast**, and the second is an **adjusted forecast** that accounts for GHG reduction policies and programs.

DATA AND METHODS

The BAU GHG emissions projections were calculated based on guidance from the Association of Environmental Professionals 2012 whitepaper Forecasting Communitywide GHG Emissions and Setting Reduction Targets.³⁴

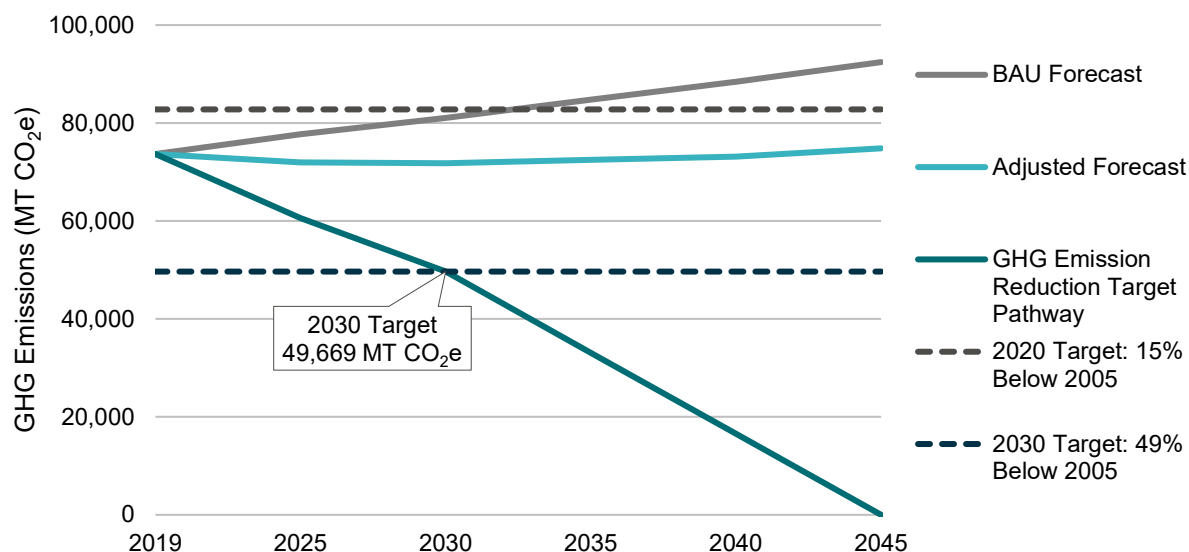
To develop a GHG emissions forecast, "growth metrics" (e.g., population, housing, and employment projections) are multiplied by BAU "growth indicators," which represent a baseline metric developed from the GHG emissions inventory. This process allows the City to convert growth projections into future GHG emissions estimates using specific GHG emissions factors, which are assumed to be the same in the future as in the 2019 GHG emissions inventory. The result is a BAU forecast in which GHG emissions change in relation to demographics, with the assumption that GHG emissions rates and activity data will continue in the future as they did in the year of the

2019 GHG emissions inventory. This methodology is used for all GHG emissions sectors and sources included in the 2019 GHG emissions inventory.

The adjusted GHG emissions forecast then accounts for reductions anticipated from state and regional legislation already in place. For example, the California Renewable Portfolio Standard (RPS) mandates that 100 percent of the electricity sold by the State's investor-owned utilities be generated from renewable resources by 2045, with an interim target of 60 percent by 2030. The impact of state- and regional-level actions on reducing local emissions is significant and can be seen in Figure 9 and Table 3. It is shown in relation to Half Moon Bay's emissions baseline, business-as-usual forecast, and reduction target.

- **“Business-as-usual” (BAU) emissions** – This projection represents the emissions expected if the 2019 patterns of travel, energy and water consumption, and waste generation/disposal were continued throughout time. This projection factors in the expected rate of county population and job growth expected to occur across Half Moon Bay. This projection is considered in the absence of any measures, policies, or actions that would reduce emissions over time, including state legislation and/or any other policies or procedures accepted after 2019. Under the BAU scenario, Half Moon Bay GHG emissions are projected to increase by ten percent in 2030 to 81,051 MT CO₂e and 25 percent in 2045 to 92,439 MT CO₂e relative to 2019.
- **Adjusted emissions** – This projection incorporates the same factors as the BAU scenario but also includes key State and regional policies. State policies include clean car standards, RPS, and energy efficiency policies such as Title 24. This projection also includes the effect of PCE operating in San Mateo County. Switching from PG&E to PCE reduces energy emissions by providing electricity sourced from a larger share of renewable and carbon-free sources, resulting in a lower emissions factor. Though PCE provides critical emissions reductions through 2030 and 2040, by 2045, the Renewable Portfolio Standard will have closed that gap by forcing all electricity providers to offer a similarly clean mix of energy. Under the adjusted scenario, Half Moon Bay GHG emissions are projected to decrease by three percent in 2030 to 71,790 MT CO₂e and increase by two percent in 2045 to 74,833 MT CO₂e relative to 2019.

Figure 9: Half Moon Bay City: GHG Emissions Forecast



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Table 3: Half Moon Bay City: Adjusted GHG Emissions Forecast by Sector

SECTOR		2020 GHG EMISSIONS (MT CO ₂ e)	2030 GHG EMISSIONS (MT CO ₂ e)	2040 GHG EMISSIONS (MT CO ₂ e)	2045 GHG EMISSIONS (MT CO ₂ e)
Transportation	On-road Transportation	40,689	36,215	33,887	33,675
	Off-road Equipment	2,231	2,768	3,457	3,873
Building Energy: Electricity	Residential Electricity	164	27	10	0
	Commercial Electricity	116	20	8	0
	Direct Access Electricity	2,683	2,425	954	0
	T&D Losses	21	6	2	0
Building Energy: Natural Gas & Multiple Fuels	Residential Natural Gas	10,596	12,179	13,878	14,885
	Commercial and District Natural Gas	4,077	4,857	5,735	6,138
	Methane Leakage (Natural Gas)	4,120	4,783	5,507	5,903
	Stationary Sources (Multiple Fuels)	69	82	97	103
Solid Waste	Solid Waste Disposal	6,479	7,580	8,783	9,438
	Landfills	572	468	382	345
Wastewater	Wastewater Treatment	324	379	439	472
Water	Water Use	3	2	1	0
TOTAL		72,144	71,790	73,141	74,833

Half Moon Bay's Contribution to the Goal

Half Moon Bay is committed to achieving the State targets for GHG reduction: 40% reduction from 1990 levels by 2030, and carbon neutrality by 2045, with at least an 85% reduction from 1990 levels. Through this commitment, Half Moon Bay will be doing its part in helping California achieve the statewide target of a 49 percent reduction below 2005 levels by 2030 and will place Half Moon Bay on the path to achieving the statewide carbon neutrality target at or before 2045. These emissions targets, and reductions required are listed below in Table 4.

Table 4: GHG Emissions Projection and Reduction Target (2030, with Carbon Neutrality by 2045)

2019 EMISSIONS (MT CO ₂ E)	TARGET EMISSIONS BY 2030 (MT CO ₂ E)	2030 ADJUSTED EMISSIONS (MT CO ₂ E)	EMISSIONS REDUCTIONS REQUIRED (MT CO ₂ E)
73,677	49,669	71,790	22,121

Measures and Actions

Strategy Overview

The City of Half Moon Bay has developed a comprehensive set of measures and actions for reducing community-wide and municipal GHG emissions across all sectors to achieve the City's climate action targets. The City has also developed a set of measures and actions for offsetting communitywide GHG emissions through carbon sequestration, which will be critical in achieving long-term carbon neutrality. These measures and actions to mitigate GHG emissions are accompanied by adaptation strategies that will allow the community to adapt to the effects of climate change, including the impacts of extreme heat, sea level rise, and increased precipitation volatility. GHG mitigation measures and actions are organized according to the following hierarchy:

- Sectors:** Sectors define the GHG emissions category in which the GHG reductions will occur. Sectors for communitywide GHG emissions include Building Energy, Transportation & Land Use, Solid Waste, Carbon Sequestration & Ecosystems, Water, and Green Business. Sectors for municipal GHG emissions include Energy, Transportation, and Waste.
- Measures:** Measures identify specific goals and GHG reductions necessary to address GHG emissions in each sector and achieve the community's GHG reduction targets.
- Actions:** Actions are the specific steps the City and community will implement in support of each measure, which together will accomplish the measure goal. Actions specifically identify the mechanisms required for implementation.

Measures and actions can be either quantitative or supportive, depending on whether they directly result in GHG emissions reductions or instead support reductions (for example: the development of partnerships or education programs).

- Quantitative:** Quantitative measures and actions result in GHG emissions reductions that can be quantified and summed to prove how Half Moon Bay will make progress towards established climate action targets. The emissions reductions expected from the implementation of these measures and

actions are supported by substantial evidence that establishes their effectiveness for achieving Half Moon Bay's GHG emissions reduction targets.

- **Supportive:** Supportive measures and actions are critical to the overall success of the CAAP and provide support so that the quantitative measures and actions can be successfully implemented. Though these measures and actions may be quantifiable, they are not quantified for one of several factors – including producing a low GHG emission reduction benefit, producing indirect GHG emission reductions, or having insufficient research to provide defensible quantification – and do not contribute directly to the City's GHG reduction targets.

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GHG REDUCTION MEASURES SUMMARY: ALL QUANTIFIED MEASURES*

GOAL & MEASURE BY SECTOR	2030 GHG REDUCTIONS (MT CO ₂ e)	2045 GHG REDUCTIONS (MT CO ₂ e)
Building Energy		
BE-1: Electrify 20% of existing residential buildings by 2030 and 100% by 2045.	2,822 MT CO ₂ e	10,500 MT CO ₂ e
BE-2: Electrify 17% of existing commercial buildings by 2030 and 100% by 2045.	803 MT CO ₂ e	2,724 MT CO ₂ e
BE-4: Require all natural gas lines to be decommissioned and/or capped in existing buildings by 2045.	0 MT CO ₂ e	5,222 MT CO ₂ e
BE-6: Require all new construction to be all-electric starting in 2021**	2,610 MT CO ₂ e	7,522 MT CO ₂ e
BE-7: Reduce 'District' PG&E account natural gas usage 35% by 2030 and 100% by 2045	265 MT CO ₂ e	957 MT CO ₂ e
Transportation and Land Use		
TL-1: Increase active transportation mode share from 5% to 9% by 2030 and 12% by 2045.	237 MT CO ₂ e	533 MT CO ₂ e
TL-2: Implement public and shared transit programs to increase public transit mode share from 0.1% to 4% by 2030 and 7% by 2045.	775 MT CO ₂ e	1,526 MT CO ₂ e
TL-3: Increase passenger zero-emission vehicle (ZEV) adoption from 3% to 33% by 2030 and 100% by 2045.	7,454 MT CO ₂ e	27,238 MT CO ₂ e
TL-4: Increase commercial zero-emission vehicle (ZEV) adoption from 0% to 27% by 2030 and 100% by 2045.	937 MT CO ₂ e	3,903 MT CO ₂ e
TL-5: Increase bus zero-emission vehicle (ZEV) adoption from 0% to 23% by 2030 and 100% by 2045.	111 MT CO ₂ e	475 MT CO ₂ e
TL-6: Electrify or otherwise decarbonize 5% of off-road equipment by 2030 with 100% by 2045.	138 MT CO ₂ e	3,873 MT CO ₂ e
Waste		
SW-1: Implement SB 1383 requirements to reduce community-wide landfilled organics 75% by 2025 and inorganic waste 35% by 2030 and achieve zero waste by 2045.	5,685 MT CO ₂ e	9,437 MT CO ₂ e
SW-2: Implement SB 1383 requirements to procure annually 1,200 tons of compost by 2030 and 1,500 tons by 2045.	281 MT CO ₂ e	346 MT CO ₂ e
Carbon Sequestration		
CS-1: Increase Half Moon Bay's urban canopy by 200 trees by 2030 and 1,000 trees by 2045.	7 MT CO ₂ e	35 MT CO ₂ e
Total Reductions	22,125 MT CO₂e	74,293 MT CO₂e
Gap to Target	-4 MT CO₂e	540 MT CO₂e

**Note that this table only includes quantified measures. Measures for the Municipal, Water, and Green Business sectors are excluded from the table because they do not include quantified measures but are included in the sections below.*

*** Note that measures BE-6 has already been implemented. GHG reductions are included in the total.*

Transportation and Land Use

2030 Objectives*

- Increase active transportation mode share from 5% to 9%
- Implement public and shared transit programs to increase public transit mode share from 0.1% to 4%
- Increase passenger zero-emission vehicle (ZEV) adoption from 3% to 33%
- Increase commercial zero-emission vehicle (ZEV) adoption from 0% to 27%
- Increase bus zero-emission vehicle (ZEV) adoption from 0% to 23%
- Electrify or otherwise decarbonize 5% of off-road equipment from forecasted levels.

Transportation is the largest GHG emissions sector in Half Moon Bay, accounting for 61 percent of total GHG emissions in the City in 2019. The Transportation sector focuses on reducing the number of miles driven by fossil fuel-powered, on-road vehicles and reducing the gallons of fossil fuel burned by off-road equipment. The measures first prioritize reducing the number of miles driven by on-road vehicles by improving active and public transportation, then shifting the remaining miles driven by on-road vehicles to electric vehicles and decarbonizing off-road equipment.

**Current mode share percentages are based on 2019 baseline levels.*

Active and Public Transportation

Reducing the number of miles driven by fossil fuel-powered vehicles, particularly when replaced with quality-of-life and public-health boosting modes of transportation, provides a critical way to reduce GHG emissions while connecting communities and keeping Half Moon Bay residents healthy. Increasing active transportation mode share will increase the quality of life and public health through increased exercise and community connectivity while reducing congestion and the space needed for roadways and parking.

Measure **T-1** directs Half Moon Bay to prioritize active transportation by expanding access to safe and convenient biking and pedestrian infrastructure through the implementation of plans and programs, surveys of existing conditions, and advocacy. Similarly, increasing access to and use of public and shared transit increases the community's access to economic opportunities and community connectivity while reducing the number of vehicle miles driven. Measure **T-2** provides a framework of policy updates, education, advocacy, and structural change to improve Half Moon Bay's public and shared transit infrastructure. They will also encourage visitors to Half Moon Bay to shift to micromobility and public transit options when exploring the City and tourist attractions, reducing this source of fossil-fuel vehicle miles traveled.

Measure **T-7** complements both Measures **T-1** and **T-2** by prioritizing walkable and transit-oriented development. Putting people and businesses where safe biking, walking, and public transit exists enhances the community's multi-modal access and economic vitality. Measure **T-7** directs the City to prioritize walkable and transit-oriented development through local policy updates and structural change. While the City can lay the policy groundwork to provide Half Moon Bay residents with safe access to active transportation options, the success of these measures

and actions ultimately relies on community-wide behavior change. Simply put, shifting from passenger vehicles to new active transportation options cannot happen without wide-spread buy-in from the community. Community participation in pedestrian and bike plan updates will also be critical to ensure that updated plans reflect the transportation needs of the Half Moon Bay community.

Zero-Emission Vehicles (ZEV) and Decarbonized Equipment

For the remaining vehicles on the road, it is important to transition them to zero-emission technologies such as electric vehicles. Electrifying the transportation sector will allow the sector to benefit from the increasingly clean electricity that will result from SB 100 and Measure **BE-5**. Additionally, reducing tailpipe air pollution through electric vehicle adoption provides public health benefits as it reduces a major source of outdoor air pollution. Measures **BE-3**, **BE-4**, and **BE-5** provide frameworks for local policy updates, funding mechanisms, advocacy, and regional collaborations to electrify Half Moon Bay's passenger vehicles, commercial vehicles, and buses. While the City cannot require its residents or businesses to purchase zero-emission vehicles, the measures will provide sufficient infrastructure and incentives to help remove barriers to adopting ZEV's.

Measure **T-6** focuses on Half Moon Bay's off-road equipment and electrifying or otherwise decarbonizing their operation. Off-road equipment burns fossil fuels, producing GHG emissions, local air pollution, and noise pollution. While sufficient technology options are not available today to decarbonize the off-road equipment in an equitable and cost-effective manner, the measure provides a framework of research, partnerships, education, and funding mechanisms to begin electrifying or otherwise decarbonizing Half Moon Bay's off-road equipment.

What Are We Trying to Achieve? Transportation and Land Use Measures

#	GOAL	GHG REDUCTIONS (MT CO ₂ e)
T-1	Increase active transportation mode share from 5% to 9% by 2030 and 12% by 2045.	2030: 237 MT CO ₂ e 2045: 533 MT CO ₂ e
T-2	Implement public and shared transit programs to increase public transit mode share from 0.1% to 4% by 2030 and 7% by 2045.	2030: 775 MT CO ₂ e 2045: 1,526 MT CO ₂ e
T-3	Increase passenger zero-emission vehicle (ZEV) adoption from 3% to 33% by 2030 and 100% by 2045.	2030: 7,454 MT CO ₂ e 2045: 27,238 MT CO ₂ e
T-4	Increase commercial zero-emission vehicle (ZEV) adoption from 0% to 27% by 2030 and 100% by 2045.	2030: 937 MT CO ₂ e 2045: 3,903 MT CO ₂ e
T-5	Increase bus zero-emission vehicle (ZEV) adoption from 0% to 23% by 2030 and 100% by 2045.	2030: 111 MT CO ₂ e 2045: 475 MT CO ₂ e
T-6	Electrify or otherwise decarbonize 5% of off-road equipment from forecasted levels by 2030 and 100% by 2045.	2030: 138 MT CO ₂ e 2045: 3,873 MT CO ₂ e
T-7	Invest in and plan for walkable and transit-oriented development which enhances safety, multi-modal access, and economic vitality	Not Quantified
Sector Total Reductions		2030: 9,653 MT CO ₂ e 2045: 37,549 MT CO ₂ e
% Total GHG Reductions (2030)		44%

How Do We Get There? Measures and Actions

Measure T-1: Increase active transportation mode share from 5% to 9% by 2030 and 12% by 2045.

Action #	Action	Quantified or Supportive?
T-1.1	Implement the Bicycle and Pedestrian Master Plan to make walking and biking more desirable through projects that install and create bike lanes, bike parking, traffic calming measures, beautification, etc.	Quantified
T-1.2	Update Bicycle and Pedestrian Plan by 2025 to evaluate and identify projects that encourage active transportation on the Coastsides and most align with mode shift goals.	Supportive
T-1.3	Collaborate and coordinate with Cabrillo Unified School District to implement Safe Routes to Schools program by investing in enhancing bike trails and safe pedestrian routes to local schools in Half Moon Bay and the Coastsides. Promote the program through collaboration with schools and hosting of events and outreach to increase volunteer participation.	Supportive
T-1.4	Improve the bike parking network on the Coastsides to reduce theft and increase rider attraction. This would include surveying existing bike parking facilities throughout the community and developing a plan to improve these for implementation with preference given to improving bike parking facilities near public transit stops to improve and expand access to transit (i.e., first and last-mile access).	Supportive
T-1.5	Evaluate and update the applicable City regulations and plans to require installation of bicycle and pedestrian related improvements (such as bike parking) for new development and retrofits.	Supportive
T-1.6	Expand micro mobility through e-bike and scooter rental, and expansion of bike rental services targeting trips between the coast and downtown. Launch an e-bike or scooter share pilot program connecting downtown with the coast other points of interest, as well as SamTrans public transit routes.	Supportive
T-1.7	Remove barriers for micro mobility companies that offer docked services for micro mobility (ex. Lime, Lyft).	Supportive
T-1.8	Advocate for expanded safe Highway 1 crossings for pedestrians and cyclists, while increasing regional bike trail connectivity.	Supportive
T-1.9	Maintain community farmers' market with locally-grown food to encourage local shopping and reduce VMT associated with acquiring produce. Consider methods to expand and encourage active transportation for visitors of the Farmer's Market.	Supportive



Shop Locally Grown and Produced | farmers' markets and reduced VMT

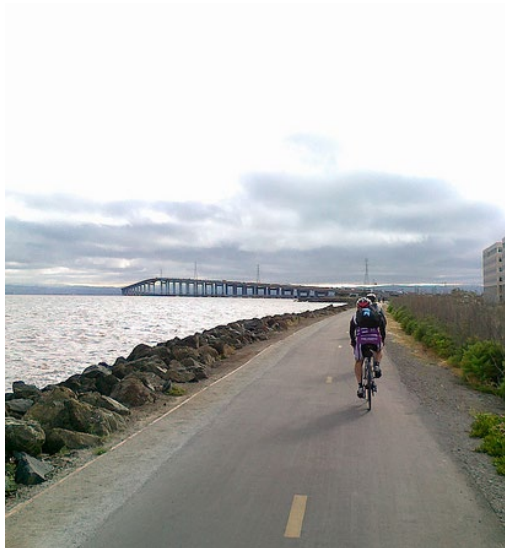
The shorter the distance your food travels to your plate or a product travels to your home, the fewer GHGs are produced. Declare one day a week to be a "buy local day" and eat foods produced within 50 miles of your house. Participate in community-supported agriculture and community-supported fishery programs and shop at the coastside farmer's markets located in Half Moon Bay, Pacifica, and Pescadero.

To find certified green businesses in your area, download the "Shop Green" app or visit <https://greenbusinessca.org/>. To find other locally owned businesses, contact your local chamber of commerce.

Buy produce and fish labeled "As Fresh As It Gets," signifying that it was grown or harvested in San Mateo County. Support restaurants and businesses accredited by the "As Fresh As It Gets" campaign, signifying that they use county-grown produce, fish, and other products. For a list of in-season produce and fish, farmers market locations, and accredited businesses and restaurants, visit www.asfreshasitgets.com.

Measure T-2: Implement public and shared transit programs to increase public transit mode share from 0.1% to 4% by 2030 and 7% by 2045.

Action #	Action	Quantified or Supportive?
T-2.1	Develop policies and incentives that attract zero-emission vehicle (ZEV) car sharing companies to establish service in Half Moon Bay.	Supportive
T-2.2	Promote, support, and advocate for programs that encourage ride sharing, carpooling, and vanpooling such as those available through Commute.org.	Supportive
T-2.3	Remove barriers to encourage ZEV car share companies to conduct business in Half Moon Bay; collaborate with neighboring jurisdictions on the Coastsides to do the same to create a larger connected network of ZEV car share.	Supportive
T-2.4	Advocate that SamTrans conduct a study to determine transit priority corridors and determine best potential locations for SamTrans expansion of public transit to connect with other transit providers throughout the Peninsula and Bay Area.	Quantified
T-2.5	Partner with SAMTrans to implement a local electric shuttle system to close the "last mile" gap for public transit. Seek and apply for grant funding to aid implementation and shuttle procurement.	Quantified
T-2.6	Require all employers to develop a Transportation Demand Management (TDM) Plan. TDM plans should include money-based incentives for employees to bike, walk, carpool, or take the bus to work. Encourage existing large employers and evaluate code to require large employers (more than 25 employees) to subsidize biking, walking, or bus travel.	Supportive
T-2.7	Advocate for statewide or regional disincentives for driving single passenger vehicles to support the active transportation and public transit mode share goals. Advocate for an analysis of potential community impacts and benefits of disincentives to decide on ones to advocate for including a congestion charge program, limiting parking options, increased local taxes (income tax, gasoline tax, or car registration tax), and TNC user taxes.	Supportive



What Would It Be Like?

Many of us drive our cars for short trips. Some short car trips are necessary; for example, health and mobility issues might limit our ability to walk. Other times, driving is convenient: when we're in a hurry, if it's cold or raining, or if we have a lot of groceries to carry. However, some short car trips might be easily made by foot or bike. What if we all chose to walk or bike for just half of our car trips of under a mile?

According to national estimates from the EPA, If we all chose to power half of these short trips with our feet instead of petroleum, assuming an average fuel economy of 22 mpg and an average fuel price of \$2.50/gallon, we would save about \$575 million in fuel costs and about 2 million metric tons of CO2 emissions per year. That's like taking approximately 400,000 cars off the road each year. The total financial savings are even bigger — almost \$900 million dollars — when you include savings on maintenance and tire replacement.^j

Measure T-3: Increase passenger zero-emission vehicle (ZEV) adoption from 3% to 33% by 2030 and 100% by 2045.

Action #	Action	Quantified or Supportive?
T-3.1	Develop an Electric Vehicle Readiness Plan that: -Quantifies the number of publicly accessible chargers needed in Half Moon Bay to support the 2030 and 2045 ZEV adoption goals -Identifies ZEV parking needs for visitors -Establishes a prioritized list of locations for new electric vehicle charging stations based on a survey of existing publicly accessible electric vehicle chargers, their locations, and their kWh charging speed -Considers prioritization with particular consideration for an equitable distribution of chargers to residents of multi-family homes, low-income and fixed income people, communities of color, elders, and disabled individuals with access needs.	Quantified
T-3.2	Continue to update building code to increase the mandated percentage of parking spaces designed to accommodate electric vehicle charging equipment and increase the mandated percentage of parking spaces devoted to clean air vehicles (EVs, PHEVs, carpools).	Supportive
T-3.3	Work with other agencies and stakeholders in San Mateo County on model code development and coordinate efforts with other cities.	Supportive
T-3.4	Work with electricity providers such as PGE and PG&E, to incentivize electric vehicle charger installations through on-bill financing.	Supportive
T-3.5	Leverage incentives to expand charging infrastructure in public properties, multi-unit dwellings and workplaces.	Supportive
T-3.6	Advocate for local, regional and statewide incentives that promote affordability of ZEVs in low-income and disadvantaged communities.	Supportive

^j United States Environmental Protection Agency. (n.d.). Green Vehicle Guide. Retrieved from <https://www.epa.gov/greenvehicles/what-if-we-kept-our-cars-parked-trips-less-one-mile>

Action #	Action	Quantified or Supportive?
T-3.7	Encourage ZEV carsharing services by removing barriers for companies like GIGCar, Blink Mobility, or ZipCar. Identify funding to expand services to provide services for multi-family and low-income housing communities.	Supportive
T-3.8	With each building code cycle, continue to work with PCE to continue to expand EV charging standards for new buildings, and renovations and retrofits through a new updated reach code. Continue to exceed state residential state standards for EV charging.	Supportive

Measure T-4: Increase commercial zero-emission vehicle (ZEV) adoption from 0% to 27% by 2030 and 100% by 2045.

Action #	Action	Quantified or Supportive?
T-4.1	Investigate commercial vehicle fleets in Half Moon Bay and identify opportunities for accelerating zero emission vehicle (ZEV) adoption.	Quantified
T-4.2	Identify and implement incentives for commercial fleet electrification. This could include local tax breaks.	Supportive
T-4.3	Identify other local municipalities to collaborate on a regional licensing fee for commercial delivery vehicles operating on fossil fuels (e.g., Amazon and FedEx) to provide funding for new active transportation and EV charging infrastructure. Consider discounting the fee for delivery companies which use electric vehicles. Evaluation of the fee would include: - Engaging directly with delivery service providers operating in the region to understand zero-emission vehicle capacity; - Determining if phasing is needed to allow for time to increase available zero-emission vehicles in fleet; and - Identifying gaps in the zero-emission vehicle fueling/charging infrastructure to maintain route efficiency.	Supportive

Measure T-5: Increase bus zero-emission vehicle (ZEV) adoption from 0% to 23% by 2030 and 100% by 2045.

Action #	Action	Quantified or Supportive?
T-5.1	Collaborate with SamTrans, Cabrillo Unified School District, and other regional providers of public transit to support bus electrification, developing a regional approach to attract funding and electrify the fleet.	Quantified

Measure T-6: Electrify or otherwise decarbonize 5% of off-road equipment from forecasted levels by 2030 with 100% ZEV adoption in both sectors by 2045.

Action #	Action	Quantified or Supportive?
T-6.1	Conduct an investigation of off-road equipment fleets in Half Moon Bay and identify fleets with the highest decarbonization potential for targeted outreach and incentives.	Supportive
T-6.2	Partner with BAAQMD to expand rebate and incentive programs for upgrading off-road equipment and switching to biofuels. Coordinate with local businesses using off-road equipment to conduct outreach and education on rebate and incentive programs.	Supportive

T-6.3	Incentivize electric off-road equipment before 2030 to improve public health, reduce noise, and reduce local GHG emissions. Consider including equity metrics and allowances for biofuels (i.e., renewable diesel) for equipment which does not have zero-emission alternatives available.	Quantified
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Measure T-7: Invest in and plan for walkable and transit-oriented development which enhances safety, multi-modal access, and economic vitality.

Action #	Action	Quantified or Supportive?
T-7.1	Amend and modify local codes and ordinances to integrate revitalization efforts utilizing smart growth principles.	Supportive
T-7.2	Develop centralized tourist parking at points of interest with access to safe biking and walking trails, micro mobility, EV Charging and public transit.	Supportive

Building Energy

2030 Objectives

- Electrify new construction (completed)
- Electrify 20% of existing residential buildings
- Electrify 17% of existing commercial buildings
- Reduce “District” natural gas usage 35% below forecasted 2030 levels
- Continue to provide carbon-free electricity options to the community and maintain PCE opt-out rates of less than 3%

Energy used to heat, cool, and power buildings accounts for **30 percent** of Half Moon Bay’s GHG emissions. The Buildings Energy sector focuses on electrification coupled with carbon-free electricity to reduce these GHG emissions. All-electric buildings reduce natural gas consumption and, when coupled with carbon-free electricity, can achieve a carbon-free operating energy footprint.

Building Electrification

Electrification of new buildings is a cost-effective and socially equitable way many cities in California are reducing GHG emissions and protecting public health. All-electric buildings can be more efficient and produce lower energy bills. When all-electric buildings are paired with solar photovoltaics as well as battery storage, they can also be insulated from public safety power shutoffs (PSPS) and grid outages, increasing the resiliency of the building.^k Moreover, natural gas prices are expected to increase in the future, potentially leaving building owners that do not electrify with the burden of ever-higher natural gas bills.^l Lastly, burning natural gas in poorly ventilated areas (gas stoves in particular) can cause a drastic increase in harmful indoor pollutants that are linked to an increased risk of respiratory illnesses, so switching to electric appliances is a critical step toward improving public health.^m

While these long-term cost savings and health benefits are important drivers for electrification in themselves, it is also important to note the immediate cost savings of building new all-electric buildings. Constructing new all-electric buildings is more cost-effective than building traditional mixed-fuel buildings, due to the cost savings resulting from avoiding the installation of natural gas infrastructure, making all-electric new construction an easy

^k <https://ebce.org/resilient-home/>

^l <https://gridworks.org/initiatives/cagas-system-transition/>

^m <https://rmi.org/insight/gas-stoves-pollution-health/>

choice for the community.ⁿ Half Moon Bay has already adopted a building electrification ordinance for all-electric new construction, which requires developers for most building types to provide all-electric systems without natural gas or propane. The GHG reductions achieved through this ordinance under **BE-6** have been marked as 'completed' as the ordinance is already in effect for new construction.

GHG emissions from Half Moon Bay's existing buildings must also be reduced to achieve the City's climate action targets. Natural gas use in residential buildings accounts for 12% of Half Moon Bay's emissions, and natural gas use in commercial and district buildings accounts for 5%. Measures **BE-1** and **BE-2** provide frameworks for local policy updates, enforcement programs, funding mechanisms, education, and advocacy to drive the electrification of existing residential and commercial buildings.

Measure **BE-4** recognizes that removing natural gas entirely will be a major effort requiring a resilient and reliable electricity supply. Electrification of more complex end uses requires technological innovation, systems thinking, and a deep consideration of equity. By adopting the building electrification ordinance, Half Moon Bay already requires all fuel cap lines to be capped or decommissioned in existing buildings by 2045. This measure focuses on the partnerships needed to advance electrification in the short term while identifying funding opportunities and other strategies needed to successfully remove natural gas from Half Moon Bay in the future.

Industrial Electrification

While excluded from Half Moon Bay's GHG emissions inventory because of data availability issues, industrial natural gas consumption does occur in the City. The City previously had specific natural gas consumption data for the industrial sector, but state aggregated data rules (i.e., the "15/15 Rule") prevented the City from receiving data on industrial natural gas consumption in recent years. In 2017, industrial emissions accounted for approximately 11% of total emissions.

Electrifying this sector will prove to be a long-term and complex challenge. Even though it is excluded from Half Moon Bay's GHG emissions, the City would like to support this sector in reducing natural gas consumption. Measure **BE-3** recognizes this challenge and provides a framework that leverages engagement, research, and data benchmarking to advance decarbonization opportunities in the sector. Obtaining more detailed data will help the City support this sector and determine the best alternatives to natural gas consumption.

District Electrification

A significant portion of Half Moon Bay's natural gas consumption comes from 'District' accounts. Measure **BE-7** addresses emissions resulting from 'District' account types who are customers of PG&E. 'District' users of natural gas are defined by PG&E as accounts held by entities like schools, hospitals, sewer districts, fire districts, public utilities, and park districts.^o These account types made up greater than ten percent of non-residential natural gas usage (i.e., commercial and district) in Half Moon Bay in 2019, but are not under the jurisdiction of the City. Therefore, to make progress on reducing emissions from these buildings the City will need to partner and collaborate with these important stakeholders. Actions under **BE-7** direct the City to collaborate with these stakeholders and PG&E to identify natural gas end uses and zero-carbon alternatives. Building electrification actions could include bulk appliance buying, and City assistance in identifying grants and incentives for replacing natural-gas-powered appliances with electric alternatives.

ⁿ <https://localenergycodes.com/>

^o PG&E Community-Wide GHG Inventory Data Dictionary, Updated 7/2/2020. Full definition of 'District' accounts is as follows: "The 'District' category includes accounts like Bay Area Rapid Transit, School Districts, Hospital Districts, Water or Sewer Districts, Fire Districts, Junior College Districts, District Fairs, Public Utility Districts, Community Service Districts, Cemetery Districts, Mosquito Abatement Districts, and Park Districts."

Carbon Free Electricity

The City of Half Moon Bay's building electrification measures are also dependent on leveraging the renewable energy that PCE provides the community. PCE provides the City with 100% carbon-free and renewable electricity as of 2021. This means that all-electric buildings are effectively carbon neutral. In the meantime, PCE provides electricity with lower GHG emissions than the alternative provider. Measure **BE-5** directs the City to work with the community and PCE to lower existing residential and commercial opt-out rates and increase the use of their carbon-free electricity service options. This measure will increase PCE's renewable electricity's GHG emission reduction potential.

Building Energy Measures: What Are We Trying to Achieve?

#	GOAL	GHG REDUCTIONS (MT CO ₂ e)
BE-1	Electrify 20% of existing residential buildings by 2030 and 100% by 2045.	2030: 2,822 MT CO ₂ e 2045: 10,500 MT CO ₂ e
BE-2	Electrify 17% of existing commercial buildings by 2030 and 100% by 2045.	2030: 803 MT CO ₂ e 2045: 2,724 MT CO ₂ e
BE-3	Reduce industrial natural gas usage.	Not Quantified
BE-4	Require all natural gas lines to be decommissioned and/or capped in existing buildings by 2045.	2030: 0 MT CO ₂ e 2045: 5,222 MT CO ₂ e
BE-5	Continue to provide carbon-free electricity options to the community and maintain PCE opt-out rates of less than 3%.	Not Quantified
BE-6	Require all new construction to be all-electric starting in 2021 (completed).	2030: 2,610 MT CO ₂ e 2045: 7,522 MT CO ₂ e
BE-7	Reduce 'District' PG&E account natural gas usage 35% by 2030 and 100% by 2045	2030: 265 MT CO ₂ e 2045: 957 MT CO ₂ e
Sector Total Reductions		2030: 6,499 MT CO ₂ e 2045: 26,926 MT CO ₂ e
% total GHG Reductions (2030)		29%

How Do We Get There? Building Energy Measures and Actions

Measure BE-1: Electrify 20% of Existing Residential Buildings by 2030 and 100% by 2045

ACTION #	ACTION	QUANTIFIED OR SUPPORTIVE?
BE-1.1	Develop and adopt an electrification ordinance by 2026 requiring gas appliances be replaced with electrical appliances on burnout for residential buildings. Steps to be completed to adopt the ordinance(s) are as follows: STEP 1: Work with interested parties in developing an idea to expand electrification ordinance(s). STEP 2: Go through the formal adoption process.	Quantified
BE-1.2	Develop and implement a comprehensive permitting compliance program to enforce the ordinance through routine training of staff, dedicating staff time to building inspections, charging fees for noncompliance, providing easy to understand compliance checklists online and with permit applications, and facilitating permitting online.	Supportive
BE-1.3	Conduct a cost-effectiveness study to assess electrification costs for home and multi-family building owners and identify technologies and best practices to reduce them.	Supportive
BE-1.4	Work with clean energy providers like PCE, regional climate programs like RICAPS, and local installers to create an Electrification Support Hub to provide technical support to residents and businesses needing to replace gas appliances upon burnout.	Supportive
BE-1.5	Through the City website and community events promote incentives provided by PCE, PG&E, and other entities (like federal funding through the Inflation Reduction Act (IRA)) to assist in the upgrade of electric panels to accommodate all-electric technologies including solar PV, battery storage, air source heat pumps, heat pump water heaters, electric dryers, electric stoves and EV chargers.	Supportive
BE-1.6	Provide education and outreach to stakeholders, including businesses, residents, and contractors, on the benefits of pairing battery storage with solar PV systems at City information centers like the permit counters.	Supportive
BE-1.7	Through marketing and outreach, promote participation in residential energy efficiency programs, including BayREN's Home Upgrade program and PG&E's efficient appliance rebates. City provides or encourages residential energy audits. City considers supplementing existing efficiency incentives and rebates.	Supportive
BE-1.8	Advocate for and require that financial incentive programs for electrification address fixed income households (senior and non-senior), multi-family apartments and restricted affordable residential units.	Supportive

ACTION #	ACTION	QUANTIFIED OR SUPPORTIVE?
BE-1.9	Leverage financial incentives for electrification by encouraging bulk purchases through programs such as the Peninsula SunShares Program and provide free assistance for project developers through the Power Purchase Agreement (PPA) and interconnection process.	Supportive
BE-1.10	Work with the local contractors, realtors, homeowners associations, and labor unions to develop a comprehensive building code and compliance training program, including hosting workforce development trainings discussing the benefits and technical requirements of electrification. Organizations to partner with include SAMCAR, College of San Mateo, and the Coastsides Recovery Initiative	Supportive
BE-1.11	Advocate for the creation of funding and financing programs by PCE, PG&E, the State, and other agencies/entities for electrification retrofits.	Supportive
BE-1.12	Develop and adopt an energy efficiency and electrification checklist for major retrofits by 2025.	Supportive
BE-1.13	Update the Measure D ranking criteria to include improved sustainability factors.	Supportive
BE-1.14	Develop and adopt a two-way air conditioning requirement for new and replacement air conditioning installations by 2025.	Supportive



Want to Electrify Your Home? Plan Ahead

Converting your existing home to all-electric would be an expensive proposition if you did it all at once. That's why it is important to initiate the change through a gradual investment as natural opportunities arise, such as when appliances like a furnace and hot water heater need to be replaced. When they're near the end of their life, do some homework so you're prepared to switch to an electric model when the time comes, and take advantage of electrification incentives from BayREN (<http://www.bayrenresidential.org/>). Meanwhile, consider upgrading your electric panel to get ready. You can also opt up to Peninsula Clean Energy's Eco100 rate. For as little as \$4 more per month, you'll be supporting 100 percent renewable electricity.

Measure BE-2: Electrify 17% of existing commercial buildings by 2030 and 100% by 2045.

ACTION #	ACTION	QUANTIFIED OR SUPPORTIVE?
BE-2.1	Develop and adopt an electrification ordinance by 2026 requiring gas appliances be replaced with electrical appliances on burnout for commercial buildings. Steps to be completed to adopt the ordinance(s) are as follows: STEP 1: Work with interested parties in developing an idea for a reach code electrification ordinance(s). STEP 2: Go through the formal adoption process.	Quantified
BE-2.2	Enforce the ordinance through the permitting compliance program and support businesses through the Electrification Support Hub.	Supportive
BE-2.3	Conduct a cost-effectiveness study to assess electrification costs for businesses and commercial building owners and identify technologies and best practices to reduce them.	Supportive

Measure BE-3: Reduce industrial natural gas usage 40% by 2030 and 100% by 2045.

Action #	Action	Quantified or Supportive?
BE-3.1	Engage industry stakeholders to develop a strategy to meet these reduction targets and educate them on the economic benefits and versatility of electrification.	Supportive
BE-3.2	Devote staff time to research technology developments in natural gas efficiency and electrification that are specific to Half Moon Bay's industrial sector. Communicate best practice findings to industry stakeholders on a semi-annual basis.	Supportive
BE-3.3	Establish a GHG emissions benchmarking program in Half Moon Bay that requires industrial entities and large commercial entities (over 10,000 square feet) to report their GHG emissions to improve data on the entities and establish targets for GHG emission reductions over time.	Supportive

Measure BE-4: Require all natural gas lines be decommissioned and/or capped in existing buildings by 2045.

Action #	Action	Quantified or Supportive?
BE-4.1	Work with PG&E to identify opportunities for natural gas infrastructure pruning to reduce the chance of stranded assets (functional natural gas infrastructure with ongoing maintenance costs that has become obsolete due to electrification) and identify funding for the abandonment and removal of the infrastructure.	Supportive

Measure BE-5: Continue to provide carbon-free electricity options to the community and maintain PCE opt-out rates of less than 3%.

Action #	Action	Quantified or Supportive?
BE-5.1	Continue to provide greener renewable electricity to the community through Peninsula Clean Energy or other energy provider and promote residents and businesses to “opt up” to PCE’s ECO100 (100% renewable) service or comparable GHG free program.	Supportive
BE-5.2	Work with PCE to conduct an annual analysis of non-PCE and direct access usage rates in the City of Half Moon Bay to understand why residents and businesses opt out of PCE or use direct access electricity.	Supportive
BE-5.3	Collaborate with PCE and community-based organizations to conduct educational outreach to maintain the reduced opt-out rate levels in the community.	Supportive



Peninsula Clean Energy

Peninsula Clean Energy began providing electricity from clean energy sources at lower rates than PG&E to 20 cities and towns across San Mateo County in 2016. Customers of Peninsula Clean Energy have two different product options: **ECOplus** has lower power rates and nearly double the percentage of renewable energy as PG&E. **ECO100**, the product referenced in this CAAP under BE-5, is 100% renewable, providing the greatest climate benefit. Peninsula Clean Energy also provides a suite of rebates and resources to electrify homes and vehicles, for both residents and businesses. Learn more at: <https://www.peninsulacleanenergy.com/>

Measure BE-6: Require all new construction to be all-electric starting in 2021 (completed)

Action #	Action	Quantified or Supportive?
BE-6.1	Continue to enforce ordinance for all-electric new construction, tracking compliance rates and actual costs for all-electric new construction.	Quantified

Measure BE-7: Reduce 'District' PG&E account natural gas usage by 35% by 2030 and 100% by 2045

Action #	Action	Quantified or Supportive?
BE-7.1	Dedicate staff time to engage and collaborate with PG&E and 'District' account holder types to identify major users of natural gas under this account type. Collaborate over accurate natural gas usage disclosure on a 2-year reporting basis in order to improve natural gas usage baseline data.	Supportive
BE-7.2	Engage 'District' account holder stakeholders to develop a strategy to reduce natural gas use by 35% by 2030 and continue to decarbonize by 2045.	Supportive
BE-7.3	Assist 'District' account holders in applying to electrification rebates and incentives, targeting appliance replacement with all-electric technology upon failure ('burnout')	Supportive
BE-7.4	Identify opportunities for information sharing, bulk purchasing, and collaboration with district stakeholders to promote decarbonization.	Supportive

Solid Waste

2030 Objectives

- Reduce community-wide landfilled organics 75% by 2025; and inorganic waste 35% by 2030 (from 2014 levels)
- Increase local organics diversion through community composting
- Support opportunities to reduce single use plastics
- Implement policies to increase organics and traditional recycling at public events

Landfills are the third largest source of methane emissions in California, and also emit air pollutants, including PM 2.5, which are detrimental to human health. Organic waste disposal drives most GHG emissions from landfills: when organic materials like food scraps and yard waste get sent to landfills, they emit methane as they decompose. Methane is 28 times more potent than carbon dioxide and is considered a climate super pollutant. Furthermore, analysis from the Natural Resources Defense Council argues that the climate impacts of wasted food extend beyond the landfill and should also consider the climate impacts from the lifetime emissions of food production, which includes on-farm water inputs, fertilizer, packaging, labor, and GHGs emitted during shipping. Reducing food waste by prioritizing human consumption of edible food and increasing options for composting are critical for mitigating methane emissions.

Emissions reductions in the waste sector will be driven through Measure **SW-1**, compliance with Senate Bill 1383 (SB 1383), which requires all jurisdictions in California to reduce organic waste disposal by 75 percent and increase edible food recovery by 20 percent relative to 2014 levels by 2025. SB 1383 addresses emissions in the waste sector by reducing upstream waste generation through increased edible food recovery and diverting downstream waste disposal away from landfills to composting and organics recycling. Measure **SW-2** drives GHG reductions through soil carbon sequestration via compost procurement and application, which is also required under SB 1383.

Half Moon Bay plans to meet the requirements of SB 1383 through Municipal partnerships with local community organizations and businesses as well as regional collaboration to procure compost and maintain high quality compost. This core strategy to reduce waste to landfills will be strengthened through supportive actions to increase, zero waste education and advocacy, and the expansion of local organics diversion through community composting. Community composting through Action **SW-1.3** reduces pressure on large-scale composting while building local soils and contributes to youth education on nutrient cycling and waste reduction. Though actions

around advocacy and community composting are not quantified, they provide critical strategies for the implementation of waste measures by providing the educational foundation needed to catalyze the widespread behavior change needed to transform waste disposal in Half Moon Bay from linear to circular. These actions will achieve higher rates of local composting, decreased contamination in collected compostables, and decreased usage of single-use plastics.

What Are We Trying to Achieve? Waste Measures

#	GOAL	GHG REDUCTIONS (MT CO ₂ e)
SW-1	Implement SB 1383 requirements to reduce community-wide landfilled organics 75% by 2025 and inorganic waste 35% by 2030, and achieve zero waste by 2045.	2030: 5,685 MT CO ₂ e 2045: 9,437 MT CO ₂ e
SW-2	Implement SB 1383 requirements to procure 1,200 tons of compost by 2030 and 1,500 tons by 2045.	2030: 281 MT CO ₂ e 2045: 346 MT CO ₂ e
Sector Total Reductions		2030: 5,965 MT CO ₂ e 2045: 9,783 MT CO ₂ e
% Total GHG Reductions (2030)		27%

Measures SW-1: Implement SB 1383 requirements to reduce community-wide landfilled organics 75% by 2025 and inorganic waste 35% by 2030, and achieve zero waste by 2045

Action #	Action	Quantified or Supportive?
SW-1.1	Implement policies to provide traditional and organics recycling at public events and to require reusable or certified compostable fiber-based cutlery and packaging to be used in compliance with the Disposable Foodware Ordinance.	Supportive
SW-1.2	Advocate and support opportunities to develop policies to encourage reuse, reduce the prevalence of single use plastics in Half Moon Bay.	Supportive
SW-1.3	Expand the capacity of community composting on the Coastsides, connecting the Public Works Department, existing community gardens, and Schools with garden space in a network of community compost sites that can serve as local hubs and education locations for waste diversion and soil health.	Supportive
SW-1.4	Partner with local community organizations and businesses to implement all required waste diversion activities under SB 1383.	Quantified
SW-1.5	Continue to work with local waste haulers to monitor and increase waste diversion rates in Half Moon Bay.	Supportive

Measures SW-2: Implement SB 1383 requirements to procure 1,200 tons of compost by 2030 and 1,500 tons by 2045.

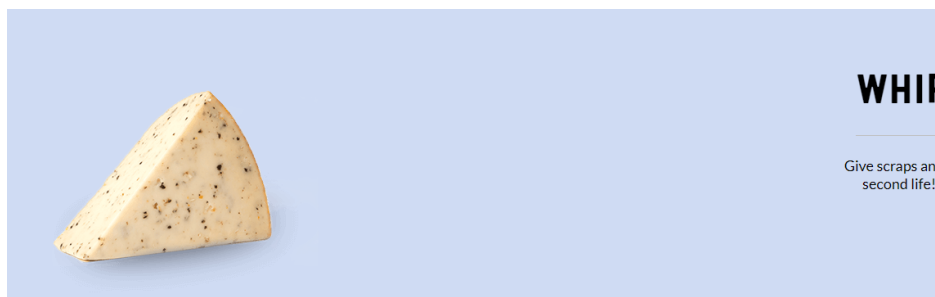
Action #	Action	Quantified or Supportive?
SW-2.1	Collaborate in the regional compost trading program in San Mateo County, procuring additional compost from other Jurisdictions to meet demand in Half Moon Bay's growing agricultural sector. Include the Parks Department in compost and mulch procurement plans for local application.	Supportive
SW-2.2	Develop partnerships with local community organizations, businesses, and growers in Half Moon Bay to meet and exceed compost procurement requirements under SB 1383. Track metrics for local compost use.	Quantified

Reducing Food Waste at Home

40% of the food supply is wasted every year in the United States. The biggest source of food waste happens at the individual and household level: consumers are the single largest source of food waste, contributing 33-55% of food waste totals, according to a United States City survey conducted by the Natural Resources Defense Council (NRDC).^p A large percentage of this wasted food is edible, but is tossed because of confusing best-by dates, mis-storage, and gaps in food preparation and cooking knowledge. According to NRDC's 'Save the Food' campaign, a family of four could save up to \$124 a month, and \$1,500 a year through food waste reduction. Household food waste reduction is a powerful tool to save families money, and reduce organic waste headed to the landfill.^q

Tips for Home and Kitchen Food Waste Reduction

Home cooks and shoppers can check out tips for food storage, recipes, and meal prep tips to reduce food waste at home through <https://savethefood.com/> (image from savethefood.com).



WHIP UP NEW RECIPES

Give scraps and that "past-it's-prime" food a new (and delicious) second life! Learn how to cook with everything from cilantro stems to that overripe avocado on the counter.

[BROWSE RECIPES](#)

Carbon Sequestration and Ecosystems

2030 Objectives

- Increase urban canopy by 200 trees by 2030
- Develop and implement an Urban Forestry Master Plan

Our forests and oceans are natural carbon sinks, each absorbing 25 percent of the carbon dioxide that is released into the atmosphere.^r The process of capturing and storing this atmospheric carbon is known as carbon sequestration, and it is a strategy that – when combined with other efforts – can help combat climate change. A nonprofit organization called Project Drawdown recommends 25 solutions based on using carbon sinks to reduce the impacts of climate change.^s

Emissions reductions in this CAAP prioritize nature-based solutions to sequester carbon, primarily through expanding the urban canopy in Half Moon Bay in Measure **CS-1**. Nature based solutions through tree planting chart a known path forward into carbon sequestration with science-based targets. However, opportunities to draw down carbon in ecosystems through techniques like carbon farming and technologies like waste biomass conversion and direct air capture are expanding and evolving. These emergent opportunities for carbon sequestration will be critical in closing the gap for carbon neutrality by 2045 and are explored in **CS-2**. As the climate science behind ecosystem and technology-based carbon sequestration becomes increasingly robust, Half

^p Food Matters: What Food We Waste and How We Can Expand the Amount of Food We Rescue (2017): <https://www.nrdc.org/sites/default/files/food-matters-ib.pdf>

^q Save the Food Campaign (NRDC): <https://savethefood.com/>;

^r NOAA. (n.d.). Ocean-Atmosphere Co2 Exchange. Retrieved from <https://sos.noaa.gov/datasets/ocean-atmosphere-co2-exchange/>.

^s Project Drawdown. (2020). Table of Solutions. Retrieved from <https://drawdown.org/solutions/table-of-solutions>.

Moon Bay will continue to explore carbon emissions reductions in this sector through feasibility studies and partnerships with the San Mateo Resource Conservation District.

Nature-based actions for carbon sequestration have numerous benefits in addition to GHG reductions. Benefits include improving environmental quality, reducing urban heat through increased shade, improving quality of life through expanded green spaces, and access to natural landscapes and open spaces. Actions under **CS-1** provide a foundation for robust funding, partnership, education, and data tracking that will be essential to maintaining, and expanding Half Moon Bay's urban canopy.

What Are We Trying to Achieve? Carbon Sequestration and Ecosystems

#	GOAL	GHG REDUCTIONS (MT CO ₂ e)
CS-1	Increase Half Moon Bay's urban canopy by 200 trees by 2030 and 1,000 trees by 2045.	2030: 7 MT CO ₂ e 2045: 35 MT CO ₂ e
CS-2	Explore opportunities for carbon sequestration in Half Moon Bay to reduce residual emissions by 2045.	Not Quantified.
Sector Total Reductions		2030: 7 MT CO ₂ e 2045: 35 MT CO ₂ e
% Total GHG Reductions (2030)		<1%

Measure CS-1: Increase Half Moon Bay's urban canopy by 200 trees by 2030 and 1,000 trees by 2045.

Action #	Action	Quantified or Supportive?
CS-1.1	Seek funding to develop and implement an Urban Forestry Master Plan to establish a framework and strategies to expand the urban tree canopy.	Quantified
CS-1.2	Identify and partner with growers during the development and implementation of the Urban Forestry Master Plan.	Supportive
CS-1.3	Continue to update the street tree master plan, which inventories the existing urban canopy, conducts tree care and maintenance, and replaces dead or sick trees. Integrate with the City Heritage Tree Program.	Supportive

Measure CS-2: Explore opportunities for carbon sequestration in Half Moon Bay to reduce residual emissions by 2045.

Action #	Action	Quantified or Supportive?
CS-2.1	Conduct a carbon sequestration feasibility study by 2035 to identify urban and natural working lands opportunities and emergent technology for carbon sequestration within Half Moon Bay.	Quantified
CS-2.2	Collaborate with the San Mateo Resource Conservation District to identify carbon farming opportunities for Half Moon Bay.	Supportive

Water

2030 Objectives

- Reduce water consumption per capita (10%) by 2030 and (20%) by 2045

While accounting for less than 1 percent of the City's GHG emissions, reducing this sector's GHG emissions via water conservation targets articulated in **W-1** offer important strategies for a community's overall sustainability and resiliency. Water conservation also has a critical overlap with climate change adaptation actions that will catalyze the long-term changes in water consumption that Half Moon Bay, and communities across the State will have to adopt to adapt to longer and more frequent droughts.

Measures laid out in this CAAP rely on municipal ordinances, and partnerships with agencies like CalWater to educate City residents, promote existing rebates, and ultimately catalyze the long-term water-conservation consumption patterns that will be necessary to adapt to future water availability as well as reduce GHG emissions in this sector.

What Are We Trying to Achieve? Water Measures

#	GOAL	GHG REDUCTIONS (MT CO ₂ e)
W-1	Reduce water consumption per capita (10%) by 2030 and (20%) by 2045	Not Quantified

Measure W-1: Reduce water consumption per capita (10%) by 2030 and (20%) by 2045

Action #	Action	Quantified or Supportive?
W-1.1	Promote BAWSCA, CalWater, and other residential water conservation rebate programs that offer rebates for items including high efficiency washing machines and toilets, rain barrels, sprinkler nozzles, irrigation controls and Lawn Be Gone (drought tolerant landscapes). Advocate with Coastside Water District to supplement existing rebates and services for Half Moon Bay residents and businesses.	Supportive
W-1.2	Enforce the City's Water Efficient Landscape Ordinance (Chapter 13.04) and issue fines to ensure compliance.	Supportive

Green Businesses

2030 Objectives

- Increase participation in San Mateo County's Green Business Program from 7 businesses to 30 businesses by 2030

The GHG reduction measures and actions laid out in this CAAP will rely on behavior change and collaboration across the community. Local businesses are a critical part piece of the puzzle, and measure **GB-1** leverages San Mateo County's existing green business program. The San Mateo County Green Business Program offers technical assistance and resources to small and medium-sized businesses to reduce their carbon, waste, energy, and water footprint. Certified green businesses in the Program also benefit from saved money (Ex. reduced

energy bills), and improved employee and customer health through the co-benefits of sustainability actions. By more than tripling the number of local businesses participating in the Program by 2030, Half Moon Bay is integrating existing businesses in the CAAP.

What Are We Trying to Achieve? Core Green Business Measures

#	GOAL	GHG REDUCTIONS (MT CO ₂ e)
GB-1	Increase participation in San Mateo County's Green Business Program from 7 businesses to 30 businesses by 2030 and 50 by 2045.	Not Quantified

Measure GB-1: Increase participation in San Mateo County's Green Business Program from 7 businesses to 30 businesses by 2030 and 50 by 2045.

Action #	Action	Quantified or Supportive?
GB-1.1	Promote San Mateo County Green Business program through engagement and direct outreach to small and minority-owned businesses.	Supportive

Municipal Measures

2030 Objectives

- Electrify all municipal facilities
- Continue to utilize ECO100 or a similar service for all municipal facilities^t
- Increase zero-emission vehicle (ZEV) adoption within the municipal fleet to 100%
- Increase waste diversion in municipal operations
- Seek funding and grant opportunities for climate action planning

The CAAP includes several municipal strategies that complement the other mitigation strategies within the plan. Though municipal operations have not been separately broken out in Half Moon Bay's GHG inventory, they generally account for a small proportion of total emissions (~2-5 percent of community emissions) in cities across the state. However, actions to reduce these emissions are important to demonstrate feasibility, establish the City as a leader, and promote more sustainable uses of local resources. GHG emissions reductions from municipal strategies and actions were not quantified as there was not a separate municipal inventory, and because quantification would have double counted reductions from other strategies.

Half Moon Bay has already paved the way for building decarbonization in the Peninsula through its ambitious local policies reducing natural gas consumption and calling for an end of natural gas use by 2045. The municipal strategies and actions laid out below strengthen this existing sustainability leadership sector-by-sector. Measure **MC-1** allows the City to continue to identify key sources of funding and technical support for overarching climate action planning and implementation. Measures **ME 1, 2, and 3**, allow the City to lead the way in decarbonizing Municipal facilities, while **MT-1** catalyzes decarbonized transportation through ZEV procurement for the City fleet.

^t ECO100 is Peninsula Clean Energy's 100% renewable electricity option. <https://www.peninsulacleanenergy.com/opt-up/>

Finally, **MW-1** allows the City to show zero-waste leadership by achieving SB 1383 targets ahead of schedule. These measures allow the City of Half Moon Bay to continue its path as a sustainability leader in the region through leading by example.

What Are We Trying to Achieve? Municipal Measures

#	GOAL	GHG REDUCTIONS (MT CO ₂ e)
Municipal Climate Action and Adaptation Planning		
MC-1	Dedicate staff time to continue to research and apply for grants, funding opportunities, and technical support for climate action and adaptation planning.	Not quantified
Municipal Energy		
ME-1	Employ carbon-free electricity for all municipal operations and increase supply of local renewable energy supply at municipal facilities.	Not quantified
ME-2	Electrify all municipal facilities by 2025.	Not quantified
ME-3	Increase the energy efficiency of all municipal facilities and operations	Not quantified
Municipal Transportation		
MT-1	Increase zero-emission vehicle (ZEV) adoption within the municipal fleet to 100% by 2030.	Not quantified
Municipal waste		
MW-1	Increase waste diversion in municipal operations to 95% by 2035	Not quantified

Municipal Climate Action and Adaptation Planning

Measure MC-1: Dedicate staff time to continue to research and apply for grants, funding opportunities, and technical support for climate action and adaptation planning.

ACTION #	ACTION	QUANTIFIED OR SUPPORTIVE?
MC-1.1	Dedicate staff time to continue to monitor and apply for sources of funding for climate action and adaptation planning from Federal, State, County, and philanthropic sources, prioritizing years when there will need to be CAAP updates and progress reports.	Supportive
MC-1.2	Dedicate staff time to identifying and utilizing technical assistance resources for climate action and adaptation planning and implementation (ex. outreach strategies, branding assistance, policy support), in sync with CAAP updates and measure and actions implementation dates.	Supportive

Municipal Energy

Measure ME-1: Employ carbon-free electricity for all municipal operations and increase supply of local renewable energy supply at municipal facilities.

ACTION #	ACTION	QUANTIFIED OR SUPPORTIVE?
ME-1.1	Through PCE or another provider, continue to utilize the ECO100 or similar service for all municipal facilities.	Supportive
ME-1.2	Conduct feasibility studies on all existing facilities to identify new opportunities for the installation of solar PV and/or solar hot water systems. Based on the results of the study, install systems where feasible and use group purchasing power such as Bay Area SunShares or purchase power agreements (PPAs) to lower costs.	Supportive

Measure ME-2: Electrify all municipal facilities by 2025.

ACTION #	ACTION	QUANTIFIED OR SUPPORTIVE?
ME-2.1	Require all existing City facilities to be all-electric by 2025.	Supportive
ME-2.2	Conduct a feasibility study and cost analysis to budget for the electrification of all existing municipal facilities and create a prioritized list of building retrofits and equipment replacements based on costs and burnout. Conduct the study and plan the retrofits using technical support and financing resources from RICAPS' Municipal Electrification Toolkit.	Supportive
ME-2.3	Develop the Corporation Yard as an all-electric facility and incorporate a PV system sufficient to power all needs of facility.	Supportive
ME-2.4	Through the RICAPS program, collaborate with other jurisdictions in San Mateo County to leverage bulk purchases to reduce electrification costs.	Supportive

Measure ME-3: Increase the energy efficiency of all municipal facilities and operations.

ACTION #	ACTION	QUANTIFIED OR SUPPORTIVE?
ME-3.1	Establish policy requiring municipal new construction and major remodels improve energy efficiency by achieving CALGreen Tier 2 energy performance.	Supportive
ME-3.2	Continue to audit City facilities for energy efficiency opportunities and implement Energy Efficiency (EE) retrofits. Participate in San Mateo County Energy Watch and subsequent/similar programs to leverage benchmarking to identify opportunities for EE upgrades and track energy performance. Leverage other programs that provide funding.	Supportive
ME-3.3	Establish an Energy Efficiency Program within its budget and/or Capital Improvement Program to fund audits and retrofits.	Supportive
ME-3.4	Consider adopting a budget policy requiring a portion of savings derived from energy efficiency and solar energy projects be dedicated to annual municipal energy efficiency projects and capital maintenance.	Supportive
ME-3.5	Continue to replace street lighting – including signal, park and parking lots – with efficient LED lighting.	Supportive
ME-3.6	Work with Caltrans to replace and maintain traffic signals as LED or greater efficiency means.	Supportive
ME-3.7	Implement the Sustainable Purchasing and Practices Policy that emphasizes the purchase of ENERGY STAR certified equipment – appliances, electronics, etc. for any replacements needed before 2025.	Supportive

Municipal Transportation

Measure MT-1: Increase zero-emission vehicle (ZEV) adoption within the municipal fleet to 100% by 2030.

ACTION #	ACTION	QUANTIFIED OR SUPPORTIVE?
MT-1.1	Establish a policy by 2023 requiring all municipal vehicle replacements be zero-emission vehicles.	Supportive
MT-1.2	Conduct an assessment of the municipal fleet and develop a plan to transition all vehicles to zero emission vehicles with a prioritized list of replacements based on age of vehicle and available technology for vehicle type.	Supportive
MT-1.3	Conduct a study to quantify the number of electric vehicle chargers needed to support a zero-emission vehicle fleet and work with PCE and PG&E to acquire funding for installations.	Supportive

Municipal Waste

Measure MW-1: Increase waste diversion in municipal operations to 95% by 2035.

ACTION #	ACTION	QUANTIFIED OR SUPPORTIVE?
MW-1.1	Establish a policy to achieve a 95% waste diversion rate in City operations by 2035. Provide appropriate bins and signage, organics recycling, and education to public employees to make the goal achievable.	Supportive
MW-1.2	Implement the sustainable purchasing policy that emphasizes the purchase of materials with high recycled content – paper, furniture, etc. Track progress through waste audits.	Supportive

Adaptation

As noted earlier, the climate is changing rapidly. According to the National Oceanic and Atmospheric Administration (NOAA):

“The globally averaged temperature departure from average over land and ocean surfaces for 2019 was the second highest since record keeping began in 1880, according to NOAA scientists. December’s combined global land and ocean surface temperature departure from average for 2019 was also the second highest in the 140-year record. In a separate analysis of global temperature data, WMO, NASA, and Copernicus scientists determined 2019 to also be the second warmest year on record. Analyses from the United Kingdom Met Office ranked 2019 among the top three warmest years on record.

For 2019, the average temperature across global land and ocean surfaces was 1.71°F (0.95°C) above the 20th century average. This was the second highest among all years in the 1880–2019 record and just 0.07°F (0.04°C) less than the record value set in 2016. The five warmest years have occurred since 2015; nine of the 10 warmest years have occurred since 2005. 1998 is the only 20th century year among the 10 warmest years on record.”³⁵

Even if we stopped emitting greenhouse gasses tomorrow, the climate would continue to change due to the length of the carbon cycle — the ability of the Earth to absorb excess carbon in the ocean and plants. Therefore, climate change is inevitable, and our communities must plan to adapt to it.

Adaptation planning is most effective at the local level. To develop its adaptation strategy, Half Moon Bay will refer to the following integrated set of policies and tools:

- California Adaptation Planning Guide from the California Office of Emergency Services (still in draft form: <https://www.caloes.ca.gov/HazardMitigationSite/Documents/APG2-FINAL-PR-DRAFTAccessible.pdf>)
- Safeguarding California Plan: California's Climate Adaptation Strategy (2018 Update)
- Cal-Adapt 2.0 (released October 2017 and updated regularly, most recently in January 2020)
- California's Climate Change Assessment (most recently updated in 2018)
- State of California General Plan Guidelines (updated periodically, most recently updated in 2017)
- Adaptation Clearinghouse
- State Hazard Mitigation (2018 Update)

In addition, the County of San Mateo has embarked on a multi-sector adaptation strategy, Climate Ready SMC, to plan, assess, and implement strategies to address sea-level rise and flooding, changes in precipitation, extreme heat, and wildfires in San Mateo County.³⁶ Half Moon Bay plans to coordinate closely with the County on adaptation planning efforts.

For more information on adaptation planning, see Appendix D or visit the Climate Ready SMC website: <https://www.smcsustainability.org/climate-ready>.

Strategies to Get Us There

Implementation

The preceding chapters describe the principal sources of Half Moon Bay's GHG emissions and related goals and actions for achieving the community's targets of reducing emissions at least 40 percent below 1990 levels by 2030. This section outlines the main components of the process for putting this CAAP into action and identifies specific actions from earlier sections that are recommended for implementation.

Although significant GHG reduction policies and initiatives are already in place, the actions proposed in this CAAP, by necessity, far surpass the scale of existing efforts. Implementing the CAAP and ensuring that it results in real GHG emissions reductions will require increased coordination across sectors and institutionalized climate protection efforts across the community.

Better Together

Climate change is an issue that crosses geographic and sector boundaries. Half Moon Bay recognizes the value of collaborating with other public agencies, businesses, and community-based organizations to accelerate climate action. Everyone has a part to play, and Half Moon Bay cannot do it alone. Half Moon Bay plans to coordinate efforts with the sectors listed below. More potential partners are listed in Appendix E.

Public Agencies

Half Moon Bay leverages existing climate protection programs funded by public agencies such as the State of California, Peninsula Clean Energy, City/County Association of Governments of San Mateo County, Association of Bay Area Governments, County of San Mateo Office of Sustainability, and Bay Area Regional Energy Network (BayREN), among others. Collaboration with these organizations helps Half Moon Bay increase the sustainability of its operations and supports community efforts to improve energy efficiency, install renewable energy technologies, facilitate transit/biking/walking initiatives, and take other actions. A more extensive list of public agencies can be found in Appendix E.1.

Nonprofits

Half Moon Bay plans to work through existing networks of community-based and faith-based organizations that serve diverse cultural communities. Some organizations may not have the economic capacity to participate and may need to have their participation expenses defrayed. Many nonprofits already provide programming that is in alignment with the goals in this CAAP. In addition, these collaborations will help Half Moon Bay engage community members who ordinarily aren't aware of climate action efforts. (See next section.) Some community members may not be able to afford childcare or other expenses to participate and may not have a car to drive to meeting locations not accessible by public transportation. A list of local nonprofits is in Appendix E.2.

Communities of Concern

The City of Half Moon Bay initiated their Climate Action and Adaptation Plan (CAAP) process by establishing partnerships with three organizations working with socially vulnerable communities – youth, seniors, the Latino community, and unhoused residents who had previously been underserved in planning processes. This effort generated innovative and tailored outreach strategies, strengthened relationships between the organizations and the City, generated a set of key priorities, and provided valuable insights that are being incorporated into the City's CAAP process. <https://climatereadysmc.org/pilotprojects>

Communities of color and low-income populations have been under-represented in policy-making and often are not consulted about programs and services intended to benefit them, frequently resulting in ineffective programs. A variety of factors, such as lack of trusted relationships with government, language barriers, and lack of inclusion in planning and policy-development processes have all served as barriers to involvement. Leadership and membership of mainstream environmental organizations have also tended to be white and well off, despite evidence that environmental concerns, including climate change, are broadly held by people of color and low-income populations.³⁷

It's important for Half Moon Bay to invest in long-term, reciprocal relationships with socially vulnerable communities. Half Moon Bay understands the need to consider how individuals who have not had access to educational opportunities or who do not speak English can participate in the conversation. Half Moon Bay is committed to listening and responding to diverse concerns and assisting community partners in participatory planning processes.

In implementing this CAAP, the City plans to continue fostering relationships and deepening involvement with communities of color and low-income populations regarding the challenges and solutions to climate change. Engagement strategies will take into account existing barriers and attempt to mitigate them. Ensuring that

education and outreach are culturally and linguistically appropriate, as well as taking into account diverse educational attainment will be critical for success.

Half Moon Bay and the County will seek to support community needs and priorities by working with community-based organizations to engage these traditionally under-represented and under-served populations and businesses. In addition, Half Moon Bay will look for opportunities to support diverse community organizations to implement actions outlined in this CAAP, including grants such as the one that enabled community-based organizations in Half Moon Bay to engage socially vulnerable communities in participating in planning processes.

Private Sector

For Half Moon Bay to succeed in achieving its CAAP goals, we need support from the private sector. Markets need to shift. The goods and services available to our community should support our efforts to build a sustainable, resilient economy that doesn't threaten the stability of the climate.

In particular, Half Moon Bay's ongoing engagement in programs to decrease energy use and shift from natural gas to electricity use provided by private company, Pacific Gas and Electric Company is crucial to our efforts to decarbonize our energy system and transportation system.

Some businesses already put resource conservation at the core of their business models. Several businesses are Certified B Corporations, which are legally required to consider the impact of their decisions on their workers, customers, suppliers, community, and the environment. Seven businesses on the Coastsides are certified as Green Businesses through the California Green Business Program. A complete list of these businesses is available at <https://greenbusinessca.org/find-green-business/>.

In addition, Half Moon Bay intends to partner with the County of San Mateo Office of Sustainability to help small and medium-sized businesses learn about additional programs and incentives that will help them save money while also being good environmental stewards.

San Mateo County is home to many multinational corporations with global supply chains, and employees that live in Half Moon Bay. Moving forward, Half Moon Bay will look for opportunities to help residents, employees, and business leaders understand how they can bring climate action principles to their workplaces.

Internal Departments

Half Moon Bay's collaborative mindset extends to our internal management. Departments and teams across the City are responsible for leading and implementing the strategies outlined in this CAAP, including Public Works, Community Development, and the City Manager's Office.

External Communication

Half Moon Bay plans to widely distribute information on programs and funding opportunities for residents and local businesses. This may include participating in a countywide or regional online engagement platforms such as [Climate Solutions Net](#) or [Sustainable Future](#), if possible. Information will be distributed through the City's eNews, Sustainability Source listserv, social media platforms, and on the City's dedicated sustainability webpage. To sign up to receive regular communications, please visit: www.hmbcity.com/sustainability.

Specific actions that community members are encouraged to take today are included in boxes throughout the Strategies and Actions, Strategies to Get Us There section. Funding opportunities are listed in Appendix F.

Half Moon Bay will also look for opportunities to partner with organizations listed in this CAAP to bring workshops and trainings to the community. Overall, the goal is to increase community awareness about climate change to influence everyday consumer behavior and purchasing decisions. Half Moon Bay's messaging can encourage community members to take action not just at home, but also at work, and with community organizations of which they're members.

Multi-sector and Regional Collaboration

To ensure full implementation of the CAAP and accelerate climate action efforts, an interdepartmental team of City staff, in collaboration with civic leaders from the public, nonprofit, and private sectors, must be assembled to ensure sustainability and accountability. In addition, Half Moon Bay will aim to participate in countywide and/or regional convenings that bring the three sectors together to identify shared goals and collaboration opportunities.

Two areas, in particular, are good candidates for regional collaboration:

1. Electrification of buildings
2. Electrification of transportation

Workforce Development

To meet our climate action goals, Half Moon Bay's workforce needs to be ready to implement projects that will result in less energy consumption, fewer vehicle miles traveled, less solid waste, and reduced municipal emissions. It's estimated that an increase of 64,000 to 100,000 local workers will be required to electrify California's building stock.³⁸

Training workers to deliver the services required by this CAAP is a critical step in the process. Organizations like BayREN and PG&E have already been training local contractors, designers, and architects in energy efficiency for over a decade through contractor trainings and specific workforce development programs. Local plumbing and electrical unions also provide extensive trainings for their members. Grid Alternatives has been offering training programs for solar installations in California and the rest of the United States by utilizing grant funds to install solar panels on low-income housing, and training workers on site in a style similar to the Habitat for Humanity model. Rising Sun Center for Opportunity runs Climate Careers, a summer youth employment and residential water and energy efficiency program in the Bay Area. It provides youth with opportunities for training and meaningful employment in the clean economy, educates about eco-literacy issues such as climate change, and offers continued professional development opportunities after employment.

Since 2019, Peninsula Clean Energy has started offering similar programs to supplement BayREN and PG&E's existing work. All three organizations have expanded to include contractor trainings on building electrification and EV charging station deployment. Since building electrification projects require contractors skilled in both plumbing and electricity trades, Half Moon Bay will collaborate with the County of San Mateo Office of Sustainability to provide opportunities for these contractors to connect with each other and potentially form implementation teams.

Supporting these workforce development programs and ensuring they help develop the expertise of our local workforce, will be critical to ensuring we meet our climate goals, and will help community members gain employment in the growing green jobs sector.

Monitoring and Improvement

Half Moon Bay envisions that the core strategies will remain constant as we move forward. As we live in an age and place of abundant technological innovation, more advanced technologies and creative innovations may be integrated into the CAAP in the future.

To ensure that the emissions targets described in this CAAP are met, ongoing monitoring is necessary. If it's determined that CAAP efforts are falling short of the goals, the City will add additional voluntary and mandatory measures to the CAAP. This process is necessary for this CAAP to maintain its status as a "GHG Reduction Strategy" and for related projects to be automatically approved under the California Environmental Quality Act (CEQA).

Generation-based inventories provide a consistent way to track progress over time. But these inventories have two shortfalls:

1. **Annual GHG generation-based inventories lag about two to three years behind.** For instance, the 2020 inventory will be available in 2023. This makes it difficult to get immediate feedback on changes to programs and policies.
2. **Generation-based inventories don't tell the whole story.** Our goal is to achieve at least a 50% reduction of GHG emissions by 2030 on the way to carbon neutrality well before 2045. It will be difficult to meet the carbon neutrality goal without calculating and tracking emissions from the consumption of goods and services in addition to the generation of emissions.

Half Moon Bay's monitoring and ongoing improvement program addresses these shortfalls:

- Half Moon Bay will establish and track key performance indicators (KPIs) for each action listed in this CAAP, including actions to reduce consumption-based emissions. Progress on KPIs will be posted on the City's website and updated biannually, at a minimum.
- Through the RICAPS program, Half Moon Bay will consider participating in a countywide goal for KPIs agreed to by all cities in the county. Those KPIs will be posted and tracked on the County's website. Examples of common KPIs are the number of solar installations, number of EV charging stations installed, number of homes retrofitted, number of EVs purchased, number of heat pump water heaters and/or space heaters installed, etc.
- Every year, Sustainability staff will issue an Annual Climate Action and Adaptation Update Report (annual report) to update the City Council, residents, and other interested stakeholders on the progress made in implementing the CAAP actions. The annual report will detail lessons learned and make recommendations for changes to the implementation strategy or the CAAP itself. Following the release of the annual report, a 30-day public comment period will be open to allow for community input on the implementation of the CAAP.
- Sustainability staff will track the emissions, resource savings, equity and inclusion impact, and any other effects of each implemented action, as well as estimate costs to government, residents, and businesses.
- Every year, Half Moon Bay will review the newest community GHG inventory provided by the County of San Mateo Office of Sustainability through the San Mateo County Energy Watch program. Every five years, Half Moon Bay will conduct a municipal GHG generation-based inventory to track progress on reducing the City's own emissions.

- This CAAP may need to be updated based on the results of the GHG inventories. Half Moon Bay may modify and/or add new actions to ensure that the City is on track to meet its GHG reduction goals.
- In partnership with the County Office of Sustainability, Half Moon Bay will explore a collaboration with a research institution to include questions about climate protection behaviors in an annual countywide survey of community members. Responses from the survey could be used to track progress on community actions related to consumption-based emissions.

DRAFT

Conclusion

The challenge of preparing for and mitigating the effects of climate change is unprecedented in its scale and potential disruption to our way of living. Recent climate disasters have given us a preview of what could become the “new abnormal.”

We must act now. Climate change waits for no one. However, in the face of daunting headlines, we remain hopeful and resolved, and know what we need to do to move forward. We have the solutions to reduce emissions, increase efficiency, promote economic vitality, and improve our quality of life.

This CAAP provides an overarching, strategic framework for Half Moon Bay to achieve the goal of reducing GHG emissions by at least 40% below 1990 levels by 2030, on the way to carbon neutrality well before 2045. While developing and publishing this CAAP is an important step, it's even more critical that this CAAP remains a living document, to be updated as technology and policies progress.

This CAAP not only supports the City's efforts to manage its own GHG emissions, it is a call-to-action to residents, community institutions, and businesses to take an active part in our transition to a low-carbon future and clean economy. In this process, Half Moon Bay will foster a vibrant economy, increase its resiliency, and support a collective vision for a livable and sustainable community for generations to come.

Appendix

A. Glossary of Abbreviations

AB 32	Assembly Bill 32, The California Global Warming Solutions Act of 2006
ALAS	Ayudando Latinos a Soñar
BAAQMD	Bay Area Air Quality Management District
CARB	California Air Resources Board
CAP	Climate action plan
CAAP	Climate action and adaptation plan
CBO	Community based organization
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CPUC	California Public Utilities Commission
EV	Electric vehicle
GHG	Greenhouse gas
ICLEI	Local Governments for Sustainability
IPCC	<u>Intergovernmental Panel on Climate Change</u>
KPI	Key performance indicator
kWh	kilowatt hour
MT	Metric ton
MMT	Million metric tons
PCE	Peninsula Clean Energy
PG&E	Pacific Gas and Electric Company
RPS	Renewable portfolio standard
TOD	Transit-oriented development
TDM	Traffic Demand Management
U.S. EPA	United States Environmental Protection Agency
VMT	Vehicle miles traveled
WRI	World Resources Institute
YLI	Youth Leadership Institute

B. Climate Change

B.1 Global Goal to Limit Warming to 1.5°C

The Intergovernmental Panel on Climate Change (IPCC), the leading international scientific body on climate change, released a report³⁹ in mid-2018 shifting the threshold at which significant and potentially irreversible climate change impacts occur from 2°C to 1.5°C of average global temperature increase above pre-industrial levels. The IPCC report promotes immediate actions to meet the 1.5°C threshold to prevent or slow these impacts. Many of the impacts of warming up to and beyond 1.5°C, and some potential impacts of mitigation actions required to limit warming to 1.5°C, fall disproportionately on low income and socially vulnerable people.

Substantial changes in regional climate occur between 1.5°C and 2°C of global average temperature increase. For example, the number of people exposed to severe heat waves triples. Keeping temperatures at 1.5°C as compared to a 2°C warming would result in global reductions in risk, including:

- **Sea level rise:** Decreasing global rate of rise by approximately 3.9 inches
- **Heat waves:** Decreasing the number of people being frequently exposed by 420 million worldwide
- **Heavy precipitation and drought:** Reducing intensity and frequency worldwide
- **Drinking water:** Lowering the number of people without access to drinking water by 50%

Limiting warming to 1.5°C will require changes by 2050, including:

- Eliminating GHG emissions in our cities
- Deep reductions in global emissions of non-CO2 climate pollutants, particularly methane
- Reducing oil use by 32-74 percent
- Reducing natural gas use by 13-60 percent
- Leveraging renewables to supply 36-97 percent of energy
- Making buildings and transportation energy efficient
- Implementing adaptation options, including coastal defense and hardening, efficient irrigation, green infrastructure, and disaster risk management

B.2 State and Local Goals and Targets

California has some of the most aggressive climate action goals in the United States. The State has set a goal of emissions reductions to 40 percent below 1990 levels by 2030. To achieve this, California has created the following strategies:

- Increase renewable electricity production to 50 percent
- Reduce petroleum use by 50 percent in vehicles
- Double energy efficiency savings at existing buildings
- Reduce GHG emissions from natural and working lands

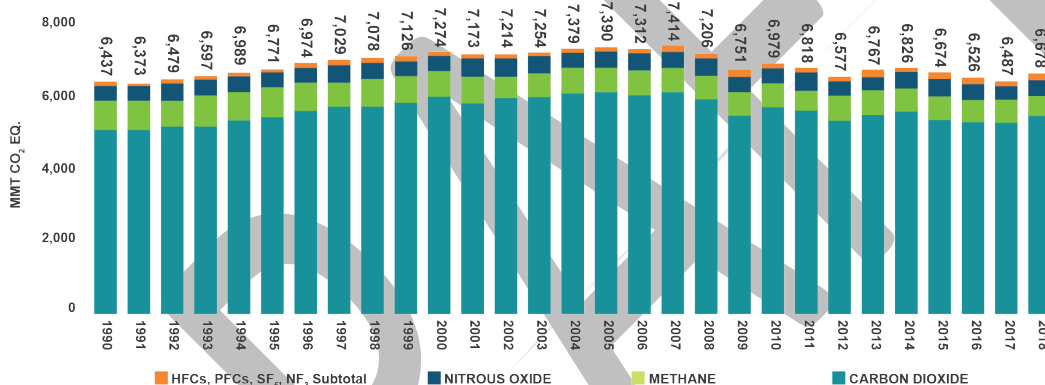
- Reduce short-lived climate pollutants such as black carbon, methane, tropospheric ozone, and fluorinated gases
- Make California more resilient to climate change in accordance with California's 2018 *Safeguarding California Plan*

B.3 Trends in National and State Emissions

National Emissions

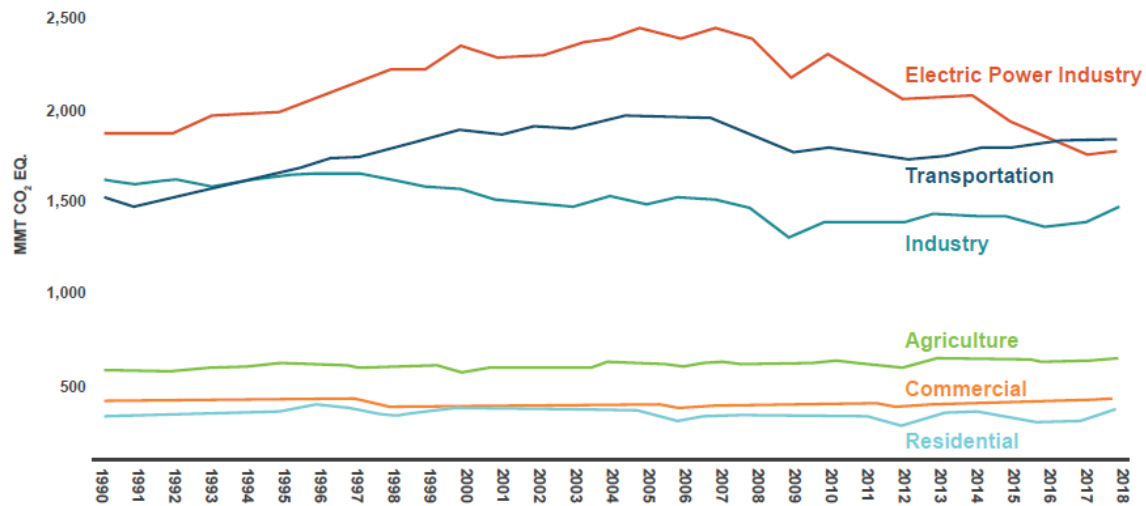
According to the U.S. EPA, gross total U.S. GHG emissions in 2017 were 6,456.7 million metric tons (MMT) of CO₂ equivalent (CO₂e), representing a 12 percent decrease below 2005 levels.⁴⁰ Emissions have also decreased 4.5 percent since 2014, largely driven by transitioning power plants from using coal to natural gas, as well as warmer winter conditions. CO₂, the largest component of man-made GHGs, made up 81.6 percent of total U.S. GHG emissions in 2017, followed by methane at 10.2 percent, nitrous oxide at 5.6 percent, and fluorinated gases at 2.6 percent.

Figure 10: Gross U.S. GHG Emissions by Gas: 1990-2018⁴¹



In 2018, the industrial sector contributed the largest share of GHG emissions (29.1 percent), followed by transportation (27.9 percent), commercial (16.2 percent), residential (15.6 percent), and agriculture (10.5 percent). Land use and forestry offset 11 percent of total gross emissions. Of the five main sectors, transportation has seen the largest increase in emissions since 1990 (22 percent increase), while industrial emissions have seen the largest decrease (15.5 percent decrease).

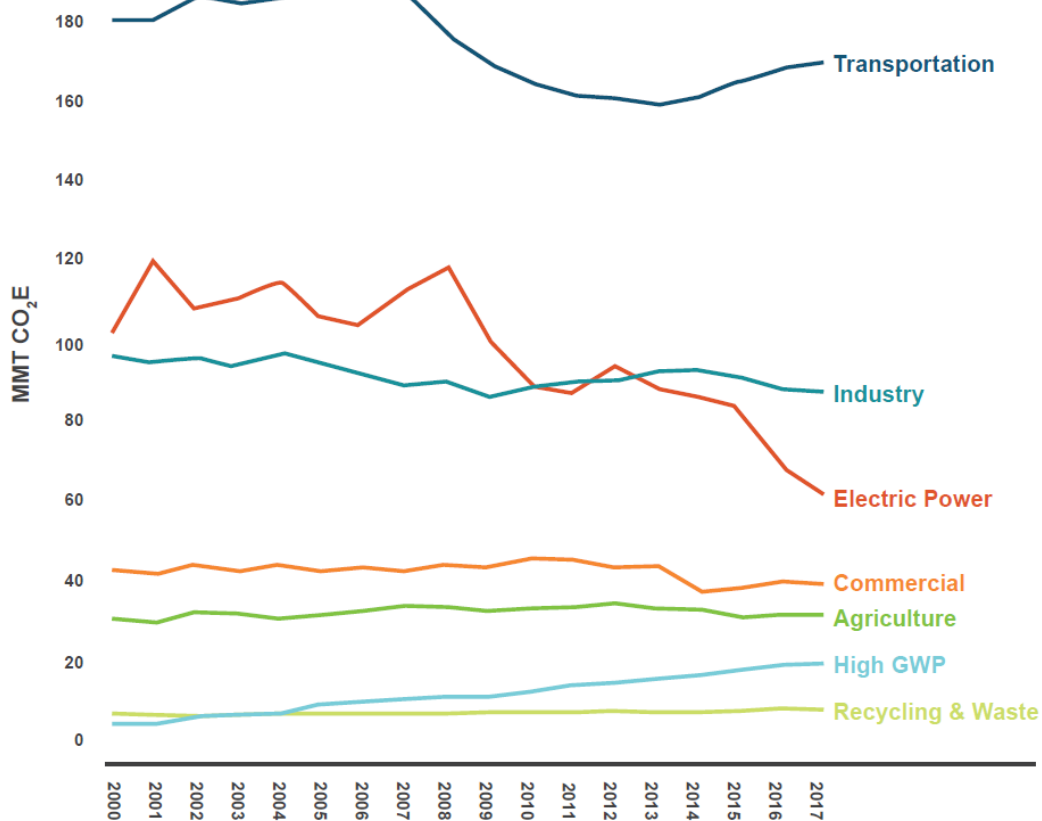
Figure 11: U.S. GHG Emissions by Economic Sector⁴²



California Emissions

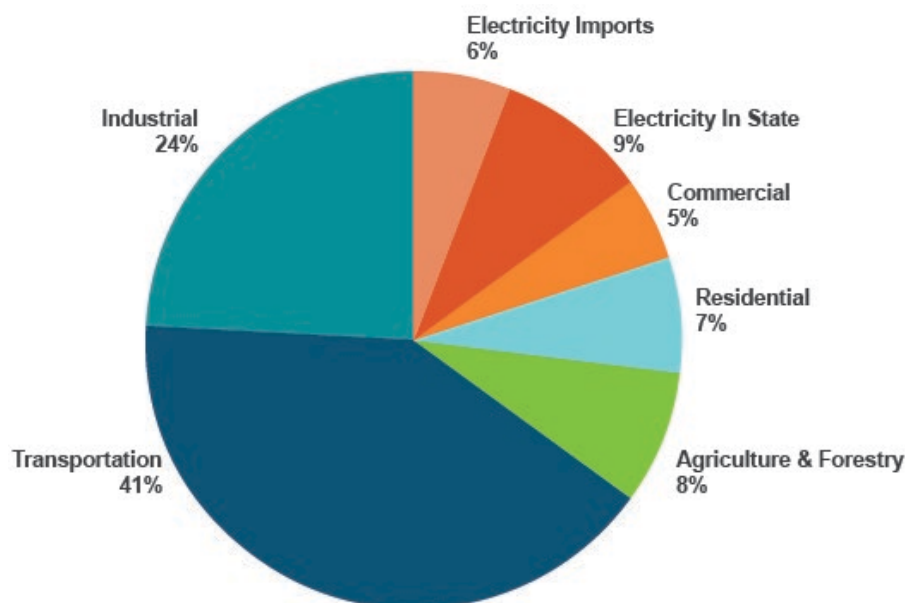
Similar to the national trend, total GHG emissions in California have decreased in recent years. According to the California Air Resources Board (CARB), total California GHG emissions in 2017 were 424 million metric tons (MMT) of CO₂e, representing a 2 percent decrease below 1990 levels and a 13 percent decrease below 2005 levels.⁴³

Figure 12: California GHG Emissions by Sector: 2000-2017



California has seen an overall decrease in carbon intensity from electricity generation, driven by a large increase in zero-GHG and renewable energy resources due in part to California's Renewable Portfolio Standard (RPS)⁴⁴ and Cap-and-Trade Program.⁴⁵ In 2017, the transportation sector contributed the largest share of GHG emissions (41 percent), followed by industrial (24 percent), in-state electricity (9 percent), agriculture and forestry (8 percent), residential (7 percent), imported electricity (6 percent), and commercial (5 percent).

Figure 13: California 2017 GHG Emissions by Sector



B.4 Four Scenarios Show What Climate Change Will Do To The Earth, From Pretty Bad To Disaster

The following is a reprint of an article that was published in Fast Company on August 26, 2014.⁴⁶ Despite the drops in emissions resulting from the downturn in economic activity during the COVID-19 pandemic, greenhouse gases are expected to continue to rise over the next decade,^{47 48} keeping us on course for the highest emissions pathway. Scientists are currently developing new emissions trajectories based on nine scenarios that will be used in the upcoming IPCC report.

Four Scenarios Show What Climate Change Will Do To The Earth, From Pretty Bad To Disaster

Climate change is going to do a lot of damage. How bad that damage will be is still under debate.

The most recent Intergovernmental Panel on Climate Change (IPCC) [report](#) left no doubt about the future of the world if we don't slow the rate at which we release heat-trapping gases into the atmosphere. In a word, it's going to get bad.

But exactly how bad is still an open question, and a lot depends not only on how we react, but how quickly. The rate at which humans cut down on greenhouse gas (GHG) emissions—if we do choose to cut them—will have a large bearing on how the world turns out by 2100, the forecasts reveal.

This [graphic](#) from the World Resources Institute gives a sense of the dynamics at play. It presents four “emissions pathways,” ranging from the very optimistic to the highly pessimistic.

WE ACTUALLY DO SOMETHING ABOUT CLIMATE CHANGE

The first “Low Emissions” scenario is for a 66% drop in greenhouse emissions by 2050 compared to 2010 levels. It's what we might call a soft landing, because under those conditions scientists believe we'll be relatively safe.

The world would have warmed only by 2 degrees C over pre-industrial levels (the level set by various international agreements). Still, almost of the quarter of the world would suffer depleted groundwater supplies by 2080, and many more people will face extreme flooding, the WRI says. So, life wouldn't be peachy.

WE KEEP DOING WHAT WE'RE DOING

The "Medium Emissions" scenario sees increases in emissions until 2040 and the world exceeding its "carbon budget"—the level at which it should stay within the 2 degrees limit—by 2056. By 2100, the planet has warmed by 2.9 degrees, and economic productivity has fallen by 20%. By the 2080s, six times as many people are experiencing catastrophic flooding as the 1980s.

WE REV THE ENGINES

The "High Emissions" scenario doesn't see emissions peaking until 2080, while global temperatures jump 3.7 degrees C by 2100. The carbon budget is exhausted in 2057. The impact on agricultural production is so heinous that adaption is no longer viable, the WRI predicts.

WE DESTROY THE PLANET

As if that's not bad enough, there's one last "Highest Emissions" scenario (they should have called it the Doomsday Scenario, really). It sees the carbon budget obliterated in 2045 and global temperatures increasing a whopping 4.8 degrees by century's end. Many animals have become extinct and farming in some places, like southern Brazil, has become impossible.

But won't we adapt to the new conditions, you might ask? Well, maybe. The scenarios here assume flat technology development, not the leaps forward in innovation that we can hope for. We could have drought-resistant crops and new ways of recycling and desalinating water, for instance, that could make these predictions less forceful.

The easier course, though, is to cut emissions. To have a fighting chance of coping with climate disorder, we have to cut greenhouse gases quickly, not just wait until it's convenient.

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C. Policy

C.1 Global Policy

United Nations Sustainable Development Goal #13: Climate Action

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing – in a global partnership. Goal #13 is "Take urgent action to combat climate change and its impacts."⁴⁹

C.2 State Policy and Regulatory Context

The State of California has been a leader in developing and implementing policies and regulations to directly address the risk of severe climate change. Below we summarize the key statewide legislation aimed at reducing

greenhouse gas (GHG) emissions and adapt to climate impacts. There are many supporting pieces of legislation and other related initiatives that are sector specific.

Assembly Bill 32 (AB 32), California Global Solutions Act, 2006

In September 2006, the California legislature passed Assembly Bill 32 (AB 32), which set the goal of reducing GHG emissions back to 1990 levels by 2020. AB 32 finds and declares that “global warming poses a serious threat to economic well-being, public health, natural resources and the environment of California.” The legislation granted authority to the Air Resources Board to establish multiple mechanisms (regulatory, reporting, voluntary, and market) to achieve quantifiable reductions in GHG emissions to meet the statewide goal.

Senate Bill 97, CEQA Guidelines for Addressing GHG Emissions, 2007

In August of 2007, Senate Bill (SB) 97 was signed into law, expressly recognizing the need to analyze GHG emissions as a part of the California Environmental Quality Act (CEQA) process. SB 97 required the Office of Planning and Research (OPR) to develop, and the California Natural Resources Agency to adopt, amendments to CEQA Guidelines addressing the analysis and mitigation of GHG emissions. Those amendments became effective in March of 2010. Proposed projects that must comply with CEQA regulations include General Plans, Specific Plans and specific types of development projects.

Senate Bill 350, Clean Energy and Pollution Reduction Act, 2015

In October of 2015, Senate Bill 350 (SB 350) was signed into law, establishing new clean energy, clean air and greenhouse gas reduction goals for 2030 and beyond. SB 350 codified Governor Jerry Brown’s aggressive clean energy goals and established California’s 2030 greenhouse gas reduction target of 40 percent below 1990 levels. To achieve this goal, SB 350 increases California’s renewable electricity procurement goal from 33 percent by 2020 (legislation originally enacted in 2002) to 50 percent by 2030. Renewable resources include wind, solar, geothermal, wave, and small hydroelectric power. In addition, SB 350 requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030.

Senate Bill 100, The 100% Clean Energy Act, 2018

In September of 2018, Governor Brown signed Senate Bill 100 (SB 100), requiring the State’s load serving entities (including energy utilities and community choice energy programs) to achieve 50 percent renewable resources target by December 31, 2026, to achieve a 60 percent target by December 31, 2030 and supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. At the same time, Governor Brown also signed Executive Order B-55-18, requiring California to achieve carbon neutrality as soon as possible, and no later than 2045, and to maintain negative emissions thereafter.

Senate Bill 1477, Low Emissions Buildings and Sources of Heat Energy, 2018

In September 2018, Governor Brown signed Senate Bill 1477 (SB 1477), that requires the California Public Utilities Commission (CPUC) to oversee two new low-carbon heating programs, investigate potential pilot programs to build all-electric, zero-carbon buildings in areas damaged by wildfires, coordinate with the California Energy Commission on updates to the State’s building (Title 24) and appliance (Title 20) energy efficiency standards, and establish a building decarbonization policy framework. The bill authorizes \$200 million over four years to be invested in programs to advance low-carbon space and water heating technologies in both new and existing buildings. Funding for the programs is slated to come from natural gas utility carbon allowance proceeds from California’s cap-and-trade program.

Bay Area Air Quality Management District CEQA Guidelines

The Bay Area Air Quality Management District (BAAQMD) encourages local governments to adopt a GHG Reduction Strategy that is consistent with AB 32 goals. The GHG Reduction Strategy may streamline environmental review of community development projects. According to the BAAQMD, if a project is consistent with a GHG Reduction Strategy, then it can be presumed that the project will not have significant GHG impacts. This approach is consistent with the following State CEQA Guidelines, Section 15183.5.a:

“Lead agencies may analyze and mitigate the significant impacts of greenhouse gas emissions at a programmatic level, such as...a plan to reduce greenhouse gas emissions. Later project-specific environmental documents may tier from and/or incorporate by reference that existing programmatic review. Project-specific environmental documents may rely on an [Environmental Impact Report] containing a programmatic analysis of greenhouse gas emissions.”

This CAAP provides a foundation for future development efforts in the community. It is expected that environmental documents for future development projects will identify and incorporate all applicable voluntary and mandatory actions from the CAAP for projects undergoing CEQA review.

C.3 State-Level Programs

The City isn't expected to make all the reductions on its own. The following programs help cities meet their climate goals.

California Advanced Clean Cars Program

In 2012, CARB adopted a set of regulations to control emissions from passenger vehicles, collectively called Advanced Clean Cars. The program was developed in coordination with the U.S. EPA and National Highway Traffic Safety Administration (NHTSA) and combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of regulations. ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program

California Low Carbon Fuel Standard Program

The Low Carbon Fuel Standard (LCFS) is designed to encourage the use of low-carbon fuels, encourage the production of those fuels, and therefore, reduce GHG emissions. Currently, the LCFS calls for a 20 percent decline in the carbon intensity of diesel fuels below 2010 levels by 2030. ww3.arb.ca.gov/fuels/lcfs/lcfs.htm

Caltrain Electrification

Caltrain Electrification is a key component of Caltrain Modernization Program (CalMod). The current project will electrify the corridor from San Francisco to San Jose, including all track in San Mateo County, and will replace 75 percent of Caltrain's diesel service with electric. The project will lower GHG emissions, improve regional air quality, and reduce noise. <https://calmod.org>

California Renewable Portfolio Standard

The Renewable Portfolio Standard (RPS), originally established in 2002, required 20 percent of electricity retail sales to be served by renewable sources by 2017. The program was accelerated in 2015 with SB 350, which mandated a 50 percent RPS by 2030. SB 100, enacted in 2018, accelerated the program further, establishing

renewable energy targets of 50 percent by 2026, 60 percent by 2030, and 100 percent by 2045.
www.cpuc.ca.gov/rps

California Long Term Energy Efficiency Strategic Plan

Published in 2008 and updated in 2011, the California Long Term Energy Efficiency Strategic Plan outlines goals and strategies for key market sectors (i.e., commercial, residential, industrial, and agricultural) and crosscutting initiatives (e.g., heating, ventilation and air conditioning, codes and standards, research, and technology). While the Plan has not been updated since 2011, it is still referenced in numerous State documents and reports. The Plan embraces four specific programmatic goals, known as the Big Bold Energy Efficiency Strategies. These goals are:

- All new residential construction in California will be zero net energy by 2020.
- All new commercial construction in California will be zero net energy by 2030.
- The Heating, Venting and Air Conditioning (HVAC) industry will be re-shaped to deliver maximum performance HVAC systems.
- All eligible low-income customers will have an opportunity to participate in the LIEE program and will be provided all cost-effective energy efficiency measures in their residences by 2020.

More information on California's zero net energy goals can be found online at: www.cpuc.ca.gov/ZNE

Organic/Food Waste Diversion

In 2016, Senate Bill 1383 (SB 1383) established methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants in various sectors of California's economy. SB 1383 establishes target to achieve at least a 50 percent reduction in the level of statewide disposal of organic waste from 2014 levels by 2020 and a 75 percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets. More information about SB 1383 can be found online at: <https://www.calrecycle.ca.gov/climate/slcp>

C.4 Local Policy

In September 2019, the San Mateo County Board of Supervisors adopted a resolution declaring a climate emergency in San Mateo County to highlight the increasingly urgent need for action to address the climate crisis. The County of San Mateo joined over 1,000 national, international, and local jurisdictions with similar declarations. The resolution calls for the County to create climate action plans (CAPs) for its government operations and unincorporated community that will achieve carbon neutrality in advance of the State of California's 2045 goal, and coordinate with the cities and other local partners in addressing the climate crisis.⁵⁰

D. Best Practices for Community Collaboration and Sustainability Planning

Community engagement is an invaluable resource to climate action planning. It allows for the building of social cohesion and resilience needed to adapt and mitigate climate change impacts. San Mateo County Health Policy and Planning (HPP) supports meaningful, transparent, and inclusive public participation of residents that are most impacted by the decisions at stake in planning and policy processes. Community is central to the process to:

- Learn about the issues we are trying to address
- Share power and resources
- Build community ownership of the issues
- Do “with” versus doing “for”
- Honor community residents’ knowledge and experience
- Inform solutions, implementation, and evaluation
- Meet the community where they are

The most effective plans are those that create a transparent process and collaborate with community from the beginning, thus providing residents with the opportunity to create ownership of and interest in the plans and issues at hand. There is a spectrum of community engagement processes with increasing levels of public influence on decision-making processes, beginning with informing the public of decisions and issues on one end of the spectrum and collaborating and empowering community members to co-design and decide for themselves at the other end.⁵¹

Some California cities have engaged in effective public collaboration and empowerment practices in their planning process by sharing their decision-making power. The table below highlights jurisdictions with model planning practices that went beyond informing the public and collaborated with and empowered the public. Building strong sustainability planning comes down to building strong narratives internally and externally, while establishing transformative collaboration processes.^{52, 53}

D.1 Health Policy and Planning Recommended Best Practices for Community Engagement

The following recommendations incorporate best practices for inclusive and intentional engagement, transparency and clear communication, community empowerment, and program measurement.

Inclusive & Intentional Engagement

- Work through existing networks of community-based and faith-based organizations that serve and organize in diverse cultural communities to identify community leaders to work with.
- Host a “meet and greet” with community organizations and advocacy groups to build connections across sectors and develop partnerships.
- Engage community members with humility and by meeting people where they are: do not expect all community members to engage at the same level, acknowledge the many forms of community member knowledge, and use accessible and non-technical language (not planning jargon).

- Attend community meetings and cultural events as a participant. Listen to what issues are discussed and how they are talked about. Be sensitive to and aware of potential power dynamics due to race, ethnicity, citizenship, class, or gender differences.
- Develop awareness of the racial and economic disparities in the area and why those disparities exist; seek insights from experienced community leaders and organizations.
- Seek out relationships with leaders from non-English speaking communities. Work with them to identify barriers to engagement and ways to bridge the divide to work with their communities. Translate materials and provide interpretation at community meetings.
- Build incentives for engagement strategies that reduce barriers to participate.
- Hold meetings at times, such as on evenings and weekends, and places that are convenient and accessible to the public, including low-income residents; whenever possible, provide childcare, meals, and transit passes. Meeting locations should be well served by public transit that runs at night and on weekends.
- Establish an Equity Working Group as a way of creating an effective forum for bringing together the best thinking on equity issues through ongoing dialogue. At the same time, ensure that the recommendations of equity stakeholders do not live in a silo but are brought to other key decision-makers and advisory groups throughout the process. Ensure equity representation on technical advisory committees.⁵⁴

Transparency

- Structure your engagement and planning process to include substantive representation by Black, Indigenous, and People of Color (BIPOC) and/or organizations that represent low-income communities in various decision-making capacities.
- Communicate all key decision points in the planning or policy process.⁵⁵
- Demonstrate how public input will be considered by describing how public input from outreach strategies will be used in the development, evaluation, and selection of the plan alternatives at each key decision point.
- Establish regular communication mechanisms and communicate early and often to gauge progress, gain feedback on the process, share information, and gain new ideas for cultivating connections and maintaining relevance to community concerns.
- Use diverse communication techniques such as social media, pictures, video, and art to help people absorb information visually.⁵⁶

Empowerment: Sharing Power & Capacity

- Empower community members to take an active role in neighborhood revitalization from the start of a process. This means:
 - Creating a participatory process for developing a shared vision for community change.
 - Engaging residents in documenting not only the disparities and conditions that merit change but also community assets to preserve and build from.^{57,58,59}
- Share governance and decision-making by, for example, setting aside resources to be shaped and decided on by community members. Resources can include: grants for community engagement, land acquisition funds, the hiring of consultants, project selection, or participatory budgeting.
- Structure the planning process so community organizations and leaders can: 1) Shape agendas and issues, 2) organize and lead convenings, and 3) identify concrete and measurable benchmarks for success, as well

as the parties who will be responsible for both procedural (community engagement) and substantive (program/policy) outcomes.

- Establish a system of neighborhood-level resident representation to empower/engage local neighborhoods in their own revitalization process.⁶⁰
- Build capacity within disadvantaged/vulnerable/historically underserved communities to empower them to co-lead, navigate and participate in planning and policy processes. This can be achieved by:
 - Contracting with local, community-based organizations in low-income communities and communities of color to conduct engagement processes.
 - Partnering with and funding equity-focused community-based organizations to train participating residents from low-income communities and communities of color in the content and skills they will need to exercise informed leaderships.^{61,62}
- Promote Community Based Participatory Research (CBPR) principles in data collection and mapping of neighborhood existing conditions.⁶³

Measuring Success

Community planning for sustainability requires establishing measurable standards for diligent implementation. Defined assessment standards such as the Envision Rating System or STAR Community Rating System enhance the success, progress, and opportunities for any plan.

The current CAAP acknowledges the value of continuously updating the implementation matrix and the monitoring tool: both are critical for implementation and transparency. Including more holistic measures like those used by the STAR Community Rating and Envision Rating may enhance the CAAP's current evaluation metrics. Measure review should also include both quantitative and qualitative performance measures.

D.2 Health Policy and Planning Recommended Best Practices for Measure Review

- Identify SMART (Specific, Measurable, Agreed Upon, Realistic, Time-Bound) goals to accurately track and measure goals and deliverables.
 - Effectively communicate and share information with county/municipal agencies and stakeholders.
- Use tools (e.g., checklists, health impact assessments, etc.) to evaluate and identify challenges and potential solutions.
 - Identify implementation priority areas based on equitable vulnerability practices/assessments.
 - Routinely conduct pre/post evaluations.
- Practice accountability (in the form of regular progress reports and meetings with interested stakeholders), consulting with experts and community.
 - Produce annual progress reports and ensure reports are accessible to communities.
 - Clearly identify and communicate action plan methodologies, performance measures, timelines, and leads.
 - Assess changes and updates on a yearly basis, both for the plan and the relevant areas.
- Measure benefits and impacts in low-income and other vulnerable communities.
 - Ensure that updates and investments benefit existing and future residents.

- Include displacement risk of existing residents in measure criteria.
- Prioritize implementation of goals and actions in areas that are most affected.

Additional Resources

- [Your Community Toolbox for Leading in a Changing Climate](#): Step-by-step guide to collaborate across sectors and provide climate change education and engagement (Climate Education Partners)
- [Sustainability Best Practices Framework](#): Options for local action in 10 sustainability areas (Institute for Local Government)
- [Planning for Equity Policy Guide](#): Guidelines to remove policy barriers to equity (American Planning Association)
- [Assessing Sustainability: A Guide for Local Governments](#): Best practices for sustainability implementation (American Planning Association)
- [Office of Planning and Research Clearinghouse](#): Tools and database, case studies, climate stories, equity resources, and more sustainability best practices (Governor's Office of Planning and Research)
- [International Association for Public Participation](#): Resources for public participation and engagement at all levels (i.e., government, institution, individual, etc.)

Table 5: Community Engagement Model Practices in suburban, urban, and rural jurisdictions^{64,65,66}

Jurisdiction (type)	Leading Stakeholders	Outcome	Model Practice
City of Napa (urban/rural)	City staff, Task force, and Community residents	Sustainability Plan	Interviews with community leaders
East Palo Alto (urban)	City Council, City staff, Community stakeholders	Health and Equity Element	Policies for civic engagement and inclusivity in decision-making process
Jurupa Valley (suburban)	Consultants, Community-based organizations, and City staff	Environmental Justice Element	Meetings in affected neighborhoods
Los Angeles (urban)	City council, City staff, and Citywide coalition	Clean Up Green Up Ordinance	Community data ground-truthing
National City (suburban)	City council, City staff, and Community-based organizations	Environmental Justice Element	Meetings with decision-makers
Oakland (urban)	Planning Bureau and 12 Community-based organizations	EO Neighborhood Initiative	Year-long community engagement
Richmond (urban)	Advisory Committee and City staff	Community Health & Wellness Element	Council-appointed committee of resident leaders

E. Partners

In addition to the partners listed here, the newly launched Bay Area Climate Action Mapping Project (<https://www.bayareacclimateactionmap.org/>) lists additional organizations actively working on climate action.

E.1 Public Sector

Organization	Description
Abundant Grace	Abundant Grace transforms lives through our job-readiness programming: taking people experiencing homelessness to grow and harvest over 20,000 pounds of fresh, organic produce for free distribution to low-income families at our Full Circle Food Justice Program; and to clean up the environment of the beaches and trails of Half Moon Bay on the Coastside Clean Team. We are doing good, meaningful work together; we are making a difference in our community; we are transforming our very selves. Thanks to funding from the City of Half Moon Bay, Abundant Grace Coastside Worker provides workforce development and employment for the homeless and extremely low-income population in our community. We employ a team 4 days each week to clean the beach and coastal trail between Kelly Avenue and Poplar Beach. While getting paid is important, so is a sense of meaning in doing something for the community, working with a team, and it's always nice when people at the beach come up and thank us for our work. https://abundantgracecw.org
Bay Area Regional Energy Network (BayREN)	Led by the Association of Bay Area Governments (ABAG), BayREN provides regional-scale energy efficiency programs, services, and resources for single-family and multi-family homes, and small and medium-size businesses. BayREN supports cities in developing reach codes, and local building departments in complying with the Energy Code through trainings, events, and compliance tools. A water bill savings program is launching in 2020. In San Mateo County, the program is administered by the County of San Mateo Office of Sustainability. www.bayren.org
Cabrillo Unified School District (CUSD)	Cabrillo Unified School District (CUSD) The Cabrillo Unified School District (CUSD) currently operates four elementary schools, one intermediate school, one high school, a continuation school, and an adult education program serving Half Moon Bay and the unincorporated mid-coastside in San Mateo County. CUSD cares deeply about its impact on the environment. This care is embedded into the fabric of the coastside due to the importance and proximity of the Pacific Ocean. Comprehensive sustainability actions that contribute to a safer and healthier future for students and community has never been more crucial. CUSD's environmental efforts are guided by the principles of sustainability, social equity and inclusion, and education. These actions and initiatives are being guided by district and site level administration in partnership with the district-wide sustainability committee, and are focused on taking action across all aspects of school life within the campus (facilities - buildings and grounds - and operations), curriculum and instruction, community and culture. https://www.cabrillo.k12.ca.us/
California State Parks	Our Mission. To provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, State Park System lands protect and preserve an unparalleled collection of culturally and environmentally sensitive structures and habitats, threatened plant and animal species, ancient Native American sites, historic structures and artifacts ... the best of California's natural and cultural history. https://www.parks.ca.gov/

City/County Association of Governments of San Mateo County (C/CAG)

C/CAG is a council of governments consisting of the County of San Mateo and its 20 cities and towns. The organization deals with topics such as transportation, air quality, stormwater runoff, hazardous waste, solid waste and recycling, land use near airports, abandoned vehicle abatement, and issues that affect general quality of life. C/CAG supports several sustainability initiatives including:

San Mateo County Energy Watch. A local government partnership between PG&E and C/CAG to promote energy efficiency in municipal and non-profit buildings. It is managed and staffed by the County of San Mateo Office of Sustainability.
<https://smcenergywatch.org/>

Congestion Management Agency. C/CAG serves as the Congestion Management Agency for San Mateo County to identify strategies to respond to future transportation needs, develop procedures to alleviate and control congestion, and promote countywide solutions. <https://ccag.ca.gov/programs/transportation-programs/congestion-management/>

Sustainable Communities Strategy/Regional Transportation Plan. C/CAG is collaborating with local governments and regional agencies to develop a Sustainable Communities Strategy (SCS) in compliance with the requirements of SB 375. The SCS will facilitate more focused development in priority development areas near public transit stations. The aim of the San Mateo County SCS is to better integrate land use with public transportation in order to reduce GHG emissions. The San Mateo Countywide Transportation Plan was adopted by the C/CAG Board of Directors in February 2017. The Plan can be found online at: <https://ccag.ca.gov/programs/countywide-transportation-plan/>

San Mateo County Energy and Water Strategy 2025. This Plan provides a comprehensive roadmap for addressing challenges in the energy and water sectors in San Mateo County through 2025. It was developed by the County of San Mateo Office of Sustainability and the City/County Association of Governments of San Mateo County (C/CAG) with extensive input from expert local stakeholders from other public agencies, community-based organizations, and the private sector.

San Mateo Countywide Water Pollution Prevention Program (SMCWPPP). The program is a partnership of C/CAG, each incorporated city and town in the County, and the County of San Mateo, which share a common National Pollutant Discharge Elimination System (NPDES) permit. The goal of the collaboration is to reduce the pollution carried by stormwater into local creeks, the San Francisco Bay, and the Pacific Ocean. Permittees developed Green Infrastructure Plans to prompt specific reductions in mercury and PCBs (polychlorinated biphenyls) from entering the Bay via stormwater by 2040.

Coastside County Water District (CCWD)

Coastside County Water District is committed to protecting the future of our national, regional, and local water supply through water-efficient practices, products and services. That is why we are partnering with the U.S. Environmental Protection Agency (EPA) to bring to you WaterSense, a national program that offers people a simple way to make product choices that use less water – and perform as well or better than your existing products and fixtures. <https://coastsidewater.org/>

County of San Mateo Office of Sustainability	The Office of Sustainability (OOS) strives to improve the sustainability of the County's operations and the greater community by administering programs and developing policies in the areas of renewable energy and energy efficiency, water conservation, alternative transportation, affordable housing, waste reduction, and greenhouse gas (GHG) emission reductions. OOS also leads the following regional collaborations: Climate Ready SMC. Brings together leaders from across sectors and jurisdictions to foster collaboration and collectively find solutions to make San Mateo County climate ready. The Collaborative is facilitated by the County of San Mateo Office of Sustainability. The Collaborative seeks to help leaders from non-profit and community-based organizations local government, businesses, and other key partners. https://www.smcsustainability.org/climate-ready Home for All Initiative. Builds on the work and momentum of the Closing the Jobs/Housing Gap Task Force. Led by Supervisors Don Horsley and Warren Slocum, the Home for All Initiative is working to inspire community action and promote closure of the County's 16:1 jobs/housing gap. The Initiative's members include representatives from all sectors of the community and are focused on creating a future where everyone in San Mateo County has an affordable home. https://homeforallsmc.org/ Regionally Integrated Climate Action Planning Suite (RICAPS). A set of tools and a collaboration of all 20 incorporated cities and the County in climate action planning and implementation. https://smcenergywatch.org/local-governments/
Flood and Sea-Level Rise Resiliency District	The Flood and Sea Level Rise Resiliency District is a coordinated, cross-jurisdictional collaborative to face impending coastal erosion, sea-level rise, and flooding threats as we look toward 2100. Comprised of the 20 incorporated cities, City/County Association of Governments, and the County of San Mateo, the purpose of this entity is to create a unified voice, to cost-effectively implement resilient infrastructure to face these challenges. The District initiates new countywide efforts to address sea-level rise, flooding, coastal erosion, and large-scale stormwater infrastructure improvements through integrated regional planning, project implementation and long-term maintenance. https://resilientsanmateo.org
ICLEI - Local Governments for Sustainability	ICLEI is an international organization of local and regional governments that have made a commitment to sustainable development. They provide guides and frameworks that support climate action. https://icleiusa.org/
Local Government Commission (LGC)	LGC works to build livable communities and local leadership by connecting leaders via innovative programs and network opportunities, advancing policies through participation at the local and state level, and implementing solutions as a technical assistance provider and advisor to local jurisdictions. https://www.lgc.org/
Peninsula Clean Energy	Peninsula Clean Energy (PCE) was launched collaboratively by the County of San Mateo and all 20 of its cities and towns in 2016 to help the environment through cleaner energy, while helping customers save money through lower rates. PCE currently offers two electricity options to all residents, businesses, and municipalities in San Mateo County. Customers are automatically enrolled in the ECOplus rate that consists of 50 percent renewable and 95 percent greenhouse gas-free energy and can "opt up" to the ECO100 rate that consists of 100 percent renewable energy that is Green-e certified. PCE has a stated goal of sourcing 100 percent of electricity from California Renewable Portfolio Standard (RPS) eligible renewable energy by 2025. PCE is also supporting programs that reduce GHG emissions and deliver benefits to San Mateo County communities. www.peninsulacleanenergy.com

San Mateo County Public Health, Policy and Planning (HPP)	This County department protects the health of everyone who lives, works, learns, and plays in San Mateo County by preventing the spread of communicable diseases, delivering targeted health care services, providing public health laboratory testing, and building communities that make it easy to stay healthy. HPP is happy to partner with local governments working on climate action planning processes. https://www.smchealth.org/division-public-health-policy-and-planning
San Mateo County Transit District (SamTrans)	SamTrans provides public transit and transportation programs in San Mateo County: SamTrans bus service, including Redi-Wheels & RediCoast paratransit service, Caltrain commuter rail, and the San Mateo County Transportation Authority. https://www.samtrans.com/
San Mateo County's Transportation Demand Management Agency (Commute.org)	This public agency aims to reduce the number of drive-alone vehicles traveling to, from, or through San Mateo County. Its goal is to help residents and commuters find alternatives to driving alone that are less stressful, less costly, and better for the environment. The agency provides information and commute planning assistance to employees, offers employer programs, and supports city transportation demand management partnerships. https://commute.org/
San Mateo Harbor District	The SMC Harbor district provides fiscally and environmentally responsible stewardship of its maritime resources, emergency response, and public access. https://www.smharbor.com/

E.2 Non-Profit Organizations

Organization	Description
Acterra	Acterra builds alliances between community residents, local government programs, and community-based organizations in low-income areas in San Mateo County to create resilience against the coming impacts of climate change. https://www.acterra.org/
Ayudando Latinos a Soñar (ALAS)	The farmworker community is a fundamental piece of the San Mateo Coastline society. ALAS' work consists of liaison and outreach, keeping close and continuous contact with the farms to know their needs. We collaborate with many organizations and different public institutions to bring services and take care of our farmworkers and their families. https://www.alasdreams.com/
Building Decarbonization Coalition	The Building Decarbonization Coalition unites building industry stakeholders with energy providers, environmental organizations, and local governments to help electrify California's homes and workspaces with clean energy. Through research, policy development, and consumer inspiration, the BDC is pursuing fast, fair action to accelerate the development of zero-emission homes and buildings that will help California cut one of its largest sources of climate pollution, while creating safe, healthy, and affordable communities. www.buildingdecarb.org/

Business Council on Climate Change (BC3)	The Business Council on Climate Change (BC3) is a San Francisco-based multi-sector partnership dedicated to incubating, scaling, and sharing world-leading solutions to address climate change. It helps companies pool their buying power to move markets and improve the economics of sustainable purchasing decisions, share knowledge about sustainability programs that work, coordinate multi-company or multi-sector partnerships, and create opportunities for cross-sector dialogue to advance Bay Area climate policy. https://www.bc3sfbay.org/
Coastside Community Emergency Response Team (CERT)	Coastside CERT (Community Emergency Response Team) is an emergency preparedness volunteer organization focused on creating a ready and resilient community along the San Francisco Bay Area coast from the southern side of the Tom Lantos Tunnel (Devil's Slide) to Tunitas Creek Road. https://www.coastsidecert.com/
Coastside Hope	Coastside Hope's mission is to provide necessities to enhance quality of life for all our neighbors. Our guiding principle is "Necessities for today, Opportunities for tomorrow." We provide: Necessities in the form of food, clothing, housing assistance, online application for government benefits, referrals, and other support. https://coastsidehope.org/
GRID Alternatives	The nation's largest nonprofit solar installer, GRID develops and implements solar projects that serve low-income households and communities. The organization partners with affordable housing organizations, job training groups, government agencies, municipalities, utilities, tribes, and local communities to make solar a win for everyone. https://gridalternatives.org/
HEAL Project	Serves over 3,000 students with hands-on outdoor learning opportunities that inspire kids' natural curiosity and cultivate environmental awareness in the next generation. The HEAL Project offers lessons on health, environment and agriculture at school sites, in the classroom and at the San Mateo County School Farm. We enhance Next Generation Science Standards (NGSS) and Common Core State Standards in our high-impact programs for environmental literacy and nutrition education. https://www.thehealproject.org/
Joint Venture: Silicon Valley Network	Established in 1993, Joint Venture provides analysis and action on issues affecting the Silicon Valley economy and quality of life. The organization brings together established and emerging leaders—from business, government, academia, labor, and the broader community—to spotlight issues, launch projects, and work toward innovative solutions. Joint Venture is actively involved in Silicon Valley's regional response to climate change. It is engaged with dozens of regional and local public and private agencies, municipalities, businesses, and other stakeholders in programs and activities designed to reduce greenhouse gas (GHG) emissions, promote sustainable energy, and improve the quality of life for all. www.jointventure.org
Peninsula Interfaith Climate Action	Peninsula Interfaith Climate Action (PICA) is a Regional Working Group of California Interfaith Power and Light. To carry forward this local interfaith approach, PICA was formed in 2014 with members from about a dozen congregations from the San Francisco Bay Peninsula area, including Trinity Episcopal in Menlo Park and the Unitarian-Universalist Fellowship of Redwood City. PICA members work to reduce the carbon footprint at their facilities by sharing information and best practices on energy, water, and resource conservation. https://www.interfaithpower.org/get-involved-3/pica/

Plastic Free Future	Plastic Free Future wants to educate the local community about the harmful impacts of single-use plastic and how we can all make our beautiful coastal town an example of environmental stewardship by eliminating plastic pollution at its source. https://plastic-free-future.org/
Republic Services	Republic Services receives all the recyclables, green waste, and garbage collected from Half Moon Bay. As a leader in environmental services, we partner with customers to provide sustainable solutions across their operations. Through our variety of products, services, and materials—for almost every industry—we help make a positive impact on people and the planet. https://www.republicservices.com/
Rising Sun Center for Opportunity	Rising Sun runs Climate Careers, a summer youth employment and residential water and energy efficiency program in the Bay Area. Climate Careers hires young people (ages 15 to 22) to become Energy Specialists, serving their communities with a free Green House Call. Energy Specialists perform audits, install free energy and water saving devices, and provide personalized recommendations and education for further savings in the home. Climate Careers was designed to serve hard-to-reach residents including renters, non-English speaking households, and low- to moderate-income households. https://risingsunopp.org/
San Mateo County Association of Realtors (SAMCAR)	SAMCAR is a trade association organized to ensure professionalism, protect property rights, promote the ownership of real property, and help members achieve success. https://www.samcar.org/
San Mateo County Economic Development Agency (SAMCEDA)	SAMCEDA was founded in 1953 to promote business issues that enhance and sustain the economic prosperity of our region and its local communities. https://www.samceda.org/
Sea Hugger	Sea Hugger is a nonprofit organization focused on protecting and healing the marine environment from plastic pollution through action and education to drive systemic change that addresses the root cause of the issue. Our mission is to educate the public to reduce plastic dependency, while focusing on protecting the marine environment, ensuring the intrinsic rights of aquatic life, and helping create sustainable communities that are no longer affected by plastic pollution. https://www.seahugger.org/
Senior Coastsiders	Through partnerships with other nonprofits, the County of San Mateo, and the City of Half Moon Bay, Senior Coastsiders has created educational outreach programs on the environment and the impacts of climate change. These issues are interwoven with other partnerships including with Peninsula Clean Energy and PG&E when addressing energy issues, fire prevention and Planned Power Shut Offs. Older adults are especially vulnerable to the impacts of climate change. In 2021, we created the Evergreen Coastsiders program which focuses on awareness, advocacy, and action. Click the links below to learn more about Senior Coastsiders' and partnering sustainability programs. https://www.seniorcoastsiders.org/

Sustainable San Mateo County (SSMC)	SSMC supports multiple programs to promote energy efficiency, alternative transportation, and education on sustainability concepts that focus on the intersections of the environment, economy, and social equity. SSMC's core programs include an Indicators Report that has been produced annually since 1997 and the Sustainable San Mateo County Awards Event, which has been held annually since 1999. The most recent Indicators Report can be found online at: https://sustainablesanmateo.org/home/indicators/
Sustainable Silicon Valley (SSV)	SSV is a collaboration of businesses, governments, and non-governmental organizations that are identifying and addressing environmental and resource pressures in Silicon Valley. As its first initiative, SSV engages Silicon Valley organizations to work towards a goal of reducing regional carbon dioxide emissions 20 percent below 1990 levels by 2010. SSV's Net Positive Bay Area 2050 goals are to: 1) produce more renewable energy than we consume, 2) sequester more carbon than we emit, and 3) optimize water resources to ensure water resilience. Their current strategy focuses on facilitating measure projects, education, events, and policies that deliver solutions by activating SSV's member network to reach the Net Positive Bay Area goals. www.sustainablesv.org
Thrive, The Alliance for Nonprofits of San Mateo County	A robust, trusted network of 200+ nonprofit organizations, government entities, foundations, businesses, and community leaders with a shared commitment to strengthening the nonprofit sector, thereby improving the quality of life in San Mateo County. Thrive unites the voice and influence of nonprofits, helps build their capacity, and enables effective cross-sector collaboration. https://www.thrivealliance.org/

F. Summary of Funding Sources

For implementation of the CAAP, Half Moon Bay must evaluate strategies for financing climate protection actions and provide adequate, reliable, and consistent long-term program funding. This appendix provides an overview of available funding sources to help determine appropriate potential program funding sources and funding levels to support existing and new programs outlined in this plan. Other funding sources may be available that are not listed here.

F.1 Federal Funding

Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grants program <https://www.transportation.gov/BUILDgrants>

Transportation Secretary Elaine L. Chao announced that in fiscal year 2020 over \$1 billion will be available for transportation projects that “have significant local or regional impact.” Cities can apply for a BUILD grant to fund road, rail, transit, and port projects. In the first two years of the BUILD Grants Program, other cities in California were awarded grants for zero-emission, battery-electric buses and chargers, as well as roadway improvements to enhance walkability and bikeability.

F.2 State Funding

Energy Conservation Assistance Act (ECAA) Program Loans

<http://www.energy.ca.gov/efficiency/financing/index.html>

Since 1979, more than \$399 million has been allocated to more than 850 recipients through ECAA Program Loans. The program offers loans with a one percent interest rate to finance energy efficiency improvements. The maximum loan amount is \$3 million per application. Eligible projects include lighting system upgrades, pumps and motors, streetlights and LED traffic signals, energy management systems and equipment controls, building insulation, energy generating infrastructure including renewable and combined heat and power projects, HVAC equipment, water and wastewater treatment equipment, and load shifting projects.

F.3 Utility Programs

Pacific Gas and Electric Company (PG&E) offers a full suite of energy efficiency rebates to support its customers in saving energy and money.

Rebates

For households: https://www.pge.com/en_US/residential/save-energy-money/savings-solutions-and-rebates/rebates-by-product/rebates-by-product.page?

For small and medium businesses: https://www.pge.com/en_US/business/save-energy-money/business-solutions-and-rebates/product-rebates/product-rebates.page

For large businesses: https://www.pge.com/en_US/large-business/save-energy-and-money/business-solutions-and-rebates/product-rebates.page

0% interest Financing

For businesses: https://www.pge.com/en_US/small-medium-business/save-energy-and-money/energy-efficiency-financing.page

F.4 Other Funding Opportunities

American Forests Global ReLeaf Grant Program

<http://www.americanforests.org/discover-american-forests/our-work/>

American Forests is a non-profit organization founded in 1875 that promotes forest conservation. American Forest's Global ReLeaf Program provides grants to fund tree-planting projects in urban and natural areas.

Funding and Financing Climate Action Plans Report

https://www.usdn.org/uploads/cms/documents/usdn_funding_financing_climate_action_final_report.pdf

Urban Sustainability Directors Network (USDN) and HIP Investor developed comprehensive financing and funding analysis for six USDN member cities and created a guide to assist other cities in performing similar work in future Climate Action Plan updates. The report builds on the [Financing Sustainable Cities Scan and Toolkit](#), an action-oriented "how-to toolkit" for Chief Sustainability Officers and Chief Financial Officers to catalog implementable and emerging funding mechanisms that can support cities striving towards bold climate action and sustainability goals. The toolkit includes a scan report, infographic of finance options, and conference agenda.

Large Landscape Audit

<http://bawasca.org/conserve/programs/audits>

BAWSCA and its participating member agencies offer this audit program to select large landscapes within the service area free of charge. This program includes the development and monthly distribution of landscape water budgets for selected accounts and actual large landscape surveys to assess landscape watering needs. A key component of the program is ongoing monitoring/tracking of actual water use and estimated water savings for the sites surveyed. For water conservation related questions, please call (650) 349-3000 or send an email to bawasca@bawasca.org. Also check with your local water company; some offer water audits for no charge.

Waste Audits by Recology

<https://www.recology.com/index.php/commercial-beyond-the-cart/84-commercial>

Recology offers a free waste audit to its business customers. A Waste Zero Specialist will come to your facility to advise you on the size/type of bins you could use and make other recommendations to help you reduce the amount of waste generated. To make an appointment, call (650) 595-3900.

G. Adaptation Planning for Climate Impacts

Effective adaptation planning and management entails dealing with uncertainty. It is a long-term process that should allow immediate action when necessary. Effective adaptation also creates the ability to adjust to changing conditions and acquire new, useful knowledge. Half Moon Bay plans to initiate an inclusive planning process that ensures the resulting actions are feasible and widely accepted. Adaptation will likely be an ongoing process of planning, prioritization, and specific project implementation.

Five important steps to effective adaptation planning are summarized below:

1. Increase Public Awareness, Engage and Educate the Community

It is critical that the public understand the magnitude of the challenge and why action is needed. It is also important for the community to be aware of win-win opportunities that can improve quality of life, protect community members, and potentially generate more jobs. The planning process should be inclusive of all stakeholders. Local outreach campaigns are needed to promote awareness of the dangers of heat exposure, flooding, wildfires, and recommend low-cost and low-GHG adaptation strategies. These efforts should leverage similar efforts undertaken at the regional, state, and federal levels. The efforts should be inclusive of community organizations (especially those with socially vulnerable community members), and include community needs early on in the process.

2. Assess Vulnerability

Understanding vulnerability to sea-level rise and other climate change impacts is critical to developing adaptation effective strategies. A detailed vulnerability analysis should be performed to assess potential climate change impacts to infrastructure and natural systems. Climate Ready SMC has developed an interactive map of climate impacts for all cities and unincorporated County. Assets and infrastructure can be overlaid with individual or multiple climate impacts to project their future vulnerability. The map includes critical infrastructure, socially vulnerable communities, and health facilities to allow for rapid vulnerability analysis. For example, cities can engage with city staff and community members to "ground-truth" data assumptions based on current observations. Often the people who live and work in the areas modeled can add valuable details, nuance, and missing information to assist Planners. Level of risk can be categorized in terms of likelihood of damage within the forecasting period and the severity of the

damages. This allows planners to prioritize their response to climate change over time, known as the adaptation pathway approach. The vulnerability assessment can also provide a framework for agency and community education and participation, feed into other planning documents, and identify funding needs.

3. Establish Goals, Criteria, and Planning Principles

Engage with stakeholders to establish planning priorities, determine decision criteria, and build community support for taking action. Include community-based organizations in this process to ensure that these priorities and criteria will reflect their needs as well. Rank physical and natural assets for preservation efforts. Where possible, look for situations where a mitigation action has adaptation co-benefits (e.g., planting trees to reduce urban heat islands while sequestering carbon and providing habitat).

4. Develop Adaptation Plan

Identify specific strategies, develop actions and cost estimates, and prioritize actions to increase local resilience of City infrastructure and critical assets, including community-identified and natural systems like wetlands and urban forests. Look for synergies between natural processes and engineering solutions. There is a continuum of strategies available to manage climate change impacts. An adaptation plan should include a prioritized list of actions (e.g., projects) with a timeline, capital expenditure plan, and framework for monitoring and adaptive management. Efforts should be made to integrate capital projects, existing infrastructure, emergency planning, and community services.

5. Ongoing Monitoring and Adaptive Management

Reassess climate change vulnerabilities on a regular basis and modify actions accordingly. This includes monitoring the effectiveness of current policies, strategies and actions, and keeping up with changing science, funding opportunities, and regulatory actions. When reassessing, consider the most updated science available, and the timing of the impact.

Climate Ready SMC has developed a set of climate adaptation strategies and tools for use in planning. These tools will continue to be updated as new ones are available, including tools for developing climate adaptation plans, incorporating climate adaptation into General Plans, Local Hazard Mitigation Plans, Capital Improvement Plans, and community engagement and social equity. For the latest information on climate impacts and adaptation strategies, visit the Climate Ready SMC site: <https://www.smcsustainability.org/climate-ready>.

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