Appendix A

Notice of Preparation and Comment Letters

NOTICE OF PREPARATION
For a Draft Environmental Impact Report

Date:	January 26, 2024
To:	State Clearinghouse, Responsible and Trustee Agencies, and Other Interested Parties and Organizations
Project Title:	Pacific Grove Housing Element Update, Zoning Amendments, and General Plan Amendments Project
Lead Agency:	City of Pacific Grove Community Development Department 300 Forest Avenue, 2nd Floor Pacific Grove, California 93950
Contact:	Karen Vaughn, Community Development Director; Alyssa Kroeger, Housing Program Manager
Public Review Period:	January 26, 2024, through February 26, 2024 (31 days) in accordance with CEQA Guidelines Section 15082

Purpose of the Notice

The intent of this Notice of Preparation (NOP) is to inform agencies and interested parties that the City of Pacific Grove (City) is preparing a Draft Environmental Impact Report (EIR) for the proposed Housing Element Update, Zoning Amendments, and General Plan Amendments Project (proposed project) in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15082. This NOP provides information about the project and its potential environmental effects and requests that comments be provided on the proposed scope and content of the Draft EIR.

Project Location and Existing Conditions

The project area includes the entirety of Pacific Grove. The city is primarily developed, with parks, beaches, and scattered undeveloped parcels within the city. Portions of the city are in the Coastal Zone, portions of the city contain mapped Critical Habitat, and the city contains sensitive archaeological and historic resources. Figure 1 shows the regional location and Figure 2 shows an aerial image of the project area. There are 15 sites within the City of Pacific Grove that are included on a list compiled pursuant to Government Code 65962.5 (“Cortese list”), including 14 closed leaking underground storage tank sites listed on the State Water Resources Control Board GeoTracker database, and 1 Cleanup and Abatement Order enforcement action at the Former Grove Laundry site.

Project Description

The proposed project consists of the following components: 1) Housing Element update, which includes a program to rezone sites in the Commercial-Forest Hill, Commercial-Downtown, and some Unclassified districts; 2) Zoning Amendments to implement Housing Element Programs, including updates to the zoning map; and 3) associated General Plan Amendments. The draft Housing Element was submitted to the California Housing and Community Development Department (HCD) for the first round of HCD review on November 2, 2023, and is undergoing revisions to address HCD comments. The zoning amendments would include modifications to the Zoning Code to meet target densities as well as compliance with State housing laws as identified in the Housing Element. The Land Use Element would

be updated for consistency with the Housing Element update and Zoning Amendments. The Health & Safety Element update would involve updated information, policies, and implementation measures consistent with the current requirements of state law. This includes additional details related to evacuation routes and emergency access.

Potential Environmental Effects

The City has determined that an EIR is the appropriate level of CEQA review. Pursuant to CEQA Guidelines Section 15063(a), because the City has determined that an EIR is needed and its scope will not be narrowed to exclude certain potential environmental effects that were determined to be insignificant, an initial study will not be prepared. The EIR will address the potential physical environmental effects of the proposed project for each of the environmental topics outlined in Appendix G of the CEQA Guidelines. The following environmental issues are anticipated to be analyzed in the EIR:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

The Draft EIR will propose mitigations to avoid and/or reduce impacts identified as being potentially significant, identify and evaluate a reasonable range of project alternatives, and compare the environmental impacts of the alternatives to the impacts of the proposed project. The EIR will also include other required information including discussions about : 1) any significant environmental effects that cannot be avoided if the project is implemented; 2) any significant irreversible and irretrievable commitments to resources; 3) growth-inducing impacts of the proposed project; 4) effects found not to be significant; and 5) cumulative impacts.

When the Draft EIR is completed, it will be available for review online and at two publicly accessible locations: 1) the City's Community Development Department located at 300 Forest Avenue, Pacific Grove, California, and 2) the Public Library located at 550 Central Ave, Pacific Grove, CA 93950.

EIR Public Scoping Meeting

The City of Pacific Grove will conduct a public scoping session at a special Planning Commission meeting on February 15, 2024, starting at 6:00 pm. This meeting will be held in person at the Council Chamber in City Hall (at 300 Forest Avenue), and virtually via Zoom. For meeting agenda and updates, including the Zoom link, please visit:

https://www.cityofpacificgrove.org/our_city/boards_commissions___committees/planning_commission/index.php.

Providing Comments

At this time, the City is soliciting comments on the scope of the EIR, including potential environmental impacts of the project and alternatives to be considered. Pursuant to Public Resources Code Section 21080.4(a) and CEQA Guidelines Sections 15082(b) and 15096(b)(2), agencies must limit comments to environmental information about the agency's area of statutory responsibility. For all commenters, comments must be specific and related directly to the project (CEQA Guidelines Section 15082[b][3]). Comments will be considered when preparing the Draft EIR's discussion of environmental impacts, mitigation measures, and alternatives. Because of time limits mandated by State law, comments must be received no later than **5:00 p.m. on February 26, 2024,** which ends the 31-day scoping period.

Comments may be submitted by U.S. mail or by email prior to the close of the scoping period. Direct comments to:

Alyssa Kroeger, Housing Program Manager
Community Development Department
City of Pacific Grove
300 Forest Avenue
Pacific Grove, California 93950
housing@cityofpacificgrove.org

For comments submitted via email, please include "NOP Comments: Housing Element Update, Zoning Amendments, and General Plan Amendments Project" in the subject line and the name and physical address of the commenter in the body of the email.

All comments on environmental issues received during the public scoping period will be considered and addressed in the Draft EIR, which is anticipated to be available for public review in the summer of 2024. This NOP and other public review documents for this project will be available for viewing online. These documents will also be available for review at the Community Development Department office at 300 Forest Avenue during regular business hours.

For questions regarding this notice, please contact Alyssa Kroeger at the contact information provided above.

Attachments

Figure 1 Regional Location

Figure 2 Project Location

Figure 1 Regional Location

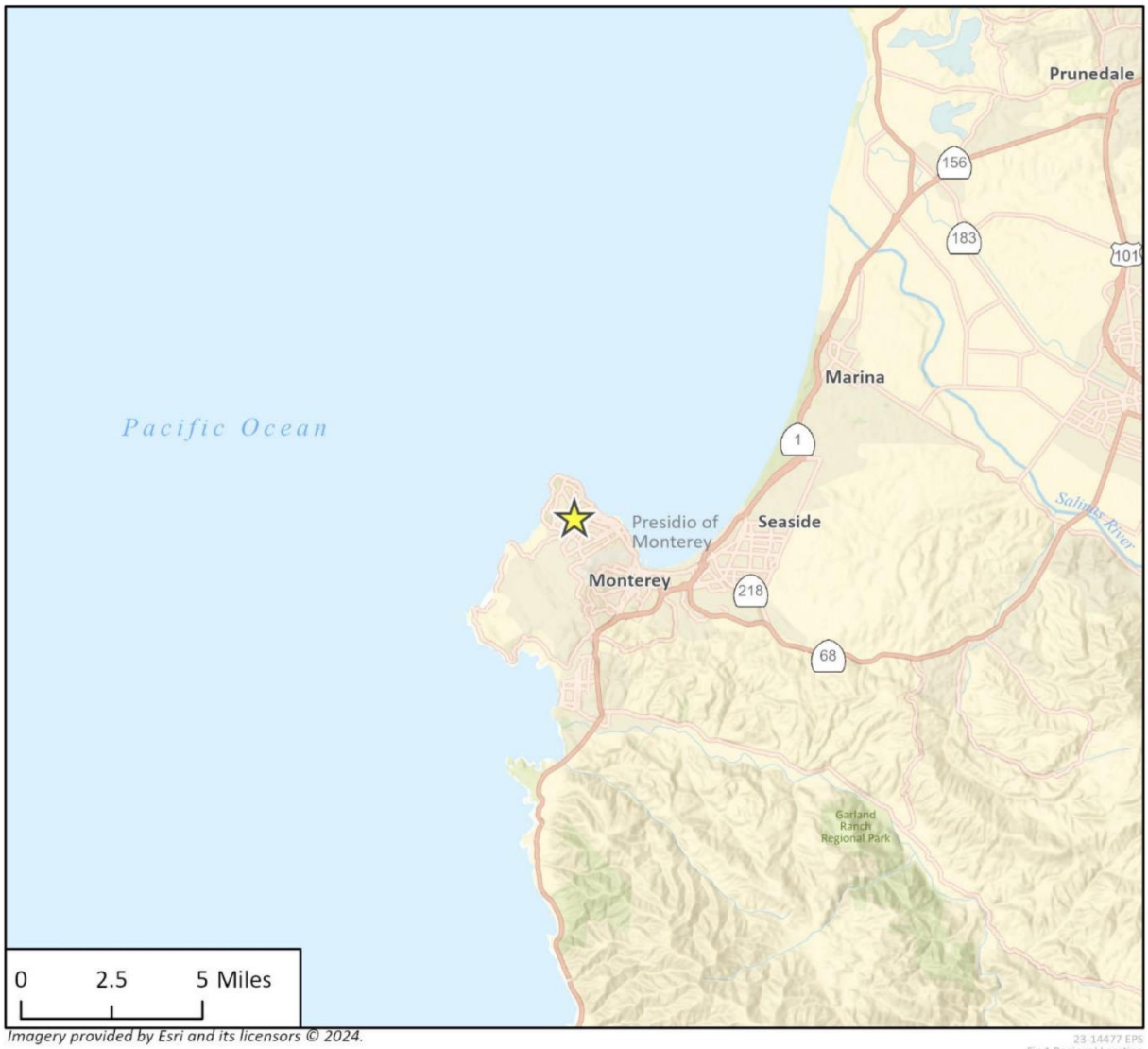


Figure 2 Project Location



CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
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COMMISSIONER
Isaac Bojorquez
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Stanley Rodriguez
Kumeyaay

COMMISSIONER
Laurena Bolden
Serrano

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Vacant

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok, Nisenan

NAHC HEADQUARTERS
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(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

NATIVE AMERICAN HERITAGE COMMISSION

February 6, 2024

Alyssa Kroeger
City of Pacific Grove
300 Forest Avenue
Pacific Grove, CA 93950

Re: 2024010897, Housing Element Update, Zoning Amendments, and General Plan Amendments Project, Monterey County

Dear Ms. Kroeger:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Cody.Campagne@nahc.ca.gov.

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

cc: State Clearinghouse

From: Zachariasen, Judith@DOC <Judith.Zachariasen@conservation.ca.gov>
Sent: Friday, February 16, 2024 9:49 AM
To: Housing
Cc: OLRA@DOC; OPR State Clearinghouse
Subject: Pacific Grove Housing Element Update, Zoning Amendments, and General Plan Amendments Project - SCH No. 2024010897

[**NOTICE:** This message originated outside of the City of Pacific Grove email system -- **DO NOT CLICK** on **links** or open **attachments** unless you are sure the content is safe.]

Dear Alyssa Kroeger,

The California Geological Survey (CGS) has received the Notice of Preparation of a Draft Environmental Impact Report (DEIR) for the Pacific Grove Housing Element Update, Zoning Amendments, and General Plan Amendments Project. This email conveys the following recommendations from CGS concerning geologic issues related to the project area:

1. Ground Shaking and Surface Fault Rupture Hazards

   The project area is located within the broad extent of the Monterey Bay-Tularcitos fault zone, with fault traces mapped on either side and trending toward, but not currently through, the City of Pacific Grove. However, the distributed nature of this fault zone, and the presence of mapped fault traces trending toward the city, suggest the possibility that as-yet unmapped fault traces that could pose a surface rupture hazard may exist in the city as well. In addition, the proximity of the city to this fault zone, and to additional active faults located to the east and west, indicates that the site could be subject to significant ground shaking during the life of the project. The DEIR and supporting documents should address these hazards as they relate to the project components and design of any proposed structures.

   Additional information about ground shaking hazard can be obtained at the following sites:
   https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=14d2f75c7c4f4619936dac0d14e1e468
   https://earthquake.usgs.gov/scenarios/catalog/bssc2014/

   Additional information about surface faults can be obtained at the following site:
   https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf

2. Tsunami Hazards

   Most of the coastal region of the City of Pacific Grove is located in a designated Tsunami Hazard Area mapped by CGS. The DEIR should address this hazard as it relates to the project components and design of any proposed structures.

   Additional information about tsunami hazard can be obtained at the following site:
   https://maps.conservation.ca.gov/cgs/informationwarehouse/ under the Tsunami Hazard Area tab.

3. Landslide and Liquefaction Hazards

CGS has not yet evaluated the area around the Project location for liquefaction and landslide hazards. Therefore, the absence of CGS-mapped Zones of Required Investigation does not indicate the absence of a hazard. The DEIR should address these hazards as they relate to the project components and design of any proposed structures.

If you have any additional comments or questions, please feel free to call or email.

Thank you,
Judy Zachariasen

Judith Zachariasen, PhD, PG, CEG
Senior Engineering Geologist
Fault Zoning Unit Supervisor
Seismic Hazards Program
California Geological Survey

California Department of Conservation
715 P Street, MS 1900, Sacramento, CA 95814
T: (916) 879-2844
E: judith.zachariasen@conservation.ca.gov

From: CEQAReview <ceqareview@dtsc.ca.gov>
Sent: Monday, February 26, 2024 2:10 PM
To: Housing; Office of Planning and Research - State Clearinghouse
Cc: Wiley, Scott@DTSC; Kereazis, Dave@DTSC
Subject: Pacific Grove Housing Element Update, Zoning Amendments, and General Plan Amendments
Attachments: DTSC Comment Letter - Pacific Grove Housing Element.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

[**NOTICE:** This message originated outside of the City of Pacific Grove email system -- **DO NOT CLICK** on **links** or open **attachments** unless you are sure the content is safe.]

Good Afternoon Alyssa,

Thank you for the opportunity for the Department of Toxic Substances Control to review and comment on the Pacific Grove Housing Element Update, Zoning Amendments, and General Plan Amendments. Attached you will find DTSC's comments for consideration. If you have any questions or comments, please reply to this email for guidance.

Thank you,

Thank you,
Tamara Purvis
Associate Environmental Planner
CEQA Unit-Permitting/HWMP
916-255-3857
Tamara.Purvis@dtsc.ca.gov
Department of Toxic Substances Control
California Environmental Protection Agency

Department of Toxic Substances Control

Meredith Williams, Ph.D., Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Yana Garcia
Secretary for
Environmental Protection

Gavin Newsom
Governor

SENT VIA ELECTRONIC MAIL

February 26. 2024

Alyssa Kroeger
Housing Program Manager
City of Pacific Grove Community Development Department
300 Forest Avenue
Pacific Grove, CA 93950
housing@cityofpacificgrove.org

RE: NOTICE OF PREPARATION (NOP) OF A DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) FOR THE PACIFIC GROVE HOUSING ELEMENT UPDATE, ZONING AMENDMENTS, AND GENERAL PLAN AMENDMENTS, DATED JANUARY 29, 2024 STATE CLEARINGHOUSE # 2024010897

Dear Alyssa Kroeger,

The Department of Toxic Substances Control (DTSC) received a NOP of a DEIR for the Pacific Grove Housing Element Update, Zoning Amendments, and General Plan Amendments. The proposed project consists of the following components: 1) Housing Element update, which includes a program to rezone sites in the Commercial-Forest Hill, Commercial-Downtown, and some Unclassified districts; 2) Zoning Amendments to implement Housing Element Programs, including updates to the zoning map; and 3) associated General Plan Amendments. The draft Housing Element was submitted to the California Housing and Community Development Department (HCD) for the first round of HCD review on November 2, 2023, and is undergoing revisions to address HCD comments. The zoning amendments would include modifications to the Zoning Code to meet target densities as well as compliance with State housing laws as

identified in the Housing Element. The Land Use Element would be updated for consistency with the Housing Element Update and Zoning Amendments. The Health & Safety Element Update would involve updated information, policies, and implementation measures consistent with the current requirements of state law. This includes additional details related to evacuation routes and emergency access. As stated in the NOP for a DEIR under the Project Location and Existing Conditions section, DTSC has identified that this project may affect multiple sites within the project boundaries therefore, based on our project review, we request the consideration of the following comments:

1. The proposed project encompasses multiple active and nonactive mitigation and clean-up sites where DTSC has conducted oversight that may be impacted as a result of this project. This may restrict what construction activities are permissible in the proposed project areas in order to avoid any impacts to human health and the environment.
2. Due to the broad scope of the project, DTSC is unable to determine all of the locations of the proposed project site, whether they are listed as having documented contamination, land use restrictions, or whether there is the potential for the project site to be included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. DTSC recommends providing further information on the project site and areas that may fall under DTSC's oversight within the DEIR. Please review the City of Pacific Grove Project Area in EnviroStor; DTSC's public-facing database.

DTSC believes the City of Pacific Grove must address these comments to determine if any significant impacts under the California Environmental Quality Act (CEQA) will occur and, if necessary, avoid significant impacts under CEQA. DTSC recommends the department connect with our unit if any hazardous waste are discovered.

DTSC appreciates the opportunity to comment on the NOP of a DEIR for the Pacific Grove Housing Element Update, Zoning Amendments, and General Plan

Amendments. Thank you for your assistance in protecting California's people and environment from the harmful effects of toxic substances. If you have any questions or would like any clarification on DTSC's comments, please respond to this letter or via email for additional guidance.

Sincerely,



Tamara Purvis
Associate Environmental Planner
HWMP - Permitting Division – CEQA Unit
Department of Toxic Substances Control
Tamara.Purvis@dtsc.ca.gov

cc: (via email)

Governor's Office of Planning and Research
State Clearinghouse
State.Clearinghouse@opr.ca.gov

Dave Kereazis
Associate Environmental Planner
HWMP – Permitting Division - CEQA Unit
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

Scott Wiley
Associate Governmental Program Analyst
HWMP – Permitting Division - CEQA Unit
Department of Toxic Substances Control
Scott.Wiley@dtsc.ca.gov

From: Wildlife R4 CEQA Program <R4CEQA@wildlife.ca.gov>
Sent: Wednesday, February 28, 2024 12:14 PM
To: Alyssa Kroeger
Cc: Barajas-Perez, Evelyn@Wildlife; OPR State Clearinghouse; Wildlife R4 CESA; Wildlife R4 LSA; steve_henry@fws.gov
Subject: Pacific Grove Housing Element Update, Zoning Amendments, and General Plan Amendments Project Notice of Preparation SCH No. 2024010897.pdf
Attachments: Pacific Grove Housing Element Update, Zoning Amendments, and General Plan Amendments Project Notice of Preparation SCH No. 2024010897.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

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Dear Alyssa Kroeger,

Please see the attached letter.

If you have questions regarding this letter or further coordination should be directed to Evelyn Barajas-Perez, Environmental Scientist, at (805) 503-5738 or evelyn.barajasperez@wildlife.ca.gov.

Thank you,

R4 CEQA Support Team

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

February 28, 2024

Alyssa Kroeger, Housing Program Manager
City of Pacific Grove
Community Development Department
300 Forest Avenue, 2nd Floor
Pacific Grove, California 93950
(831) 648-3127
akroeger@cityofpacificgrove.org

Subject: Pacific Grove Housing Element Update, Zoning Amendments, and General Plan Amendments Project (Plan)
Notice of Preparation (NOP)
SCH No.: 2024010897

Dear Alyssa Kroeger:

The California Department of Fish and Wildlife (CDFW) received a Notice of preparation (NOP) to prepare a Draft Environmental Impact Report (DEIR) from the City of Pacific Grove Development Department (City of Pacific Grove) for the Pacific Grove Housing Element Update, Zoning Amendments, and General Plan Amendments Project (Plan) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Plan that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Plan that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statue for all the people of the State (Fish & Game Code, Section 711.7, subd. (a) & 1802; Pub. Resources Code, Section 21070; CEQA Guidelines

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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Section 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., Section 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, Section 21069; CEQA Guidelines, Section 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, reasonably foreseeable future project's tiered from this Plan may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & Game Code, Section 1600 et seq.). Likewise, to the extent implementation of reasonably foreseeable future project's tiered from this Plan may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & Game Code, Section 2050 et seq.), related authorization as provided by the Fish and Game Code may be required.

Nesting Birds: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include, sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

Fully Protected Species: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians and reptiles, and fish, pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species is prohibited and CDFW cannot authorize their incidental take.

As a responsible agency, CDFW is responsible for providing, as available, biological expertise during public agency environmental review efforts (e.g., CEQA), focusing specifically on project activities that have the potential to adversely affect fish and wildlife resources. CDFW provides recommendations to identify potential impacts and possible measures to avoid or reduce those impacts.

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PROJECT DESCRIPTION SUMMARY

Proponent: City of Pacific Grove

Objective: The proposed Plan consists of the following components: 1) Housing Element update, which includes a program to rezone sites in the Commercial-Forest Hill, Commercial-Downtown, and some Unclassified districts; 2) Zoning Amendments to implement Housing Element Programs, including updates to the zoning map; and 3) associated General Plan Amendments. The draft Housing Element was submitted to the California Housing and Community Development Department (HCD) for the first round of HCD review on November 2, 2023, and is undergoing revisions to address HCD comments. The zoning amendments would include modifications to the Zoning Code to meet target densities as well as compliance with State housing laws as identified in the Housing Element. The Land Use Element would be updated for consistency with the Housing Element update and Zoning Amendments. The Health & Safety Element update would involve updated information, policies, and implementation measures consistent with the current requirements of State law. This includes additional details related to evacuation routes and emergency access.

Location: The City of Pacific Grove

Comments and recommendations

CDFW is unable to provide substantive comments due to the limited General Plan information provided. Many special-status plant and animal species in the proposed Plan area have been reported to the California Natural Diversity Database (CNDDB) (CDFW 2024). The following species should be considered as part of the DEIR that will be drafted for this Plan:

The federally endangered steelhead - south-central California coast DPS (*Oncorhynchus mykiss irideu*); State and federally endangered California jewelflower (*Caulanthus californicus*), least bell's vireo (*Vireo bellii pusillus*), Menzies' wallflower (*Erysimum menziesii*), Tidestrom's lupine (*Lupinus tidestromii*), and foothill yellow-legged frog - south coast DPS (*Rana boylii*); State endangered and federally threatened beach layia (*Layia carnosa*); State and federally threatened California tiger salamander - central California DPS (*Ambystoma californiense*); State endangered and fully protected bald eagle (*Haliaeetus leucocephalus*); State endangered Santa Lucia mint (*Pogogyne clareana*); State rare adobe sanicle (*Sanicula maritima*) and Pismo clarkia (*Clarkia speciosa ssp. immaculata*); Candidate endangered Crotch's bumble bee (*Bombus crotchii*) and Western bumble bee (*Bombus occidentalis*); State threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*) and Monterey gilia (*Gilia tenuiflora*); State threatened bank swallow (*Riparia riparia*), California black rail (*Laterallus jamaicensis coturniculus*), and tricolored blackbird (*Agelaius tricolor*);

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State fully protected American peregrine falcon (*Falco peregrinus anatum*), golden eagle (*Aquila chrysaetos*), and white-tailed kite (*Elanus leucurus*); and State species of special concern American badger (*Taxidea taxus*), black swift (*Cypseloides niger*), coast horned lizard (*Phrynosoma blainvillii*), coast range newt (*Taricha torosa*), Monterey dusky-footed woodrat (*Neotoma macrotis luciana*), Monterey hitch (*Lavinia exilicauda harengus),* Northern California legless lizard (*Anniella pulchra*), Northern harrier (*Circus hudsonius*), Pacific lamprey (*Entosphenus tridentatus*), pallid bat (*Antrozous pallidus*), purple martin (*Progne subis*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), Salinas pocket mouse (*Perognathus inornatus psammophilus*), Southern coastal roach (*Hesperoleucus venustus subditus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western pond turtle (*Emys marmorata*), western mastiff bat (*Eumops perotis californicus*), western spadefoot (*Spea hammondii*), and yellow warbler (*Setophaga petechia*).

California Endangered Species Act

Reasonably foreseeable future projects tiered from this Plan may be subject to CDFWs regulatory authority pursuant to CESA. In the event that species listed under CESA are detected during surveys, consultation with CDFW is warranted to discuss how to implement the Project and avoid “take,” or if avoidance is not feasible, to acquire a State Incidental Take Permit (ITP), pursuant to Fish and Game Code section 2081 subdivision (b), prior to any ground disturbing activities. In addition, CDFW advises that mitigation measures for the CESA listed species be fully addressed in the CEQA document prepared for any future project tiered from this Plan.

CDFW therefore recommends that the DEIR for this Plan include information related to these requirements and advises that projects tiered from this Plan retain a qualified biologist to determine if potential impacts to CESA listed species may require the need to obtain a 2081 ITP.

Botanical Surveys

CDFW recommends that the DEIR for this Plan include a measure requiring that each project implemented within the Plan area be surveyed by a qualified botanist for any possible special-status plants following the “Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities” (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline) as part of the biological technical studies completed in support of the CEQA documents tiered from this Plan. CDFW recommends that the plant surveys be floristic and utilize a known reference site for any special status plants in order to provide a high level of confidence in the effort and results.

If a special status plant is found, CDFW recommends that the special status plant species be avoided whenever possible by delineating and observing a no disturbance

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buffer of at least 50 feet from the outer edge of the plant population(s) or specific habitat type(s) required by special status plant species. If buffers cannot be maintained, then consultation with CDFW is warranted to determine appropriate minimization and mitigation measures for impacts to special-status plant species. If a State or federally listed plant species is identified during botanical surveys, consultation with CDFW and/or the USFWS is warranted to determine permitting needs.

Nesting birds

CDFW recommends that all projects tiered from this Plan occur during the bird non-nesting season; however, if ground-disturbing or vegetation-disturbing activities must occur during the breeding season (February 15 through September 15), each future project applicant is responsible for ensuring that implementation of their project does not result in a violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

To evaluate future project-related impacts on nesting birds, CDFW recommends that a qualified biologist conduct an assessment of nesting habitat during biological surveys in support of each project's CEQA document, and then conduct pre-activity surveys for active nests no more than 10 days prior to the start of ground or vegetation disturbance to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around each future project site to identify nests and determine their status. A sufficient area means any area potentially affected by a project. In addition to direct impacts (i.e., nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends having a qualified biologist continuously monitor nests to detect behavioral changes resulting from each future project. If behavioral changes occur, CDFW recommends halting the work causing that change and consulting with CDFW for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction areas would be concealed from a nest site by topography. CDFW recommends that a qualified biologist advise on any variance from these buffers and notify CDFW in advance of implementing a variance.

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Cumulative Impacts

Given that a general plan serves primarily as a planning tool and that future project-level CEQA documents are expected to be tiered from it, CDFW recommends that a cumulative impact analysis be conducted for all potential biological resources that will either be significantly or potentially significantly impacted by implementation of the Plan, including those whose impacts are determined to be less than significant with mitigation incorporated or for those resources that are rare or in poor or declining health and will be impacted by the any future project, even if those impacts are expected to be relatively small (i.e. less than significant). CDFW recommends cumulative impacts be analyzed using an acceptable methodology to evaluate the impacts of past, present, and reasonably foreseeable future projects on resources and be focused specifically on the resource, not the project. An appropriate resource study area identified and utilized for this analysis is advised. CDFW staff is available for consultation in support of cumulative impacts analyses as a trustee and responsible agency under CEQA.

Lake and Stream Alteration

Reasonably foreseeable future projects tiered from this Plan may be subject to CDFW's regulatory authority pursuant to Fish and Game Code section 1600 et seq. Fish and Game Code section 1602 requires project proponents to notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake; or (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent as well as those that are perennial in nature. For additional information on notification requirements, please contact our staff in the LSA Program at (559) 243-4593, or R4LSA@wildlife.ca.gov.

CDFW therefore recommends that the DEIR for this Plan include information related to these requirements of Fish and Game code and advise that projects tiered from this Plan retain a qualified biologist to determine if potential impacts to streams may require the need to obtain a 1600 LSAA.

CEQA Alternatives Analysis

CDFW recommends that the information and results obtained from the cumulative impacts analysis conducted as part of this Plan's DEIR be used to develop and modify the Plan's alternatives to avoid and minimize impacts to biological resources to the maximum extent possible. Please note that for all future projects tiered from this Plan, that when efforts to avoid and minimize have been exhausted, remaining impacts to sensitive biological resources may need to be mitigated to reduce impacts to a less than significant level, if feasible.

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CNDDB

Please note that the CNDDB is populated by and records voluntary submissions of species detections. As a result, species may be present in locations not depicted in the CNDDB but where there is suitable habitat and features capable of supporting species. A lack of an occurrence record in the CNDDB does not mean a species is not present. All projects tiered from this Plan should adequately assess any potential project-related impacts to biological resources by ensuring biological surveys are conducted by a qualified biologist during the appropriate survey period(s) and using the appropriate protocol survey methodology as warranted in order to determine whether or not any special status species are present at or near the project area.

Federally Listed Species

CDFW recommends consulting with the USFWS on potential impacts to federally listed species. Take under the Federal Endangered Species Act (FESA) is more broadly defined than CESA; take under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS to comply with FESA is advised well in advance of any ground disturbing activities.

Environmental Data

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, Section 21003, subd. (e).) Accordingly, please report any special-status species and natural communities detected during Project surveys to CNDDB. The CNDDB field survey form can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

Filing Fees

The Plan, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, Section 753.5; Fish & G. Code, Section 711.4; Pub. Resources Code, Section 21089.)

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Conclusion

CDFW appreciates the opportunity to comment on the NOP to assist the City of Pacific Grove in identifying and mitigating this Plan's impacts on biological resources.

More information on survey and monitoring protocols for sensitive species can be found at CDFW's website (https://www.wildlife.ca.gov/Conservation/Survey-Protocols). Questions regarding this letter or further coordination should be directed to Evelyn Barajas-Perez, Environmental Scientist, at (805) 503-5738 or evelyn.barajas-perez@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Julie Vance
FA83F09FE08945A...

Julie A. Vance
Regional Manager

ec: State Clearinghouse
Governor's Office of Planning and Research
State.Clearinghouse@opr.ca.gov

CESA R4CESA@wildlife.ca.gov
LSA R4LSA@wildlife.ca.gov
FWS steve_henry@fws.gov

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LITERATURE CITED

California Department of Fish and Wildlife. 2024. Biogeographic Information and Observation System (BIOS). https://www.wildlife.ca.gov/Data/BIOS. Accessed February 2024.

From:	Susan Morley
Sent:	Tuesday, January 30, 2024 3:40 PM
To:	Alyssa Kroeger; Tom Nason; Cari Herthel
Cc:	Brenna Wheelis; inammec
Subject:	Re: NOP for DEIR Housing Element Update, Zoning Amendments, and General Plan Amendments Project
Attachments:	PACIFIC GROVE GENERAL PLAN CONSULT ETMC letter response.pdf
Follow Up Flag:	Follow up
Flag Status:	Flagged

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Dear Alyssa,
Please accept this letter on behalf of Chair Nason for consultation as the City of PG updates its general plan.
Please let me know if this is sufficient notice or if you need anything else.
Thank you.
Susan

Susan Morley
Cultural Resources Committee Chairperson
Esselen Tribe of Monterey County
[redacted]

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Susan Morley

Good afternoon Chair Tom Little Bear Nason and Vice Chair Cari Herthel,

Please consider this correspondence both as a formal notice of the City of Pacific Grove's Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) for the proposed Housing Element Update, Zoning Amendments, and General Plan Amendments Project (proposed project) and a follow-up per our recent communication on January 22nd to

confirm a meeting for your tribe to provide consultation with the City regarding the Submitted Draft Housing Element, Zoning amendments, and Focused General Plan Amendments pursuant to SB 18.

The NOP is attached and can also be viewed online at the following link:
https://files.cityofpacificgrove.org/Revize_Photo_Gallery/Department/Community%20Development/Housing/Housing%20Element/HE.EIR.FGPU/SIGNED_Pacific%20Grove%20HE_NOP_2024%2001%2026_V2.pdf

Your comments and concerns are important to us, and we look forward to hearing from you. Should you have any questions or require additional information before the consultation, please feel free to contact me.

Thank you,

Alyssa Kroeger

Housing Program Manager | City of Pacific Grove

300 Forest Avenue, Pacific Grove, CA 93950
+1 (831) 648-3127 / www.cityofpg.org

Esselen Tribe of Monterey County
P.O. Box 95. Carmel Valley, Ca. 93924
831-214-5345 - Fax: 831-659-0111
Tribalchairman@Esselentribe.org

A California Native American 501-C-3 Non-Profit Organization

January 19, 2024

Alyssa Kroeger
City of Pacific Grove
Housing Program Manage
300 Forest Ave
Pacific Grove, CA 93950
akroeger@cityofpacificgrove.org

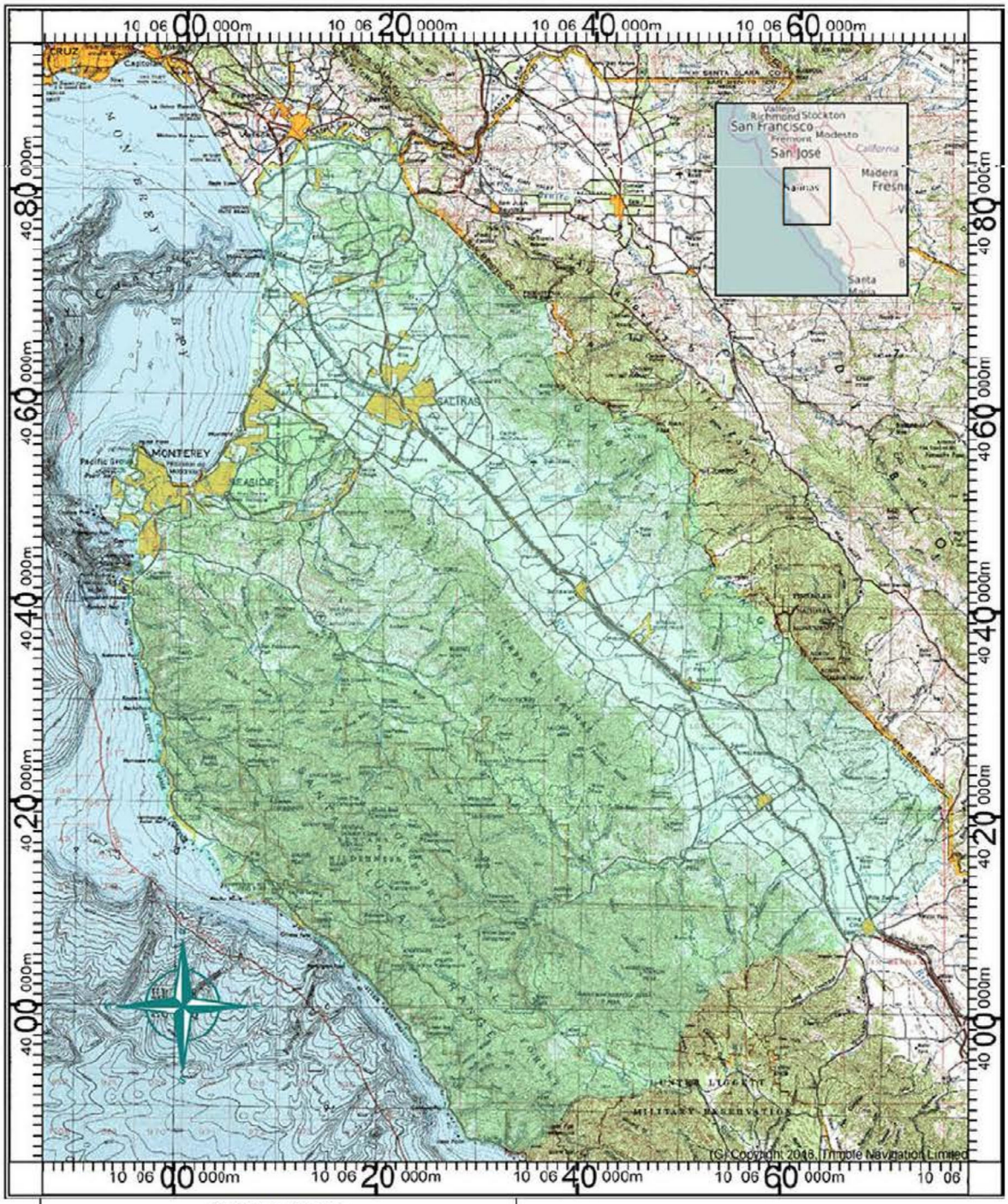
Dear Ms. Kroeger,
Thank you for your letter informing the Esselen Tribe of Monterey County of the proposed General Plan Amendment by the City of Pacific Grove. This letter confirms our intent and initiates our engagement in formal Tribal consultation with the City of Pacific Grove as Lead Agency on this Project.

We have reviewed the proposed Project area and our cultural landscape database and conclude the Project area lies within the Esselen Tribe of Monterey County's cultural and ancestral landscape. This part of the Monterey Peninsula is highly sensitive for our tribe. We are aware that cultural resources are located in that area.

I, Tom Little Bear Nason, am ETMC's lead contact person for continued consultation on this Project. In consideration of the environment, we request future consultation correspondence is delivered electronically. Please contact to set up a meeting to consult with you on this General Plan Update.

Thank you again for your outreach.
Respectfully,

Tom Little Bear Nason
Tribal chairperson
Esselen Tribe of Monterey County
tribalchairman@esselentribe.org
(831-214-5345



SCALE 1:500000

0 10 20 Miles

0 10 20 30 Kilometers

Esselen Tribe of Monterey County
Rumsen/Costanoan/Esselen

Sacred Lands Map

From: Steven Lilley <srllilley@gmail.com>
Sent: Sunday, January 28, 2024 8:02 AM
To: Housing
Cc: andrewkubica; City Manager; Bill Peake; boxwood; Claudia Sawyer; Luke Coletti; pnodzenski; Vega, Erica L.; wmfredrickson; Joe Amelio; Karen Vaughn; Lori McDonnell; Nick Smith; Ross Davison
Subject: Re: Housing Element Update - NOTICE OF PREPARATION (NOP) For a Draft Environmental Impact Report (DEIR)

Follow Up Flag: Flag for follow up
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Alyssa,

Thank you for sending the NOP for the EIR regarding the Housing Element and the General Plan. Perhaps I am confused, but I do not understand why we are proceeding with a NOP\EIR when the draft Housing Element is still a draft, that is subject to substantial revision. There also has been nothing done on other elements to the General Plan to support any of the proposed Housing Element items. Aren't we putting the proverbial cart before the horse here?

It would seem to me that a DETAILED schedule of items for the Housing Element, General Plan, and EIR should be presented for review by the Planning Commission and City Council. The deadline about builders' remedy now is rather secondary, as we have breached the timelines anyway. It is more important to get everything right and have a viable process for community comment. Rushing things along piecemeal doesn't work, as I'm sure you would agree.

Again, I appreciate your notice.

Steven Lilley
Chair, Planning Commission

On Fri, Jan 26, 2024 at 2:14 PM City of Pacific Grove - Housing Division <housing@cityofpacificgrove.org> wrote:





Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) for the proposed Housing Element Update, Zoning Amendments, and General Plan Amendments Project (proposed project)

The City of Pacific Grove's Community Development Department, is initiating the environmental review process for the proposed Housing Element Update, Zoning Amendments, and General Plan Amendments Project. The NOP is now available for public review from January 26, 2024, to February 26, 2024, in accordance with CEQA Guidelines Section 15082 and can be viewed online HERE or in-person at City Hall or the Public Library.

Project Overview:

- **Lead Agency:** City of Pacific Grove, Community Development Department
- **Contact**: Karen Vaughn, Community Development Director; Alyssa Kroeger, Housing Program Manager
- **Public Review Period:** January 26, 2024, to February 26, 2024 (31 days)

Purpose of the Notice: This NOP serves to inform agencies and interested parties about the City's preparation of a Draft Environmental Impact Report (DEIR) for the proposed project. Comments are invited on the project's scope and content.

Project Components:

1. Housing Element Update
2. Zoning Amendments
3. General Plan Amendments

Potential Environmental Effects: The EIR will address various environmental topics (see linked NOP for the complete list).

EIR Public Scoping Meeting: A public scoping session is scheduled at a special Planning Commission meeting for February 15, 2024, at 6:00 pm, both in-person at City Hall and virtually via Zoom. The meeting agenda and updates will be made available on the City's Planning Commission webpage HERE.

Providing Comments: Comments on the EIR scope are invited until 5:00 p.m. on February 26, 2024. Agencies must limit comments to their area of statutory responsibility, and all comments should be specific to the project.

Comment Submission Methods:

- U.S. Mail: City of Pacific Grove, Community Development Department, ATTN: Alyssa Kroeger, Housing Program Manager, 300 Forest Avenue, Pacific Grove, CA 93950
- Email: housing@cityofpacificgrove.org
    - For comments submitted via email, please include "NOP Comments: Housing Element Update, Zoning Amendments, and General Plan Amendments Project" in the subject line and the name and physical address of the commenter in the body of the email.

CLICK HERE for NOP

The City of Pacific Grove promotes fair housing and makes programs available to low- and moderate income households regardless of age, race, color, religion, sex, national origin, ancestry, sexual orientation, marital status, disability/medical conditions, or source of income.

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300 Forest Avenue
Pacific Grove
CA 93950

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City of Pacific Grove · 300 Forest Avenue · Community Development Department · Pacific Grove, CA 93950 · USA



From: Jane Haines <janehaines80@gmail.com>
Sent: Thursday, February 8, 2024 8:37 AM
To: Alyssa Kroeger; Housing; Karen Vaughn
Subject: NOP Comments: Housing Element Update, Zoning Amendments, and General Plan Amendments Project

Follow Up Flag: Follow up
Flag Status: Flagged

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Dear Ms. Kroeger,

The following comments respond to the January 26, 2024 Notice of Preparation (NOP) for the Draft Environmental Impact Report (EIR) for the "Project" titled "Pacific Grove Housing Element Update, Zoning Amendments, and General Plan Amendments Project."

NOP Responses Regarding The Project's Potential Physical Environmental Effects

1. POPULATION AND HOUSING

Response: The EIR should include baseline population growth information to quantify the Project's growth-inducing impacts.

Background: The November 2023 Draft Housing Element (DHE) states in Table 1, titled "AMBAG Population Projections," on pg. 1-2, that Pacific Grove's population in 2020 was 15,265. It projects an increase of 130 people by 2030 to a population of 15,395. This increase of 130 people in 10 years represents an average increase of less than one percent in population growth over that 10-year period. However, information that should be in the DHE but I cannot find is how many housing units Pacific Grove currently has. The 2020 Decennial Census states there were 8,121 total housing units in 2020. An increase from 8,121 to 9,246 (8,121 + 1,125, assuming one new resident per additional housing unit) is a 13.85% growth rate over eight years (2023 to 2031). The EIR should explain why a 1% increase in population requires a 13.8% increase in housing.

2. TRANSPORTATION/TRAFFIC

Response: The EIR should assess the Project's environmental impacts resulting from an increased need for parking spaces.

Background: Before the EIR can assess the Project's environmental impacts on the City's parking spaces, it must determine the number of additional parking spaces needed for 1,125 additional housing units. Assuming one extra vehicle per additional housing unit, that would create a need for 1,125 additional parking spaces by 2031. The EIR should

describe and analyze the environmental impacts of the increased number of needed parking spaces and provide maps showing where the new parking spaces will be located.

The 1996 Wilbur Smith Associates' *Pacific Grove Downtown Parking Study* states in Table 1-1 that the 1984 Downtown Total Parking Supply has 1,370 spaces, 58% on-street and 42% off-street, and it recommends a 3-phase program to add a total of 695 additional parking spaces downtown. The EIR should state how many parking spaces are currently in the Downtown area, how many more will be needed, where the added parking spaces will be located, what change will result in the ratio of parking spaces to the City's businesses and residential areas, and the resulting impacts on aesthetics, traffic flow, bicycle lanes, pedestrian traffic, etc.

The 1994 General Plan Transportation Element Goal 5 states, "Ensure provision of adequate on- and off-street parking." Policy 14 states, "Require off-street parking for new residential developments and for additions the increase in the parking demand." Policies 15-19 also address parking. The EIR should evaluate the Project's impacts on those goals, quantify the number of additional parking spaces, explain where the additional parking spaces will be located, identify alternatives to converting City-owned parking lots to housing, described impacts on General Plan parking-related goals and policies, propose mitigation measures to reduce the Project's impacts from additional parking, and recommend alternatives to lessen or avoid the impacts. It should also explain what amendments are necessary to existing parking ordinances and policies resulting from the increased number of necessary parking spaces.

3. PARKS AND RECREATION.

Response: The EIR should analyze the Project's impacts on the Parks and Recreation Element Goal #1 resulting from rezoning open space land.

Background: Goal #1 of the Parks and Recreation Element in the 1994 General Plan is to "maintain a public park system and recreation facilities suited to the needs of all Pacific Grove residents and visitors." The Project will decrease the amount of land now available for recreation. DHE Table 2-9 designates Site 52, a 15.73-acre vacant site behind the David Avenue School, for 191 median-income housing units with a 70% realistic capacity rating. (Presumably, the less-than-100 % capacity rating is because the site would need rezoning from U (unclassified) to R-2 (Medium Density Residential) and R-4 (High-Density Residential), which requires voter approval.) Table 2-9 designates 417 Hillcrest Avenue, a 9-acre parcel at the location of a former reservoir, for 182 affordable and medium-income units, also with a 70% realistic capacity rating. The EIR should explain how much park and recreation land will remain in the City and evaluate whether that amount will be sufficient for the City's 2031 population.

4. PUBLIC SERVICES.

Response: The EIR should describe the Project's impacts on the City's water and sewage systems, solid waste disposal, and other public services.

Background: Goals of the Public Facilities Element of the 1994 General Plan include maintaining adequate levels of service in the City's water system, sewage collection and disposal system, storm drainage system, solid waste disposal, and recycling, providing a library, museum, cemetery, community center, golf course, and public and private schools for residents. Calculating and reporting the City's Project-caused population growth is a prerequisite for analyzing the Project's impacts on public services.

5. AESTHETICS

Response: The EIR should recommend consultation with the Pacific Grove Heritage Society Board of Directors about lessening the impact on scenic resources resulting from addition of 225 ADUs.

Background: A significantly troubling aspect of the Project is its potential impact on Pacific Grove's visual qualities, described in the 1994 Land Use Plan as the "historic nature of Pacific Grove" and in the 1994 Urban Structure and Design Element as Pacific Grove's "overall visual attractiveness." Drive along Lighthouse or Central Avenues and see historic homes and buildings, qualities conspicuously responsible for Pacific Grove's moniker as "America's last hometown."

A current and increasing threat to Pacific Grove's historical nature is the addition of 225 ADUs. However, with care, those ADUs could become an asset to Pacific Grove's "overall visual attractiveness" and "historic nature." What is needed are pre-reviewed attractive ADU plans.

Program 9 of the DHE Housing Action Plan states, "By July 2024, work with neighboring jurisdictions to develop pre-reviewed plans for ADUs." I'm afraid I have to disagree because I've viewed the pre-reviewed plans offered by two neighboring jurisdictions, and I find them inconsistent with "overall visual attractiveness" and "historic nature." Therefore, I recommend the alternative that instead of working with "neighboring jurisdictions," Pacific Grove consult with the Board of Directors of the Heritage Society, a local organization with over 400 dues-paying members. The Society is dedicated to fostering an appreciation of the City's historical and architectural resources. Its members include contractors and realtors familiar with construction costs who want to preserve Pacific Grove's "historic nature." So, instead of working with "neighboring jurisdictions," I recommend the EIR consultant seek assistance from knowledgeable members of Pacific Grove's Heritage Society for the purpose of developing one or more pre-reviewed ADU plans that would be compatible with Pacific Grove's historic nature. I realize that the City could not require ADU applicants to use pre-reviewed plans; however, if the pre-reviewed plans are as low cost to construct as less attractive ADUs, if using pre-reviewed ADU plans sensitive to the City's historic nature will result in reduced review time, and if they are aesthetically more pleasing and consistent with Pacific Grove's historic nature, ADU owners would be more likely to use them than to use the less attractive plans. The goal should be to develop attractive-looking ADUs that cost no more than alternative ADUs.

6. NOISE

Response: A needed amendment to the current General plan is the addition of a Noise Element, required by Government Code §65302(f) to identify and appraise noise problems in the community.

The EIR should address at least three serious noise problems in Pacific Grove that need appraisal — harmful noise impacts on harbor seals, excessive noise from granite excavation, and noise from pickleball courts in a residential area.

- *Harbor seals.* On October 19, 2022, agenda item 11.F, the City Council recognized the problem of road construction noise on harbor seals and adopted an ordinance regulating it. See Herald article at https://www.montereyherald.com/2022/10/20/pacific-grove-council-approves-harbor-seal-protections-tables-tax-discussion/ Several hundred harbor seals reside in Pacific Grove, so the new Noise Element should recognize harbor seals as sensitive noise receptors and add mitigation measures to reduce noise impacts on them.
- *Granite excavation.* Pacific Grove sits on top of a granite layer. Foundations for new housing are likely to require granite excavation. The General Plan noise element should set noise standards for granite excavation.

- *Pickleball.* Another noise issue in Pacific Grove is pickleball's noise impacts on neighboring residences. I have never heard complaints about pickleball noise generated from the high school pickleball courts, because those courts are distant from neighboring residences. However, persons residing near pickleball courts at the Community Center have objected strenuously. The General Plan's new Noise Element should address pickleball-caused noise impacts and consider the differing sensitivities of different nearby noise receptors.

7. LAND USE AND PLANNING

Response: The EIR should analyze whether the City's plan to rezone Site 58 from U to R4 conflicts with PGMC §12.20.020(3)(A), the terms of the conservation easement held by the Fish and Wildlife Department applicable to the nearby Pacific Grove Monarch Butterfly Ecological Reserve, and the thousands of overwintering Monarch butterflies who roost on trees located in and close to Site 58.

Background: Site 58 is a 6.17-acre site owned by either the City of Pacific Grove (as the DHE states on pg. 2-28) or the Pacific Grove Unified School District (as I believe to be true). In either case, Site 58 is within several hundred yards of the Pacific Grove Monarch Butterfly Ecological Reserve ("Butterfly Sanctuary"), the 2.7-acre sited that has long been home to thousands of overwintering Monarch Butterflies who are the reason for P.G.'s international reputation as "Butterfly Town, U.S.A." In 1990, Pacific Grove voters approved a bond measure to acquire the 2.696-acre site which was then, as now, a nationally famous overwintering site for Monarch butterflies and in 1992 acquired the site with a portion of the purchase funds coming from the Wildlife Conservation Board. The City and the State entered into a conservation easement limiting the City's activities on the site by CCRs prohibiting removing vegetation except as authorized by good husbandry practices *approved by the State*. Also Municipal Code §12.20.020(3)(4) protects trees within and near the Butterfly Sanctuary, and its purpose is to protect the thousands of overwintering Monarch Butterflies who congregate on those trees. The Project would rezone nearly Site 58 from U to R-4, allowing up to 29 units per acre for up to 124 housing units. The EIR should analyze the impact of rezoning Site 58 on the colonies of the nearby Monarch butterflies, the possibility that the proposed rezoning would result in violations of Municipal Code §§ 12.2.020(3)(4), and the potential impact on the Monarch Butterflies protected by terms of the Wildlife Conservation Board conservation easement. That investigation should include an interview with Pacific Grove's Public Works Environmental Manager and the Wildlife Conservation Board (contact Julia Vance at reg4assistant@wildlife.ca.gov) to obtain their opinions as to whether the proposed rezoning of Site 58 will affect the overwintering Monarch Butterflies.

8. CLIMATE ACTION AND ADAPTATION

Response: The City should amend the Safety Element of the 1994 General Plan to include Pacific Grove's Climate Action and Adaptation Plan.

Background: SB 379 requires local jurisdictions to include climate adaptation and resilience strategies in the safety elements of their general plans. Pacific Grove established a Climate Action and Adaptation Planning Subcommittee composed of selected Council members and Commissioners of the Beautification and Natural Resources Commission to work with a consultant to create a Climate Action and Adaptation Plan (CAAP), to serve as a roadmap for how the City will reduce greenhouse gas emissions for the impacts of climate change on public health, infrastructure, ecosystems, equity, and public spaces. The CAAP, when completed, should be included in the amended General Plan Safety Element.

9. MISCELLANEOIS

Please see my 1/19/24 and 1/22/24 RSDHE comments providing evidence contrary to presumed 100% “realistic capacity” for Sites 1 and 11. Please also see my 1/23/24 comment describing HCD errors in Table 2-6 on pg. 2-12 pertaining to addresses for Site 9 which are contrary to Figure 2-2 on pg. 2-13 showing the three Site 9 parcels at different addresses than stated in Table 2-6.

Name and Address of Commenter

The 1/25/24 instructions for this NOP state that the name and physical address of a commenter should be in the body of the email. I am Jane Haines, and I reside at 610 Ocean View Boulevard, Apt. 1, in Pacific Grove.

Conclusion

Thank you for this opportunity to comment on the NOP.

Yours truly, Jane Haines

From: Jane Haines <janehaines80@gmail.com>
Sent: Tuesday, February 20, 2024 7:35 AM
To: Alyssa Kroeger; Housing
Cc: Karen Vaughn; CDD Planning
Subject: NOP Comments: Housing Element Update, Zoning Amendments, and General Plan Amendments Project

Follow Up Flag: Flag for follow up
Flag Status: Flagged

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Dear Ms. Kroeger,

I am writing to request a thorough analysis in the Draft Environmental Impact Report (EIR) of potential impacts to the physical environment resulting from Project-caused changes in the number of Pacific Grove's parking spaces. By "Project," I refer to the Housing Element Update, Zoning Amendments, and General Plan Amendments.

As mentioned at the February 15 scoping meeting, a reduction in parking spaces is generally considered a non-CEQA impact when it results in the mere inconvenience of searching for parking. However, if the City's existing parking spaces cannot adequately meet the increased demand, that may necessitate the construction of new parking facilities, such as parking garages or additional parking lots. Failing to address this issue could lead to residents resorting to parking in open spaces not designated for such purposes, like public parks, front lawns, and along the dunes lining Ocean View Boulevard, causing significant environmental impacts.

Moreover, CEQA Appendix G presumes a significant impact when a project conflicts with any applicable land use policy of an agency with jurisdiction over the project, including general plan policies adopted for the purpose of avoiding or mitigating an environmental effect. This Project conflicts with policies 11, 14, and 19 in the 1994 General Plan Transportation Element. Those policies require new construction to accommodate off-street parking and replacement of an equal number of off street spaces in the same vicinity when existing spaces are removed.

The EIR should assume the addition of at least one needed parking space for each of the 1,125 housing units, and recognize the reduction in currently-existing parking spaces caused by removal of parking lots as described for Sites 1, 2, 5, 10, 11, 20, 22, 23, 25, 27, 30, 34, 36, 37, 38, 39, 31, 48, 49, 50, and 56 on pages 2-10 to 2-30 of the Draft Housing Element.

In order to accurately measure the resulting Project-caused impacts, the EIR must establish a baseline by quantifying the current number of parking spaces within City limits, as well as the number required for the additional 1,125 housing units, and subtract Project-caused loss of currently-existing parking spaces. If the analysis shows that additional parking is necessary, the EIR should analyze mitigation measures. I suggest mitigation by construction of a high-rise parking garage on Site 11, a City-owned 0.88-acre site which the Project designates for 81affordable housing units.

A parking garage on this 0.88-acre site (equivalent to 38,333 square feet) containing the typical 320-sq. ft. size parking space, would provide 119 parking spaces per floor, minus room for car lanes. Before subtracting the area for car lanes, a nine-story parking garage could accommodate 1,071 vehicles, the approximate equivalent of one car for each of the 1,125 additional housing units, before factoring in the number of Project-caused lost parking lots.

In sum, the EIR must quantify Pacific Grove's existing parking capacity and assess the need to lessen the Project's potentially significant environmental impacts resulting from changes in the number of Pacific Grove's parking spaces.

These comments supplement my February 8, 2024 response to the Notice of Preparation (NOP). I am Jane Haines, residing at 601 Ocean View Boulevard, Apt. 1, Pacific Grove.

Cordially yours,

Jane Haines

From:	Jane Haines <janehaines80@gmail.com>
Sent:	Tuesday, February 27, 2024 7:13 AM
To:	Alyssa Kroeger; Housing
Cc:	Karen Vaughn; CDD Planning
Subject:	NOP Comments: Housing Element Update, Zoning Amendments, and General Plan Amendments Project
Attachments:	Alternatives.pdf
Follow Up Flag:	Flag for follow up
Flag Status:	Flagged

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Dear Ms. Kroeger,

I request that the Environmental Impact Report for the above-referenced Project analyze two potentially superior project alternatives:

1. Potentially superior Alternative #1 eliminates Sites 52 and 56 (351 additional housing units), replacing them with alternative PGUSD-owned sites that could yield fewer, but still a sizable number, of additional housing units without causing significant environmental impacts.

2. Potentially superior Alternative #2 replaces use of Site 11 for 52 housing units. Instead, it uses Site 11 for a high-rise parking structure to reduce the Project's potentially severe environment impacts resulting from diminishing the City's parking space capacity.

The attached "Alternatives" file describes Alternative #1 and Alternative #2 and incorporates by reference my earlier Feb. 8 and 20 responses to the Notice of Preparation for a Draft EIR.

I reside in unit #1 at 601 Ocean View Boulevard in Pacific Grove.

Sincerely,
Jane Haines

Alternative #1

I request that the Project eliminate Sites 52 and 56, two PGUSD-owned sites likely to cause significant environmental impacts, and partially replace them with the PGUSD-owned large, unpaved ball field behind Robert Down School, between Spruce Avenue and Junipero Avenue, for a housing site. I lived one block from that location for over fifteen years, and I seldom saw the grassy field in use, even though the paved portion between Spruce and Pine Avenue is used constantly for school activities and neighborhood recreation.





Since the Robert Down School site dates back to the 19th century, its land seems less likely to be subject to deed restrictions than Sites 51 and 53 are. Furthermore, the grassy field is near no environmentally sensitive, such as the Monarch Sanctuary, like Site 53. It seems unlikely that voters would reject a referendum to rezone that site for affordable housing.

I request that the EIR analyze the grassy hill that adjoins Sinex Avenue beyond the Middle School's fenced-in recreation field. That land, depicted here, likely belongs to PGUSD. However, it has no uses other than housing large, mature trees. Could it be used for row houses for school personnel? The hill is steep, and construction would need to retain the trees. However, I can think of no reason why voters would reject a referendum to rezone that site for row houses for PGUSD personnel.



Alternative #2

I request the EIR to analyze my proposal to replace the proposed use of Site 11 for 52 low income housing units with a high-rise parking structure to reduce the Project's potentially severe environmental impacts resulting from the Project-caused reduction of the City's parking space capacity.

Background: My February 20 response to the Notice of Preparation requests a thorough analysis in the Draft Environmental Impact Report of potential impacts to the physical environment resulting from Project-caused changes in the number of Pacific Grove's parking spaces. I recognize that the "social inconvenience of having to hunt for scarce parking spaces is not an environmental impact," however I believe that the Updated Housing Element will cause there to be more vehicles in Pacific Grove than there will be parking spaces, thus necessitating either construction of new parking facilities, such as parking garages or additional parking lots, or failing that, residents of necessity will have to park in open spaces such as public parks, front lawns, and along the dunes lining Ocean View Boulevard, resulting in significant environmental impacts.

An additional significant environmental impact results from the conflict between the Updated Housing Element and 1994 General Plan transportation policies 11, 14, and 19 adopted to prevent environmental impacts. (CEQA Appendix G, section Xb.)
Site 11 is centrally located downtown and, therefore, is more likely to alleviate the parking shortage than a parking garage at other locations. Moreover, it is the most extensive (0.88 acre) of the numerous parking lots the Project will eliminate and, therefore, more likely to prevent illegal parking than a parking garage on a smaller site.

Site 11 was the subject of 2022 emails between a developer and the former City Manager. The latter proposed "an October City Council meeting, in Closed Session" to present the Developer's plan for a TCAC (California Tax Credit Allocation Committee) funded affordable housing project. See emails on following pages 4 and 5.

That closed session never occurred. Instead, agenda item no. 9F on the July 19, 2023 regular agenda resulted in the City Council tabling the Developer's proposal for the City to donate the 0.88 acres for the housing project.

The Draft Housing Element, Appendix A: Compiled Site Inventory on page A-1, assigns 100% Realistic Capacity for 52 low-income housing units at Site 11. Suppose the EIR analysis shows a parking garage is unnecessary at Site 11? In that case, the City should allow non-profit housing developers, such as Mid-Pen or CHISPA, a fair opportunity to bid against the currently proposed 52-unit TCAC-funded Project.

I'll get on it! Let me discuss items with our side of things and let you know.

Thanks

Daniel Silverie, Jr.
SILCON Constructors, Inc
(831)402-7985

From: City Manager <citymanager@cityofpacificgrove.org>
Sent: Monday, September 12, 2022 3:28:51 PM
To: Daniel Silverie <danieljr@silconconstructors.com>; Anastacia Wyatt <awyatt@cityofpacificgrove.org>; John Kuehl <jkuehl@4leafinc.com>; Dan Silverie <DSilverie@silconconstructors.com>; Chad Brown <chad@montereydesignbuild.com>; Joe Sidor <jsidor@cityofpacificgrove.org>
Cc: Sandra Kandell <skandell@cityofpacificgrove.org>; Kerry Lindstrom <klindstrom@cityofpacificgrove.org>
Subject: RE: PG Cinema Laurel Street Project

Hi, Dan –

I've placed this on the City Council's Closed Session agenda for the October 5th City Council meeting. It will be me going into Closed Session with them to share your proposal (I won't be able to bring in you and your team with me). So, yes, we will need your draft proposal and design ASAP. I would like to review it first with you and your team so that I understand everything and may go through it with the City Council to get their feedback and direction in Closed Session. I am in the office this week – but out of the office all next week (September 19 – 23). I will need to take your proposal and design and prepare a report for the October 5 Closed Session – so being able to review it with you sooner than later is crucial. Please let me know your availability so that we may get things going. Thanks!

Ben Harvey
City Manager
City of Pacific Grove

From: Daniel Silverie <danieljr@silconconstructors.com>
Sent: Monday, September 12, 2022 1:50 PM
To: City Manager <citymanager@cityofpacificgrove.org>; Anastacia Wyatt <awyatt@cityofpacificgrove.org>; John Kuehl <jkuehl@4leafinc.com>; Dan Silverie <DSilverie@silconconstructors.com>; Chad Brown <chad@montereydesignbuild.com>; Joe Sidor <jsidor@cityofpacificgrove.org>
Subject: RE: PG Cinema Laurel Street Project

[NOTICE: This message originated outside of the City of Pacific Grove email system – DO NOT CLICK on links or open attachments unless you are sure the content is safe.]
Hello Ben we would be happy to meet with the City Council on October 5th. We will provide you with the proposal and the draft design prior to the meeting.

Thank you,

Daniel Silverie, Jr.
SILCON Constructors, Inc
3160 Ocean Terrace
Marina Ca 93933
CSLB #972926
Cell 831.402.7985

<image001.jpg>

From: City Manager <citymanager@cityofpacificgrove.org>
Sent: Tuesday, September 6, 2022 3:00 PM
To: Daniel Silverie <danieljr@silconconstructors.com>; Anastacia Wyatt <awyatt@cityofpacificgrove.org>; John Kuehl <jkuehl@4leafinc.com>; Dan Silverie <DSilverie@silconconstructors.com>; Chad Brown <chad@montereydesignbuild.com>; Joe Sidor <jsidor@cityofpacificgrove.org>
Subject: RE: PG Cinema Laurel Street Project

Hi, Dan – thank you – we were targeting an October City Council meeting, in Closed Session. I will need a 1-pager proposal and potential proposed design that I could bring with me into this meeting with the City Council. We meet on October 5 and October 19. If either one of these dates is a possibility, please let me know?

Ben Harvey
City Manager
City of Pacific Grove
bharvey@cityofpacificgrove.org

From: Daniel Silverie <danieljr@silconconstructors.com>
Sent: Tuesday, September 6, 2022 2:13 PM
To: Anastacia Wyatt <awyatt@cityofpacificgrove.org>; John Kuehl <jkuehl@4leafinc.com>; City Manager <citymanager@cityofpacificgrove.org>; Dan Silverie <DSilverie@silconconstructors.com>; Chad Brown <chad@montereydesignbuild.com>; Joe Sidor <jsidor@cityofpacificgrove.org>
Subject: Re: PG Cinema Laurel Street Project

[**NOTICE:** This message originated outside of the City of Pacific Grove email system -- **DO NOT CLICK** on links or open attachments unless you are sure the content is safe.]
Hello again,

An update for you all on our end of things:
We spoke with our Attorney and with Mr. Panetta's guarantee to receive federal vouchers we stand a much better and quicker chance during the application to be awarded TCAC funding. That is encouraging news let's keep the momentum going forward. Please advise on the meeting we are requesting with City council. I appreciate your efforts.

Thank you,

Daniel Silverie, Jr.

SILCON Constructors, Inc
(831)402-7985

From: Anastacia Wyatt <awyatt@cityofpacificgrove.org>
Sent: Thursday, August 25, 2022 12:27:02 PM
To: Daniel Silverie <danieljr@silconconstructors.com>; John Kuehl <jkuehl@4leafinc.com>; City Manager <citymanager@cityofpacificgrove.org>; Dan Silverie <DSilverie@silconconstructors.com>; Chad Brown <chad@montereydesignbuild.com>; Joe Sidor <jsidor@cityofpacificgrove.org>
Subject: RE: PG Cinema Laurel Street Project

Dan,
That is great. We will look at time to schedule a meeting.

Thank you,

Anastacia Wyatt
Community Development Director
City of Pacific Grove
831-648-3182
<image002.jpg>

From: Daniel Silverie <danieljr@silconconstructors.com>
Sent: Wednesday, August 24, 2022 4:15 PM
To: John Kuehl <jkuehl@4leafinc.com>; City Manager <citymanager@cityofpacificgrove.org>; Dan Silverie <DSilverie@silconconstructors.com>; Chad Brown <chad@montereydesignbuild.com>; Joe Sidor <jsidor@cityofpacificgrove.org>; Anastacia Wyatt <awyatt@cityofpacificgrove.org>
Subject: PG Cinema Laurel Street Project

[NOTICE: This message originated outside of the City of Pacific Grove email system -- DO NOT CLICK on links or open attachments unless you are sure the content is safe.]
Hello Everyone:

I was fortunate enough to get an hour with Congressman Panetta this afternoon to discuss the project. Jimmy is willing to support the project in any way he can and wants to remain informed as we go through the process. With that, I am hoping we could meet again very soon and have another look at the project with City Council. We will use the same plans for now and add color and landscape concepts and make it more appealing.

Thank you for your consideration in scheduling a meeting as soon as possible.

Sincerely,

Daniel Silverie, Jr.
SILCON Constructors, Inc
3160 Ocean Terrace
Marina Ca 93933
CSLB #972926

From: David <fogtops@yahoo.com>
Sent: Thursday, February 22, 2024 5:49 PM
To: Housing
Cc: Nancy Parsons; Mike Gibbs; Vince Tuminello; Peggy Gibbs
Subject: NOP Comments: Housing Element Update, Zoning Amendments, and General Plan Amendments Project
Attachments: PGhousingHarm+CarryCapacity.pdf

[NOTICE: This message originated outside of the City of Pacific Grove email system -- DO NOT CLICK on links or open attachments unless you are sure the content is safe.]

You should find a PDF attached with HOPE's requests for the scope of the Housing Element Update EIR.

If you have any trouble reading it - please contact us at this email ASAP.

Thank you,
David Dilworth

NOP Comments: Housing Element Update, Zoning Amendments, and General Plan Amendments Project

State of Our Monterey Peninsula's Environment 2024
By David Dilworth, Executive Director, ***Helping Our Peninsula's Environment***

We request the EIR address Carrying capacity of humans - describing the impacts that arise as a population approaches Carrying capacity; and what impacts signify when carry capacity has been reached or exceeded.

Why? Because here on our Monterey Peninsula --

- ***We*** **humans have already seriously endangered** some 82 local animal species plus 19 trees and plants who've lived here for millenia before we arrived,

- There is something seriously wrong with the magnificent dark green cloak that protects and beautifies our Peninsula, warms us in the winter and cools us in the summer - our Monterey Pine Forest,

- Our Carmel River and its biggest animals are dying; and you and I are enduring an official water supply emergency that was first officially declared in 1977,

- Our Peninsula is infested with Gridlocked Highways,

Yet most of our elected officials keep approving more water guzzling golf courses, more habitat destroying subdivisions, roads and mansions as though nothing is wrong!

They have no concept of - "Enough"

As recently as the early 1970s Monterey Peninsula residents enjoyed a quiet, gentle life -- when we could drink clear tap water without thinking about it, walk safely across any street, walk in untouched forests, and watch a sunset turn into a constellation - all in solitude.

We must now brave daily gridlock and road rage, the screaming noise of constant construction machines and chainsaws destroying trees, rationing of repugnant water, endure choking smoke and deadly flames from burning Fort Ord and perpetually increasing loss of our beautiful Monterey pine, Cypress and oak forests and other wild habitat and views - all lost to greed for more subdivisions, mansions and golf courses.

Welcome to Paradise.

Monterey Pine Forest - Down and Threatened

Most of our beautiful Monterey pine forest has been destroyed by bulldozing, paving and building of Pacific Grove, Monterey and Carmel and the development of golf courses and houses in Pebble Beach. Yet it has absolutely zero legal protection inland of our Coastal Zone. This is even though all the genuine world experts in imperiled species have found our forest as seriously endangered. This includes the United Nations Food & Agriculture Organization, and the California Native Plant Society.

Endangered Animals & Plants

We have caused the official imperilment of some 82 local animal species plus 19 trees and plants. Our "authorities" regularly kill beautiful Mountain Lions. An (hopefully merely incompetent) Dept. of Fish & Game officer killed a gentle Black Bear who wandered into Carmel in 2001. (For reference - no Californian has ever been killed by a Black Bear!)

Long-Term Water Supply Emergency

Since our 1977 drought and **building Moratorium**, the usually developer-controlled Water Board has approved some 8,000 new water connections (this is not a mis-print) several of which are new golf courses. This has greatly helped cause the imperilment of the West Coast Steelhead and the Carmel Valley Red-Necked Frog (just kidding - its the California red-legged frog).

Dangerous Chemicals in our Water

Pebble Beach, and the cities of Pacific Grove and Monterey regularly let raw sewage run into our bays - harming Sea Otters and a huge spectrum of other wildlife. Every year the some 20+ local Golf Courses use thousands of pounds of pesticides and tons of fertilizers - much of which run off into the Carmel River, Carmel Bay and our Marine Sanctuary.

Gridlock

The highways from the Carmel River all the way to Pacific Grove (Highways One and 68) are officially in gridlock (Level of Service "F"); so is Highway 68 all the way from Salinas. Mornings, even the freeway past Fort Ord between Seaside and Marina is in gridlock.

For emergencies, like fires or Tsunamis, Pacific Grove has only 2 public roads to reach safety.
Those exact roads are already in gridlock every rush hour; and worse with summer tourist traffic.

So one mitigation would be to prohibit emergencies like fires or Tsunamis, to non-rush hour times.

Lack of Parking already inflames neighbor anger.
What level of anger will result in even more population growth?

That's all for now.

# # #

Comments from Economic Development Commissioner Mike Gibbs
Received by CDD - Housing on 2/22/24

From: Mike Gibbs <dr.mike@bizsmartglobal.com>
Sent: Thursday, February 22, 2024 6:41 PM
To: David; Housing
Cc: Nancy Parsons; Vince Tuminello; Peggy Gibbs
Subject: RE: NOP Comments: Housing Element Update, Zoning Amendments, and General Plan Amendments Project

Follow Up Flag: Flag for follow up
Flag Status: Flagged

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David--thank you,

mike

-----Original Message-----
From: David <fogtops@yahoo.com>
Sent: Thursday, February 22, 2024 5:49 PM
To: housing@cityofpacificgrove.org
Cc: Nancy Parsons <nancyparsons29@gmail.com>; Mike Gibbs <dr.mike@bizsmartglobal.com>; Vince Tuminello <vinnyone3@gmail.com>; Peggy Gibbs <Peggy.Gibbs@bizsmartglobal.com>
Subject: NOP Comments: Housing Element Update, Zoning Amendments, and General Plan Amendments Project

You should find a PDF attached with HOPE's requests for the scope of the Housing Element Update EIR.

If you have any trouble reading it - please contact us at this email ASAP.

Thank you,
David Dilworth

From: Nancy Parsons <nancyparsons29@gmail.com>
Sent: Friday, February 23, 2024 9:27 PM
To: Housing; Bill Peake; City Council Members; Planning Commission; Karen Vaughn; Save Salamander Field; David; Vince Tuminello
Subject: Environmental Impact Report considerations Deadline for comments February 26 or 28 I believe 2 deadlines were mentioned.

Follow Up Flag: Flag for follow up
Flag Status: Flagged

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Before I share my concerns regarding the environmental impacts due to the housing development plan, I would like to know why I couldn't find the form that might have made this whole process easier. No matter where I looked I couldn't find the form mentioned in the Planning Commission meeting on February 15. I find this to be the case with much information on the city website. I have had others mention the same frustrations. Perhaps that could be looked into.

These are my main concerns regarding the community we live in and how the housing element will change our environment forever:

1. The main threat to wildlife today, including herons, hawks, bluebirds, song birds, deer, etc. is loss of habitat, meaning the loss of open space and trees. Whenever a field or forest is cleared we lose animals that don't come back.
2. The Monterey Pine tree is now listed as threatened. Pebble Beach has already cleared much of its forest for mega mansions. The old growth forests that we have left in Pacific Grove should not be touched including the old growth forest next to site 52 at David Avenue school. A friend lives in the butterfly zone on Asilomar Drive and is not allowed to have his trees trimmed from October - May because butterflies are around and yet you want to build on site 56 next to the endangered butterfly sanctuary near Lighthouse School.
3. Lake Mead and the Colorado river are drying up. We have had some good rain years but what happens when another drought hits this state. Where will the water for all this building come from? Fort Ord has already built thousands of dwellings; I demand an answer to that question.
4. Traffic! There are only two roads into Pacific Grove, Lighthouse and Highway 68. Both roads are often gridlocked in the afternoon. That will only get worse because there will be more people and more cars on the road. No one takes the bus!! All that traffic will affect our air quality AND quality of life!!! If there were a tsunami or fire how would people get out?! Think of Maui and the Paradise fire where people were incinerated in their cars while trying to leave.
5. Tax payers Dollars!!! Who will pay for new sewage lines, water run off, power lines, Water run off will cause more pollution flowing into the Monterey Bay Marine Sanctuary.
6. Increased population will require more recreation and open space as well as schools and yet several sites will take away open spaces and possibly David Avenue School, (15 acre site??) That is a much larger area than just a ball field and open space.

7. Wildfire! You must consider wildfire. Del Monte Park and site 52 and also the Lighthouse site 56 are surrounded by forest.

I know you have a hard job to do in finding locations for housing but please don't destroy our beautiful area so that so many people can live here. Then we will have a ghost town and a dead ocean as a tourist attraction! Thank you for taking my comments.

Nancy Parsons

Comments from Planning Commissioner Andrew Kubica
Received by CDD - Housing on 2/27/24

From: Andrew Kubica <andrewkubica@outlook.com>
Sent: Tuesday, February 27, 2024 10:43 AM
To: housing@cityof pacific grove.org; Alyssa Kroeger
Cc: Karen Vaughn
Subject: Suggestions for additions to the EIR Scoping for Housing Element

Follow Up Flag: Flag for follow up
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Alyssia,
Suggest that the following be added to the scoping for the Housing EIR.

1) Add sites such as Linen Property at the corner of Congress Avenue and Sunset Drive
2) Add site such as the former La Porte Mansion at the corner of Lighthouse Avenue and 17 Mile Drive
3) Add site of small shopping center at 1219 Forest Avenue for multi-use housing.
4) Consider Arnet Park depending on the deed restrictions, if any.
5) Consider one of the baseball fields. Suggest checking on usage, deed restrictions, what could be consolidated on usage if appropriate.
6) Suggest addition 1350 and 2700 additional cars to Pacific Grove in circulation section of CEQA. These numbers are based on one or two cars per unit.
7) Suggest addition of population growth of lower bound of 1350 new residents and upper bound of 4000 new residents. For the 1350 new units.
8) Add additional Public transportation to the Circulation part of EIR
9) Add additional sewer capability and other public services necessary to support population increase.

Thank You
Andrew Kubica

Comments from Planning Commissioner Andrew Kubica
Received by CDD - Housing on 2/27/24

From: Andrew Kubica <andrewkubica@outlook.com>
Sent: Tuesday, February 27, 2024 10:45 AM
To: Housing; Alyssa Kroeger
Subject: Suggestions for additions to the EIR Scoping for Housing Element

Follow Up Flag: Flag for follow up
Flag Status: Flagged

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8) Add additional Public transportation to the Circulation part of EIR
9) Add additional sewer capability and other public services necessary to support population increase.

Thank You
Andrew Kubica

From: Marcia Wright <marciawright@comcast.net>
Sent: Wednesday, February 28, 2024 2:24 PM
To: Housing
Cc: Bill Peake; Nick Smith; Joe Amelio; Debby Beck; Luke Coletti; Chaps Poduri; Lori McDonnell; Mao.Lee@hcd.ca.gov
Subject: "NOP Comments: Housing Element Update, Zoning Amendments, and General Plan Amendments Project"

Follow Up Flag: Follow up
Flag Status: Flagged

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Dear Housing Department and Rincon,

I request that the EIR cover issues of concern in the following areas:

1. Land Use and Planning

a. Deed restrictions regarding 2 PGUSD properties, Site 56 at 1025 Lighthouse Avenue and Site 52 at 1004 David Avenue preclude the school district from using the properties for real estate business ventures or for non-educational purposes. There are other aspects to the deed restrictions as outlined in recent letters emailed to the Housing Dept by Pebble Beach resident attorney, Ms. M. Thum, and by Pacific Grove resident attorney, Ms. J. Gray.

In addition to the deed restrictions of the 2 PGUSD properties, because they are currently zoned U (unclassified), in order to change their zoning status, a referendum would need to be submitted to PG voters for approval. PG voters are very protective of open green spaces (hence, the referendum requirement for U and O zoned properties) so there is a high likelihood of failure to gain voter approval.

I request that both PGUSD properties - Site 56 at 1025 Lighthouse Avenue and Site 52 at 1004 David Avenue - be removed from the HE's Inventory Site List because of the 2 significant hurdles to Affordable Housing ever being developed at these properties due to deed restrictions and due to the voter approval requirement. No mitigation is possible. The City does not own either Site 52 or Site 56.

b. **An alternative site for consideration to replace the housing unit numbers assigned to Sites 52 and 56 is the Mission Linen property at 801 Sunset Drive.** It is 3 acres; has considerable/necessary water credits; is already zoned for multi-family; could be built 3-5 stories tall. A couple of years ago City officials, including our former City Manager, remarked that Mission Linen had great potential for housing. One called it an "amazing" location for housing given its water credits and being located next to the high school. I am not sure why the Mission Linen site was dismissed. Does the CDD have a copy of a recent letter from the Mission Linen owner that states he does not want his property re-zoned for affordable housing? Or is there a date and time of a recent phone call between the CDD staff or Rincon staff when

the Mission Linen owner was contacted and interviewed? Barring any evidence that exists of recent communications with the Mission Linen owner, I believe that the Mission Linen site should be added to the City's current Site Inventory List.

https://www.montereycountyweekly.com/news/local_news/pacific-grove-eyes-annexing-mission-linen-supply-site-for-much-needed-housing/article_7433e3c4-58ed-11ea-aea5-23f3b3b89004.html

c. **Concentration of low income and very low income at certain sites as opposed to above market housing assignments to other sites is not helpful for inclusive goals and neighborhood acceptance.** See article by Richard Funderburg and Heather MacDonald "Neighbourhood Valuation Effects from New Construction of Low-income Housing Tax Credit Projects in Iowa: A Natural Experiment"

As examples of poverty concentration versus upscale housing concentrations in PG's HE, see how Site 56 at 1025 Lighthouse and Site 55 at 1030 Lighthouse are assigned 102 Low Income + 22 Middle Income (Site 56) and 29 Low Income and 0 Middle Income (Site 55) for a Total of 131 Low Income units for 2 properties located across the street from one another. Whereas Site 52 at 1004 David Avenue is assigned 191 Above Market Income units with 0 Low Income or MI units with much less density.

To mitigate these types of lop-sided concentrations in different neighborhoods and to encourage inclusion and assimilation to existing neighborhoods, in my opinion, each site in PG's HE document should be changed so they include a comparable mix of income groups to one another where ever possible.

2. Biological Resources

The beloved environmentally sensitive iconic property - i.e. **the Monarch Butterfly Sanctuary** - is situated adjacent to Site 56 at 1025 Lighthouse Avenue, which is yet another reason why Site 56 should be removed from the HE Inventory List. There are no mitigation possibilities to diminish the serious impacts of a large Affordable Housing development on the fragile Monarch Butterfly pollinators.

Congressman Jimmy Panetta has submitted the National Monarch Act legislation to protect Monarch Butterfly sites including the City's Monarch Butterfly Sanctuary. Congressman Panetta's efforts would include a sizable amount of annual grants to cities like Pacific Grove.

https://panetta.house.gov/media/press-releases/rep-panetta-reintroduces-his-legislation-promote-protection-and-preservation

Mayor Bill Peake is a strong supporter of the Monarch Butterfly Sanctuary as are many other Pagrovians. PG is known as Butterfly Town. Indeed, the HE front cover features a photo of a Monarch Butterfly and an artwork emblem with a Monarch Butterfly hangs behind the dias of City Council Chambers.

Even if the City owned Site 56 - which it doesn't - the idea of negatively impacting our beloved Monarch Butterflies with housing development construction next door and loud heavy machinery, earth moves, and crews would be unacceptable. Monarch Butterflies spend time on trees and also some rest on the ground. That's why there are signs warning visitors to stay on the designated paths. Also with over 124 AH units to house families who have children and pets at 1025 Lighthouse, it is unlikely they will stick to designated paths at the Sanctuary. There would also be a problem of considerable light and noise

pollution from the housing units which would have a deleterious effect on the Monarch Butterflies.

Monarch butterflies will be under consideration by US Fish and Wildlife this October for gaining official Endangered Species status. An international scientific org has already declared Monarch butterflies as endangered species .

"The International Union for the Conservation of Nature added the migrating monarch butterfly for the first time to its "red list" of threatened species and categorized it as "endangered" — two steps from extinct." Also "Ryan Drum, a biologist with the U.S Fish and Wildlife Service, said "these low numbers we see here are a challenge for all of us." He said the new data would be taken into account when U.S. experts make their recommendation…"

3. Hydrology and Water Quality

The fact that HCD has not asked questions about the SWRCB Cease and Desist Order (WRO 2009-0060) and the PUC's Moratorium against CalAm, the water purveyor for cities in Monterey Peninsula including Pacific Grove, leads me to strongly believe that the EIR needs to be far more detailed about our city's "Potable Water Poverty" situation. Most CA cities have water conservation guidelines in place, but they do not have a State Water Board/PUC Moratorium in place that prohibits new water hookups or intensification of water usage at existing hookups due to zoning changes or use changes. The Moratorium has effectively shut down most Affordable Housing projects in Monterey Peninsula cities. PG has barely enough water allotment for ADUs.

"We are not going to see the setting of new (water) meters until the cease-and-desist order is lifted," said Dave Stoldt, the general manager of the water district and a member of the panel. And the order won't be lifted until there is a viable source of new water. "None of the cities (on the Peninsula) are in the position to provide new housing projects…Stoldt pointed to a project that had been in the works for years along Garden Road in Monterey that would have added several hundred housing units, many of which would have been deemed affordable, at least by municipal planning standards. But the state Water Board refused to allow any new hookups."
https://www.montereyherald.com/2023/01/10/monterey-peninsula-housing-and-water-two-parts-of-the-same-problem/

The other water problem is the fact that MP's designated raw water source, **the Seaside Aquifer, is in overdraught** and has been assigned a Watermaster Judge to ensure that the aquifer is adequately replenished. So it requires a delicate balancing act of replenishment versus potable water use for existing residential customers, hospitality, and other businesses.

The evaluation of **Water Quality** may be impacted in the near future when the EPA mandates new drinking water standards regarding **PFAS using the Hazard Index from CERCLA**. MontereyOne potable recycle facility may be vulnerable to PFAS much lower ppt findings and cleanup mandates because its operation associated with some PFAS risk factors that include a military base (Fort Ord National Priority Superfund site), landfills, wastewater recycle, and airports (foam fire fighting exercises). Orange County Water District and its allies are asking the EPA to exempt potable water recycle facilities from pending PFAS monthly monitoring and cleanup requirements.The EPA has not responded at this time.

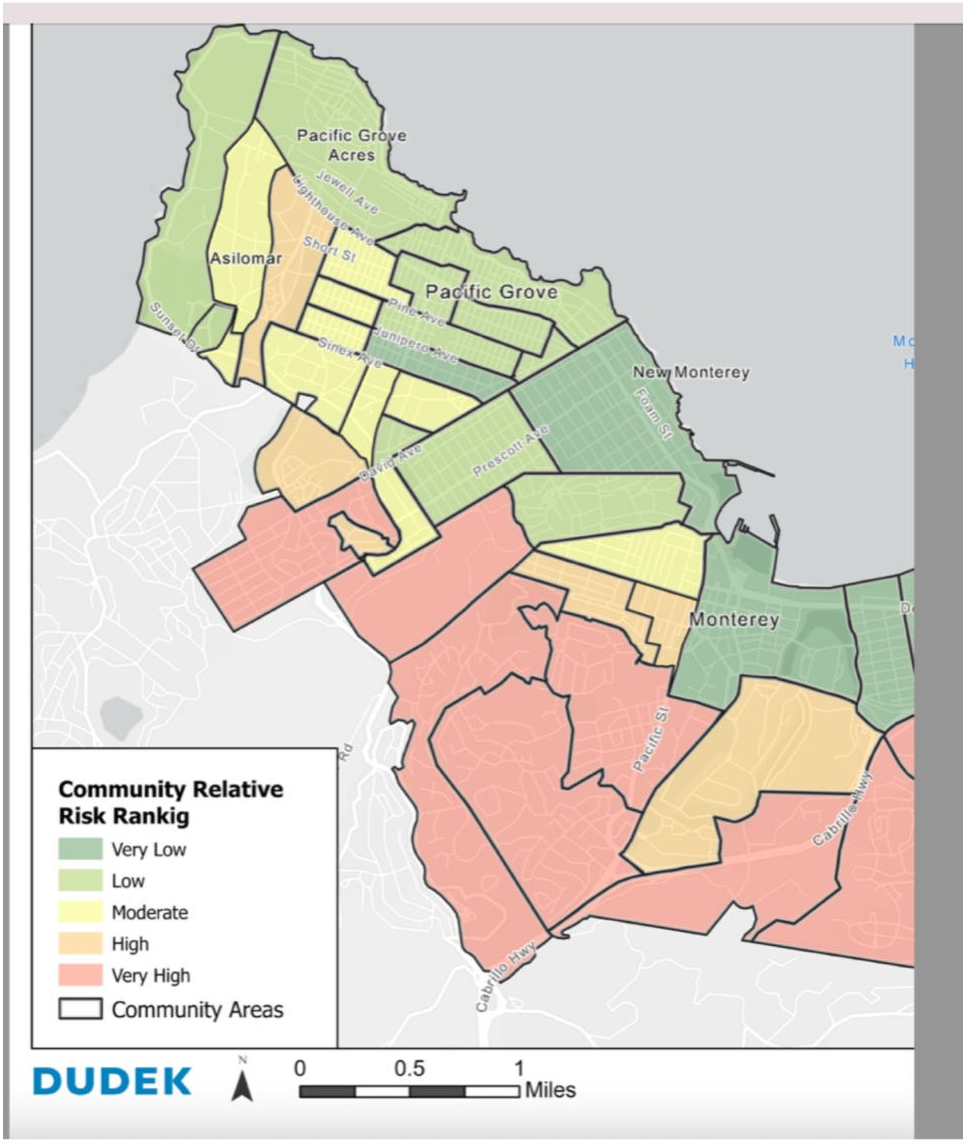
It is essential that the EIR provide considerable detailed information to HCD so it understands that the Cease and Desist and Moratorium is unlike what most/all other CA. cities face. Monterey Peninsula

cities like PG may continue to face Potable Water Poverty for some time to come. There is no mitigation possible. The potable water issues are out of PG's hands.

4. Wildfire

a. **Approximately 40% of PG is classified a combination of high or very high fire risk.** Actually Site 56 is classified High Fire Risk and Site 52 is classified Very High Fire Risk. Some PG homeowners have lost fire insurance and have had to turn to the state fire insurance pool and the annual premiums are much higher as a result. That is something HCD should be aware of. Will fire insurance for AH housing projects in fire risk zones be paid by the developer, or the renters, or grants from HCD?

See Dudek fire map below from link at https://dudek.maps.arcgis.com/sharing/rest/content/items/bf8c1615dfbe47878278f061f4f4ad53/data#page=37



b. **The exits for PG residents in the event of a calamity such as fire occurring in identified risky**

portions of the city are limited. PG does not have a quick on ramp to Hwy 1, like nearby cities Monterey or Carmel or Pebble Beach. We get to Hwy 1 we need to travel through Monterey or by Pebble Beach and use a roundabout in the latter case. The indirect exits are something HCD should be aware of.

5. Population and Housing

Our population has decreased in recent years and so have jobs (close to a 2% loss?). In order to justify the substantial RHNA number assigned to PG for the 6th Housing Element cycle, **it might be helpful if PG Housing staff asked HCD for the reports written by HCD and or AMBAG that forecast new industries/businesses for PG that required an increase in housing for industry workers. The reports should be public information and be added to the EIR.**

6. Utilities

PG&E is the power utility for PG. We've had several blackouts the past few years which have seemed to increase in frequency. Perhaps Housing staff could contact PG&E for statistics and comparisons of PG's blackouts to other nearby cities.

Thank you for considering my concerns and recommendations for the EIR.

Sincerely,
M.A. Wright
PG homeowner

Comments from City Councilmember Luke Coletti
Received by CDD - Housing on 2/28/24

From: Luke Coletti
Sent: Wednesday, February 28, 2024 3:31 PM
To: Housing
Cc: Mao.Lee@hcd.ca.gov
Subject: Pacific Grove NOP Comments: Housing Element Update, Zoning Amendments, and General Plan Amendments Project

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Greetings -

Scope of Land Use Changes:
As discussed at the 8/2//2023 City Council meeting (see links below), the scope of the land use changes to the General Plan and Zoning Code will only be driven by the 6th Cycle Housing Element. The EIR should explicitly acknowledge this limited scope.

Agenda Report:
https://destinyhosted.com/agenda_publish.cfm?id=72243&mt=ALL&vl=true&get_month=8&get_year=2023&dsp=agm&seq=4003&rev=0&ag=1788&ln=15333&nseq=4021&nrev=0&pseq=&prev=#ReturnTo15333

Video:
https://www.youtube.com/live/tS7TTrngDGw?si=w2l33XnzzW_SUm4X&t=7476

SB-35 and SB-423:
With that said, the EIR might also include analysis of the land use impacts due to the provisions of SB-35 and SB-423.

https://www.coxcastle.com/publication-governor-signs-legislation-enacting-significant-amendments-to-sb-35-increasing-opportunities-for-development-of-multi-family-housing-part-i

Thank you.

--
Luke Coletti
Councilmember Pacific Grove
(831) 238-0714

Comments from Planning Commissioner Claudia Sawyer
Received by CDD - Housing on 2/28/24

From: Claudia Sawyer <claudiasawyer@me.com>
Sent: Wednesday, February 28, 2024 4:44 PM
To: Karen Vaughn
Cc: Alyssa Kroeger
Subject: Housing Element Update, Zoning Amendments and General Plan Amendments Project

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Ms. Vaughn and Ms. Kroeger,

I realize the public scoping period for comments re. the NOP is past. I wanted to submit comments that could be considered as the Housing Element Update, Zoning Amendments and General Plan Amendments Project proceeds. My comments are as follows:

1. Historic Preservation
   a. Determine what we as a community want to preserve
   b. Use of historic overlay districts to protect historic structures
   c. Provide zones for affordable housing and missing middle housing in historic overlay districts
   d.. Determine how to utilize adaptive reuse to increase housing
   e. Use of historic tax incentives to encourage housing and incorporate low income housing
   f. How to increase density in historic neighborhoods while maintaining the "historic community feel"
   g. Update processes for review of projects affecting historic buildings

2. How to bring Planning and Preservation advocates together in Housing and Zoning Reform

3. What progress have we made or are we intending to make regarding form based codes?

4. Objective Design Standards — where are we in that necessary process

5. How to include the community in upzoning decisions and where these changes will take place. It can not simply be a Community Development Department, Council, consultants decision or Planning Commission decisions -the community must be part of these decisions that will affect the city for years to come.

6. Addressing local hazards and mitigation necessary in changing structures to include housing i.e. lead, asbestos, and mold.

7. Noise - Generators
   a. Length of use
   b. Noise level (DB and determining distance particular DB is acceptable)
   c. Use on private property
   d. Use on public property
   e. Permanent installation
      -setbacks
      -construction design
         materials
         location
         safety consideration

8. Address circulation issues in view of increasing population density in areas of upzoning and the impact on surrounding areas

Thank you.

Regards,

Claudia Sawyer

From: Margaret T <margaret.thum@gmail.com>
Sent: Wednesday, February 28, 2024 5:40 PM
To: Karen Vaughn; Housing; Bill Peake
Cc: mao.lee@hcd.ca.gov
Subject: NOP Comments: Housing Element Update, Zoning Amendments, and General Plan Amendments Project

Follow Up Flag: Flag for follow up
Flag Status: Flagged

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Hi PG Housing, Ms. Vaughn, and Mayor Peake,

First, an EIR is premature, given no specific site has been identified. The multitude of sites have a multitude of issues, and if your plan is to make it impossible for the public to respond to issues at each location, you've succeeded.

Second, regarding the NOP posted by the City of Pacific Grove, note that it is defective, because it doesn't notify Pebble Beach residents who pay PGUSD taxes and would be impacted by the proposed PGUSD properties (that have deed restrictions that would prohibit any development other than for educational purposes) in the housing element. I learned about this casually through an acquaintance who resides in PG. In addition, I incorporate by reference my letters to the City and/or PGUSD on the housing element sent this year and skate park sent last year (either from this email address or margaret@thumlaw.com). The same concerns apply.

Third, the David Ave. location is in a forest and home to a multitude of wildlife, including salamanders, eagles, hawks, falcons, deer, foxes, wild turkeys, to mention a few. Often this area of the forest is protected area for deer and their young. The impact on the wildlife needs to be part of the report.

Fourth, the traffic congestion at the David Ave. site is horrible -traffic can back up past David Ave. when trying to enter the PB gate on the weekends or during events. Traffic impacts should be part of the report.

Fifth, the impact on the utility infrastructure, e.g., water, sewer, electricity, etc. should be part of the report. The Monterey Peninsula, including PG has been on a water moratorium for almost 30 years. Many vacant lots are scattered throughout Pacific Grove, because the homeowners are unable to secure a water connection. The report should identify how the affordable housing element will be able to overcome this significant restriction. In addition, in the past couple of winters, there have been extended periods without power, with flooding, etc. how will additional housing and congestion exacerbate the issues experience during the winter and storms? In addition, it has been widely reported that local residents are having challenges obtaining property insurance, including some insurance policies of current residents being canceled. So, with increased housing and congestion in a relatively small area, how will this impact current residents being able to obtain and maintain insurance coverage for their properties?

Thanks,
Margaret

From: Janet Gray <janet-gray@att.net>
Sent: Wednesday, February 28, 2024 3:54 PM
To: Housing
Cc: City Council Members; Debby Beck; Luke Coletti; Bill Peake; Joe Amelio; Lori McDonnell; Nick Smith; Chaps Poduri; Mao.Lee@hcd.ca.gov
Subject: Letter regarding EIR comments for Housing Element, Site 52
Attachments: EIR Comments.Site 52_2.28.24.pdf

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[**NOTICE:** This message originated outside of the City of Pacific Grove email system -- **DO NOT CLICK** on **links** or open **attachments** unless you are sure the content is safe.]

Please include my attached letter in the EIR comments regarding revisions to the Housing Element. This letter is intended to augment my previous letter sent earlier this month. Thanks in advance to your time and attention to this matter.

Janet Gray

Janet J. Gray
Attorney at Law
P.O. Box 51962
Pacific Grove, California 93950

February 28, 2024

Alyssa Kroeger, Housing Program Manager
Community Development Department
City of Pacific Grove, CA 93950
Housing@cityofpacificgrove.org

I am sending some additional comments to augment my previous letter sent to your office regarding the Housing Element revisions. I am requesting that you remove Site 52, David Ave School site from consideration as a site for rezoning for development of housing. This area contains a baseball field currently used by both residents of this neighborhood as well as the girls' softball league for practice. This field, referred to by some of the users of the field as "Salamander Field" is the only open, green space in Del Monte Park and is used by a number of residents.

There has been no showing of the necessity to ruin not only a viable baseball field used on a regular basis by hundreds of children, but also a neighborhood open space that has been used a *de facto* park by numerous residents.

Salamander Field is used by three schools, including younger children.
The Monterey Bay Charter School pays considerable rent to the PGUSD for the use of the school and its surrounding areas. Some events have taken place in Salamander Field. The school is a closed campus and is on a different schedule for holidays, as well as starting and stopping dates.

The school grounds also provide a pre-school for the most vulnerable of our school-age children as well as Community High, both of which require the use of outdoor space under educational code guidelines.

An EIR should explore not only the current use and importance to the neighborhood and schools as an open space, but also the large number of issues presented by destroying a green open space actively used by the community.

These issues include increased traffic, inasmuch as there is a major thoroughfare on one side of the property, Congress Ave, and David Avenue, which is already a busy thoroughfare into the neighborhood. With two hundred additional homes on the small amount of acreage beyond the school building, an EIR should examine how many more residents would be expected to be in this location, along with the expected one car per adult resident that is typical of this area. That could be

somewhere between 400 to 600 more cars on this narrow rural road where running the stop sign on David Avenue and Buena Vista Avenue is so commonly done that young children in the area are taught not to rely on the stop sign at all. Two sides of the property border Pebble Beach, which currently does not allow roadway access to residents without Pebble Beach gate access rights.

There is also a rest home at the end of David Avenue, a block beyond the proposed site. There are frequent 911 calls requiring emergency vehicles to assist with some of the frail older people living in that small hospital.

There will be issues with noise pollution with the addition of two hundred homes and their residents that will necessarily be built as dense housing in an area that is now an open space and park for the residents of this area. Another factor that should be considered is destroying the aesthetics of the area, where current residents have a forest view from their homes on many parts of David Avenue. Some of the acreage on this area is undisturbed forest that will eliminate yet more of the trees, necessary not only for their beauty but also contribution to oxygen production.

Construction as envisioned by the housing element will destroying the habitat of several species of animals and birds, including the endangered salamander. Salamander Field is also home to black-tailed deer, red-tailed hawks, foxes and well as species of other birds and a vast number of botanical species.

Sincerely,

Janet J. Gray,
Resident, Homeowner

cc: citycouncil@cityofpacificgrove.org;
lcoletti@cityofpacificgrove.org; dbeck@cityofpacificgrove.org;
lmcdonnell@cityofpacificgrove.org; cpoduri@cityofpacificgrove.org
jamelio@cityofpacificgrove.org; nsmith@cityofpacificgrove.org

Appendix B

Proposed Land Use Element Revisions

2 Land Use

Land use is a major focus of the General Plan. Pacific Grove's land use pattern is well established and ~~unlikely to~~ has not had any major changes since the adoption of the 1994 General Plan. This chapter describes the history of land use planning in Pacific Grove, discusses the major issues that face the city, and presents the goals, policies, and programs that will determine how land use and growth will be managed in Pacific Grove ~~between 1994 and 2010~~.

2.1 HISTORY OF LAND USE PLANNING IN PACIFIC GROVE

Pacific Grove was founded in 1875 as the Methodist Seaside Retreat. In evolving into a predominantly single-family community, the town retained the natural qualities that originally contributed to its charm, beauty, and popularity.

In 1883, the Methodists sold the Retreat property to the Pacific Improvement Corporation (PIC), a subsidiary of the Southern Pacific Railroad. By then, much of the property had been divided into small lots meant to accommodate the tents of seasonal visitors. On July 16, 1889, Pacific Grove incorporated. Over the next few decades, a number of areas were added to the city, and the Victorian homes that came to define Pacific Grove's residential character were built.

(For a more complete history of the area and the city, see Chapter 7, Section 7.1, "A Brief History of Pacific Grove.")

Municipal land use planning in Pacific Grove dates from 1919, when Samuel F. B. Morse reorganized the PIC into Del Monte properties and sold much of its land including waterfront property—to Pacific Grove. In so doing, Morse declared that the waterfront "should be forever restricted against building or use other than what would be desirable to the citizens of Pacific Grove." This declaration, along with others advocating the retention of the city's natural beauty and encouraging architectural control of its development, marked the beginning of a history of conscientious land use planning.

The City's first planning commission was created in 1929. Thirty years later, Pacific Grove's first "Master Plan" was adopted (1958). In 1971, the City established a planning department, and a new General Plan was adopted in 1973. ~~The 1973 General Plan remained in effect—with additions along the way—until the adoption of this General Plan in 1994~~with additions along the way – until the adoption of the 1994 General Plan, which set forth updated land use policies intended to guide community growth and development. Since the adoption of the 1994 General Plan, various elements of the General Plan required periodic updates to identify and prioritize a response to evolving local needs and demonstrate compliance with new State planning laws.

2.2 CITIZEN INITIATIVES AFFECTING PLANNING

Several provisions have become part of the City's Zoning Ordinance through the initiative process. This section summarizes initiatives passed since 1948. Provisions approved by initiative restrict certain types of multiple- unit developments, the development of motels, the use of George Washington Park, and the rezoning of land zoned either "U" (Unclassified) or "O" (Open Space).

The initiative restricting the use of Washington Park was approved in 1948. It provides that the park is to be used only for recreation and pleasure purposes, and prohibits trailer camps, campgrounds, and public or private businesses.

A 1955 initiative created the R-3-M zoning district, and confined motels to this zone.

In 1978, in response to an initiative petition, the City Council rezoned the R-3-A District bounded by Lighthouse Avenue, the easterly city limits, Pine Avenue, and 15th Street to R-2.

The initiative that regulates multiple-unit developments involving condominiums and planned unit de—velopments (PUDs) was passed in 1982. Its intent was to assure that condominium and PUD developments conform with land use and zoning standards applicable to single-family uses. It restricts condominium and PUD densities (number of dwelling units per acre) to no more than 125 percent of the density of the nearest single- family residential district. In order "to avoid the conversion and loss of the city's residential stock and character," the initiative also prohibited time-share projects in Pacific Grove.

A 1986 initiative prohibits the development of hotels and motels in all but existing R-3-M districts. It also prohibits the establishment of any new R-3-M districts, and sets the density of R-3-M uses at a minimum of 2,500 square feet of land for each family unit and hotel or motel unit.

Another initiative measure passed in 1986 requires that all property within the city zoned "O" or "U" as of July 14, 1986, must retain such zoning until an ordinance to change the zoning is approved by the voters. The parcels affected include parks and recreation areas, Pacific Grove Unified School District properties, and municipal properties.

In 1994, the Ceity Ceouncil placed a measure on the ballot. The measure to allow condominiums and hotel use in the Holman's block of the Downtown was passed by the city's voters.

In 2011, Measure U was adopted, which updated the prior restrictions for existing hotels and motels in the R-3-M district. This measure allowed for renovations and the construction of up to 79 additional units. The goal was to allow for existing establishments to expand and renovate for continued tourist attraction to the area.

Measure F was an initiative adopted by City Council in 2012 that rezoned the Holman building downtown to C-1-T. The measure allowed for the development of the Holman building into a mixed-use space. This rezoning was part of a broader effort to revitalize the Downtown, encouraging tourism and increasing commercial activity while preserving the historical significance of the Holman building as a community landmark.

In 2016, Measure X addressed the development of the former American Tin Cannery, a previous industrial facility in Pacific Grove. The measure provided specific guidelines for the redevelopment of the American Tin Cannery site, permitting a mix of uses that included commercial, retail, and tourism-related activities. The initiative sought to revitalize the underused property and create a new, attractive destination within Pacific Grove.

Measure M, which was adopted in 2018, established regulations for Short Term Rental units (STRs). With the popularization of vacation rental sites, such as Airbnb and Vrbo, Measure M established rules that govern the number and location of STRs. This measure also included the types of properties eligible as rentals, and operational guidelines to ensure that short-term rentals did not negatively impact the character and livability of residential neighborhoods, while balancing the need for visitor accommodations.

In 2022, Measure M, adopted new regulations for the commercial cannabis industry in the city. The measure allowed for continued operation of cannabis-related businesses, while operating within the land use framework provided by the initiative. This included buffers from sensitive areas such as schools and parks.

In 2024, Measure Q was adopted by City Council. The measure updated the definition of timeshares and added fractional ownership as a prohibited land use within certain zones. The measure aimed to limit the conversion of existing properties into timeshare units and decrease residential housing availability.

2.3 RECENT ANNEXATION HISTORY AND POLICY

By 1964, the city's land area totalledtotaled 1,368 acres. After the Monterey County Local Agency Formation Commission (LAFCO) was established in 1964, Pacific Grove annexed 11 areas totaling 462 acres (see Figure 2-1).

The most recent Later(and second largest) additions was included the Asilomar annexation, which was the second largest annexation of 131 acres in 1979. Most recently, the City annexed the former site of the Mission Linen facility. The 2.99-acre property was the last section of Monterey County land within the City's Sphere of Influence and was identified to accommodate residential development. As of 19942025, the city's total area was 1,830 1,795 acres.

Figure 2-1
Annexations, 1964–2025

Area	Date	Acres
David Avenue School	March 1964	16.49
Congress Avenue	March 1964	0.03
Point Pinos	May 1966	84.00
Del Monte Park	September 1972	195.00
Thornton	February 1974	0.28
Sunset	March 1975	14.81
Alston-Lee	March 1975	0.24
Forest Grove No. 1	January 1976	3.00
Forest Grove No. 2	November 1976	17.11
Winslow's Addition	December 1976	0.10
Asilomar	October 1979	130.70
Mission Linen	March 2021	2.99
Total 1964–2025		**464.75**

Source: City of Pacific Grove, 2025.

2.4 EXISTING LAND USE

~~For this General Plan revision, a citywide survey classified existing land uses for every property in Pacific Grove.~~ Figures 2-2 and 2-3 summarize the ~~survey's~~distribution of land uses within Pacific Grove using Monterey County Assessor's parcel data from 2024.

The predominant land use in Pacific Grove is residential, and most of that is single-family. Commercial uses are largely related to goods and services, with almost no land available for industrial uses. A generous amount of land is devoted to parks and natural areas that are free and open to the public.

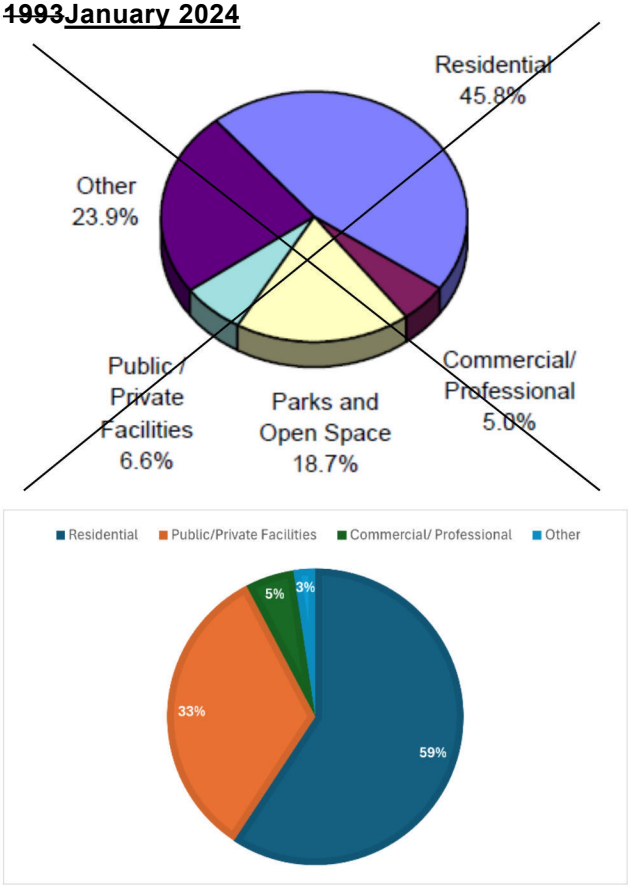
Most significant is that Pacific Grove is almost fully built-out. There is very little buildable vacant land in the city. The land use issues in Pacific Grove, therefore, focus primarily on managing existing uses, incorporating mixed use and infill development, and ~~potential~~ intensification in density.

Figure 2-2
Pacific Grove Existing Land Use, ~~November~~ January 19932024

Land Use Type	Acres	Percent of City
Residential		
Single-family Residential	~~634.4~~665.0	~~34.7~~45.8
Single-family w/Second Unit	~~11.8~~35.2	~~0.6~~2.4
Duplexes	~~56.0~~29.2	~~3~~2.0
Multi-family	~~67.2~~67.1	~~3.7~~4.6
Condominiums	~~41.5~~38.9	2.~~3~~7
Mobile Homes	~~15.1~~14.7	~~0.8~~1.0
Rest/Group Homes	~~12.2~~11.2	0.~~7~~8
Subtotal*	**~~838.2~~861.3**	**~~45.8~~59.3**
Commercial/~~Professional~~Nonresidential		
~~Transient Lodging~~Hotel/Motel/Inn	~~22.1~~20.6	1.~~2~~4
Mixed Residential / Commercial / Office	~~2.3~~2.8	0.~~1~~2
Commercial	~~54.9~~48.9	3.~~0~~4
~~Heavy Commercial~~	~~10.5~~	~~0.6~~
~~Offices in R-4 Zone~~	~~2.7~~5.3	0.~~1~~4
Subtotal*	**~~92.5~~77.6**	**5.03**
Parks and Recreation/Open Space*		
~~Parks and Recreational Facilities~~	~~85.1~~	~~4.6~~
~~Golf Course~~	~~90.0~~	~~4.9~~
~~Cemetery~~	~~12.3~~	~~0.6~~
~~Asilomar~~	~~103.0~~	~~5.6~~
~~Other Publicly Owned Facilities~~Open Space	~~51.5~~31.9	~~2~~2.8
Other Open Space	3.2	0.2
Subtotal*	**~~341.9~~335.1**	**~~18.7~~23.1**
Public/Private Facilities		
Parking Lots	3.2	0.2
Government ~~-O~~owned ~~Facilities~~	~~12.4~~20.64	~~0.6~~1.4
Public Schools	85.8	4~~5~~.7~~9~~
~~Private Educational Facilities~~	~~13.5~~	~~0.7~~
Other Institutional/Educational	14.0	1.0
~~Public~~ Utilities	~~9.6~~9.7	0.~~5~~6
Subtotal*	**~~120.8~~133.3**	**~~69.6~~2**
Other		
Churches	12.~~0~~2	0.~~7~~8
Miscellaneous	~~2.4~~12.1	0.~~1~~8
Vacant	~~31.8~~22.0	~~1~~1.~~7~~5
~~Streets~~	~~390.4~~	~~21.3~~
Subtotal	**~~46.3~~36.6**	**~~23~~3.2.~~9~~**
Total**	**~~1830~~1453.5~~.0~~**	**100.~~0~~**

~~See Chapter 5 for descriptions of parks and open space areas.~~
Source: ~~Community Development Department, November 1993~~Monterey County Assessor Parcel Data, 2024
**Due to rounding, the subtotals may not precisely add up to the table total*
***Total acreage does not include roads and streets and therefore does not add up to the total acreage of the city*

Figure 2-3
Existing Land Use in Pacific Grove ~~November 1993~~January 2024



Source: Community Development Department, January 2025

2.5 MODERN DEVELOPMENT AND BUILD-OUT

By the 1980s, it was clear that any further growth in Pacific Grove would occur only as vacant lots were developed and as uses on existing developed lots were intensified. As of ~~1993~~2025, ~~less than 2 percent~~approximately 1.2 percent (~~31.8~~21.65 acres) of Pacific Grove's land area was vacant and available for additional development.

As vacant land became more scarce and land prices rose, property owners turned increasingly to redevelopment and intensification. Because housing and land costs are high in Pacific Grove and because much of Pacific Grove's housing stock is made up of smaller units, many property owners and residents have added on to existing housing to meet their needs for more room. In addition, with the support of State accessory dwelling unit (ADU) legislation, homeowners are increasingly building ADUs, mainly on properties with existing single-family homes. These units are frequently used as housing for family members or as rental units. In a more open housing market, families would be able to move to larger homes in the area. Property tax policies established by Proposition 13 in 1978, however, discourage families from "moving up."

In addition, some residential and commercial lots are not developed to their full potential under the zoning (for example, single- family homes on R-3- or R-4-zoned lots). Over time, some of these single-family homes are likely to be ~~replaced~~ redeveloped with ~~apartments~~multi-family housing developments. Where the General Plan and zoning allow, development on existing residential parcels will be intensified by ~~replacing~~ redeveloping existing single- family housing ~~homes with multi-family buildings~~sites with increased residential densities. ~~In other areas, second units~~ ADUs or other additions will likely be built on~~to existing~~ parcels with existing residential uses~~structures~~. On existing commercial ~~and~~ mixed-use parcels, intensification will occur where existing ~~residences on commercially-zoned sites are converted to commercial use, and where old~~ buildings are torn down and ~~new ones are put up~~are redeveloped at higher densities or vacant commercial spaces may be converted to residential, such as vacant offices on the second floor of a commercial building. Some residential buildings in commercially zoned areas might be converted to commercial use, however commercially zoned areas that allow for mixed-uses will also be developed at higher residential densities.

The 1994 General Plan update ~~According to~~ estimates~~d made by the City in May 1994,~~ an additional 5,431 residential units could be built within Pacific Grove's city limits, for a total of 13,133 residential units within the city. Of these additional ~~, 4,303~~ residences, 3,688 could be accommodated in single-family residential districts, consisting of ~~(~~262 single-family, 3,426 second units, and 615 multi-~~–~~family units~~) could be built in residentially-zoned areas based on existing zoning~~. The remaining additional 1,743 residential units could be built in multi-family and commercial districts. ~~Sixty-eight of these single- family units and 37 of the multi-family units (105 in total) could be built on now-vacant lots. Of the remaining units, 3,426 would be second units attached to existing single-family homes, 566 would be added on underutilized multi-family-zoned lots, 145 units could be built on sites derived from multiple-lot parcels (133 single-family units, 12 duplex units), and 61 units could be built on parcels with potential for subdivision.~~

The theoretical build-out projections, while necessary to define the maximum development potential of this General Plan, point to much greater development than can be supported by recent trends. Over the past several decades, new development in Pacific Grove and most of the Monterey Peninsula has been limited due to water supply issues. California American Water (CalAm) is the water provider for Pacific Grove and other cities on the Monterey Peninsula and has historically sourced its water from the Carmel River and the Seaside Groundwater Basin. Multiple restrictions on water use from these sources have greatly limited new development in Pacific Grove and other communities on the peninsula. The Monterey Peninsula Water Management District's moratorium on new construction in response to the prolonged drought of 1987 through 1992 curtailed new construction in the city. In 1995, the California State Water Resources Control Board (State Water Board) issued Order WR 95-10, requiring CalAm to reduce water diversion from the Carmel River. In 2006, the Monterey County Superior Court mandated reductions in groundwater pumping from the Seaside Groundwater Basin. In 2009, the State Water Board issued Order WR 2009-60 (a cease-and-desist order) to CalAm for failure to comply with WR 95-10. This cease-and-desist order placed a moratorium on new water connections, effectively halting new development. ~~Because there are few sources of new water for development on the Monterey Peninsula, the limited~~

water supply will continue to shape land use in this area in the future.

The most recent source of new water for the Monterey Peninsula is the Paralta well in Seaside. Its water is allocated to the various local jurisdictions by the Monterey Peninsula Water Management District. As of September 1994, Pacific Grove has less than eight acre-feet of water remaining in its allocation from the Paralta well. Realistically, the potential for new development in Pacific Grove will not be realized unless additional new sources of water become available. At the time of the adoption of this General Plan, the city council was attempting to acquire a portion of the water from the Pebble Beach water reclamation project.The City currently has water available for the development of ADUs, and residential development or intensification on mixed-use and multifamily sites where water is currently available. Several projects have been implemented to increase water supply for the Monterey Peninsula, including the Seaside Aquifer Storage and Recovery program and Pure Water Monterey project. Completion of the Pure Water Monterey Expansion project in 2025 is anticipated to provide the permanent water source that could lead to the removal of the State Water Board's cease-and-desist order on new water connections, which would create opportunities for additional housing throughout the city.

Of the 5,431 new units possible in the theoretical build-out projection for Pacific Grove, 3,426 are new secondary units on sites with existing single-family dwellings. However, over the past 10 years during which zoning has allowed secondary units, only 42 have been built. Leaving aside the lack of water, this experience suggests that there will be a steady trickle of new secondary units, but not a flood of thousands. All other sources of new units—intensification of use on current

Between 1994 and 2024, the total number of residential units in the city increased by approximately 550 units. This is significantly lower than the projected 5,431 units estimated under the 1994 General Plan. This is likely due to continued and increasing water supply restrictions. Land use changes facilitated by the 2025 General Plan updates could accommodate an addition of 2,335 residential units and 292,578 square feet of commercial. However, the rate of future growth is dependent on external factors, such as future water supply availability and market trends.

Figure 2-4
Residential Unit Development Potential

Type of Zoning District	Existing	Maximum Potential Additional	Total Build-out
Dwelling Units in Single-family Residential Districts			
Building Sites Derived from Multiple Lot Parcels		133	133
New Subdivisions		61	61
Second Units	40	3,426	3,466
Vacant Sites		68	68
Current Dwelling Units (not including existing second units)	4,047		4,047
Subtotal	4,087	3,688	7,775
Dwelling Units in Multi-family and Commercial Districts			

Over the years, City decision-makers have become increasingly aware of the potential for land divisions (lot splits and subdivisions) which although they comply with the City's minimum standards create incongruities in lot size or shape compared to neigh- boring properties. Goal 21, and Land Use Policies 4 through 76, address this issue.

The rapidity and extent of infill and intensification will depend on—in addition to water—market demand, land values, rent levels, overall economic conditions, tax laws, and the City's regulatory policies. As infill development and intensification occur, the City intends to preserve Pacific Grove's residential neighborhood character, encourage residential and mixed-use development and ease the pressure on itsevaluate the capacity of its aging infrastructure to implement improvements as needed to support future development.

Goals, policies, and programs in Sections 2.6 through 2.14 and throughout the General Plan address how the city may and should develop.

2.6 DEVELOPMENT POTENTIAL AND ANNEXATION

~~Until now, t~~The City's ~~has had no~~ formal annexation policy was adopted as part of the 1994 Land Use Element. According to State law, a city's General Plan may cover "any land outside its boundaries which, in the planning agency's judgment, bears relation to its planning." The City of Pacific Grove has selected for its Planning Area the existing incorporated city plus ~~the unincorporated Spanish Bay, Country Club, and Gowen Cypress areas of Del Monte Forest to the south, and~~ the Presidio, Pebble Beach and portions of Monterey bordering David Avenue. Figure ~~12~~ ~~2~~ 7 shows the Planning Area and other boundaries.

The ~~much smaller~~ Sphere of Influence (the city's ultimate service area boundary), adopted for Pacific Grove in 1984 by LAFCO, includes ~~only~~ the entire existing incorporated city ~~plus~~. In 2021 City Council approved the annexation of the three-acre Mission Linen property at Sunset Drive and Congress Avenue. The Mission Linen property ~~is a county island completely surrounded by~~was the last remaining unincorporated area of the City's Sphere of Influence to be incorporated into Pacific Grove. ~~LAFCO policies support its eventual annexation.~~

~~Except for the Mission Linen property, the~~The City does not expect to annex ~~the adjacent~~ additional unincorporated areas. Nevertheless, it is concerned about the growth and flow of traffic from ~~them~~nearby unincorporated areas, and the likely impact of that traffic on the City of Pacific Grove and its residences and businesses. ~~The unincorporated portions of Del Monte Forest within Pacific Grove's Planning Area still have development potential for 285 residential units.~~

These unincorporated areas have strong economic and social ties to Pacific Grove. They are part of the Pacific Grove Unified School District, and residents of the area do much of their convenience shopping in Pacific Grove. Two of the five gates to Del Monte Forest open onto Pacific Grove streets. Thus, the City's main planning concerns about development in Del Monte Forest relate to traffic (addressed in the Transportation Chapter of this General Plan) and to providing public services including schools, library, and recreation facilities and programs.

Against this background of land use history, the City has adopted the following goals, policies, and programs:

GOAL 1 **Provide for orderly, well-planned, and balanced development consistent with the historic nature of Pacific Grove, the capacity of the City's infrastructure, and ability to assimilate new growth.**

~~GOAL 2~~ ~~Repair and upgrade the City's infrastructure.~~

POLICY 1 **Seek to preserve Pacific Grove's traditional "hometown" qualities.**

POLICY 1.5 **Protect Pacific Grove's residential character by prohibiting the short-term (less than 30 consecutive calendar days) rental of residential property in residential zoning districts, except to the extent such use is allowed in the Coastal Zone under the Local Coastal Program. The Pacific Grove Municipal Code shall be consistent with this Policy.**

Policy 1.5 was added by the Initiative to Preserve and Protect Pacific Grove's Residential Character. Policy 1.5 may be repealed or amended only by a vote of the people. The Initiative also amended the Pacific Grove Municipal Code to be consistent with Policy 1.5, including a requirement that existing transient use of residential property inconsistent with Policy 1.5 be discontinued within 18 months from the date the Initiative was approved by the voters.



An example of Pacific Grove's "hometown qualities"

POLICY 2 **Ensure that new development is well-balanced and com-patible with adjacent existing develop-ment.**

"Compatible" means "mutually supportive, capable of existing together without conflict or detrimental effects." This policy applies broadly and citywide to residential and commercial uses. Its purpose is to ensure harmonious, ~~or at least~~ unobtrusive development in terms of use, density,

intensity, and architectural character. It is not intended to restrict new buildings, discourage multi-family dwelling types and mixed-use developments, or prevent additions to exact duplications of styles or heights. ~~This policy also is **not** intended to restrict the conversion of single-family dwellings to apartments if the parcel is zoned for multi-family use and if there are other multi-family uses nearby.~~

POLICY 3 Balance a property owner's ability to develop with the desirability of maintaining neighborhood character.

POLICY ~~5~~ 4 Encourage consolidation of small lots to create larger, more developable lots.~~Avoid creating land divisions that result in lots smaller than prevailing lot sizes in the neighborhood, or which are~~

POLICY ~~6~~ 5 Preserve significant areas of vegetation and open space when approving land divisions.

Significant can mean, for example, a single specimen tree, vegetation serving as habitat, or a grove of several native trees which enhance the canopy and scenic beauty of a neighborhood.

POLICY ~~7~~ 6 Evaluate and mitigate the impacts of proposed land divisions on traffic, access, trees, topography, environmentally sensitive habitat, utilities, and public services, through the approval process.

In order to mitigate the impacts, the number of lots to be created may be reduced.

POLICY ~~8~~ 7 ~~View more favorably those land divisions where~~Encourage improving or reusing existing buildings with historic or architectural significance ~~are retained and/or improved rather than demolished.~~

Program ~~E~~ D ~~Adopt land division standards that will retain the scale and character of the city and will reflect the subdivision and development patterns within existing neighborhoods.~~Review and identify development standards that may be revised to allow for greater flexibility in developing varied housing types at a range of densities.

~~Program F Require land divisions within, or immediately adjacent to, environmentally sensitive habitat to keep development intensity as low as possible immediately adjacent to the sensitive habitat (LUP, 3.4.4.3).~~

This program will help maintain contiguous areas of undisturbed land in open space. Residential development in such areas, including driveway and utility connections, will be allowed if it can be demonstrated that environmentally sensitive habitat and associated wildlife values will be protected through mitigation measures.

Program ~~G~~ E Ensure that zoning, licensing, enforcement, and other controls are adequate to fairly govern the supplemental use of residential properties for business purposes.

New development and increased development intensity will place increased demand on the City's existing infrastructure, including water, sewer, and storm drainage

POLICY ~~9~~ 8 Strive to preserve significant public view corridors.

POLICY ~~10~~ 9 Strive to protect property owners' rights to privacy and reasonable access to light, air, and sunshine.

Policy ~~11~~10 Facilitate the development of residential neighborhoods that accommodate a range of housing types at varying densities.

POLICY ~~12~~11 Support the redevelopment of underutilized lots to encourage development that aligns with the intended land use intensity ~~of~~ the land use designation.

The policies above are carried out by the programs below.

~~Program A Create buffers between commercial and residential areas where feasible.~~

Program ~~B~~A Continue to regulate the intensity of ~~commercial~~ uses in commercial zones and maintain the under~~-~~lying distinctions of each commercial area.

Program ~~C~~B ~~Revise~~ Consider revising development standards, including height and setback requirements, in mixed-use and multi-family residential zones, where medium and high residential densities are allowed~~:~~ in order to achieve maximum density ~~height and lot coverage standards to regulate the size and mass of residential additions and expansions.~~

Program ~~D~~ C Consider including floor area ratios (FARs) in the zoning regulations for residential areas.

Floor area ratios regulate building mass and scale.

systems. Some streets and water lines are currently deficient and would be strained by buildout to current zoning.

Given these challenges, the City has adopted the following goals, policies, and programs:

GOAL 2 **Repair and upgrade the City's infrastructure.**

Policy 12 **Continue to preserve Pacific Grove's character and ensure adequate infrastructure for future development so as not to overburden the City's existing infrastructure.**

The policy above is carried out by the programs below.

Program F Continue to ensure there is adequate infrastructure capacity to serve existing and future development by reviewing potential impacts to the City's infrastructure systems as part of the development and environmental review process.

Program ~~F~~G Conduct periodic municipal service reviews to assess infrastructure capacity, identify infrastructure deficiencies, and develop infrastructure improvement and expansion projects.

The City recognizes that the current provisions for home businesses are working well, and will examine and make modifications to the regulations in the future as needed.

Goals, policies, and action programs that establish the philosophy, approach to, and workings of Pacific Grove's system for managing land use and growth appear throughout this chapter. Goals, policies, and action programs relating to architectural review are found in Chapter 8, Urban Structure and Design.

2.7 ECONOMIC VITALITY AND COMMUNITY CHARACTER OF COMMERCIAL AREAS

Pacific Grove is a town that takes pride in its residential character. As expressed in public meetings and workshops, Pacific Grove residents want the character of the city to remain predominantly residential.

The City supports and encourages retail and commercial uses which provide goods and services for a peninsula-wide trade area. It recognizes, however, that it will always be in a very competitive retail market because of its location at the tip of the Monterey Peninsula and its relative distance from major highways. The City also foresees that in the future a greater proportion of its economic vitality may come from visitor-serving enterprises.

The City encourages mixed-use developments within commercial areas with a high potential for housing units such as the Downtown, Central-Eardley Commercial, and Forest Hill districts. Residential development in commercially zoned areas support a vibrant, mixed-use environment that accommodates both living and commercial activities.

The character of Pacific Grove is one of a small town where residents can live, work, do business, shop, and have recreational facilities a self-contained com-munity. The businesses of the city should provide a balance which preserves this character.

GOAL 3 **Designate land in commercial and office categories adequate to provide mixed-use development to support a range of goods and services and higher-density residential opportunities to meet the ~~for the~~ needs of Pacific Grove, ~~and its trade area.~~**

POLICY ~~11~~ 1213 Ensure that commercial uses are bal-anced, and that business and industry are compatible with the city's residential character.

This policy reflects the City Charter statement that "Pacific Grove is primarily a city of homes and that business and industry shall be compatible with its residential character."

POLICY ~~12~~ 1314 Promote and maintain a healthy local economy while preserving the local community character.

POLICY ~~13~~ 1415 Assure that new commercial devel-opment is designed to avoid the appear-ance of strip development.

POLICY ~~14~~ 1516 Promote Pacific Grove businesses and industries.

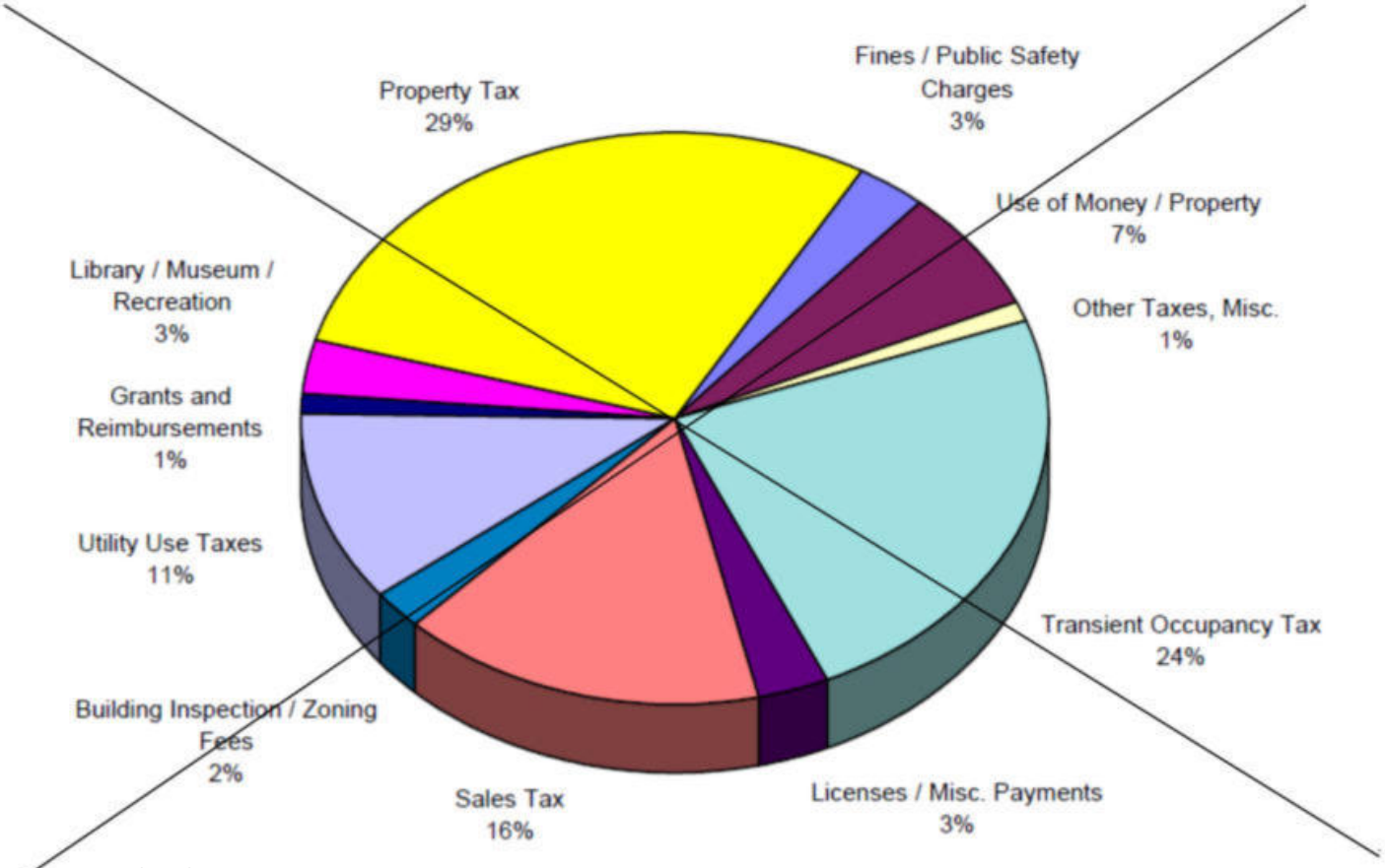
POLICY ~~16~~17 Support the integration of residential development in commercial shopping centers.

Program H– Work with local business groups and associations, such as the Pacific Grove Chamber of Commerce, to promote local businesses to local residents, and to encourage local residents to support Pacific Grove businesses.

Program I –Develop a strategy to retain and attract businesses that meet the shopping and service needs of Pacific Grove and area-wide residents.

Program J—_ Encourage the City of Pacific Grove to do business within its boundaries whenever practical.

Figure 2-5
General Fund Revenue, Fiscal Year 1993-94



Source: City of Pacific Grove, 1994

2.7.1 Land Use and Fiscal Policy

City revenues pay for the services provided to the community, such as police, fire, and library services. Since Proposition 13, Pacific Grove has become more dependent on revenues from sales taxes and transient occupancy taxes. ~~The major components of Pacific Grove's budget revenues are shown in Figure 2-5.~~ A city's sales taxes and transient occupancy taxes are influenced the most by the economy and local decisions on development and growth.

The current tax structure and declining municipal revenues encourage cities to make land use decisions based on the amount of tax revenues a project can generate. A reasonable consideration of the effects of land use decisions on revenue can help ensure an adequate budget for City services, but an overemphasis can distort the appropriate balance of land uses in the community. Basing land use decisions on revenues favors commercial and office development over the preservation or construction of housing. Too much emphasis on tax revenues creates pressures for large, high-intensity projects.

Pacific Grove will pursue a balanced planning approach by providing for a variety of housing while maintaining an attractive business climate.

The City will continue to weigh the nature and intensity of development, including concerns about traffic, design, compatibility, and regional effects, against the role that transient occupancy and sales tax revenues play in Pacific Grove's continued economic well-being.

GOAL 4 **Maintain strong and stable sources of City revenues while promoting an appropriate balance of land uses in the city.**

POLICY 15~~8~~ **Encourage land uses that generate revenue to the City while maintaining a balance with other community needs, such as housing, open space, and recreation.**

POLICY 16~~9~~ **Attract and retain a variety of businesses and services in the community.**

Program K Work with the business community to understand their economic needs.

Program L Streamline the permit review process while maintaining the character of Pacific Grove.

2.7.2 Visitor Accommodations

In ~~1993~~2025, there were ~~22~~ 23 motels ~~and,~~ hotels and ~~seven~~ bed and breakfast inns in Pacific Grove ~~with a combined total of 748 rooms~~. Most of the motels and hotels are located along the western end of Lighthouse Avenue and along Asilomar Avenue. The bed and breakfast inns, which are converted historic structures, are located in the R-3-PGR and the R-4 zoning districts. In addition, Asilomar State Beach Hotel and Conference Grounds has 313 guest rooms for ~~guests, bringing the total of~~ visitor accommodations ~~to 1,061 rooms~~.

The ~~relatively few~~ hotel and motel units along with around 84 licensed short-term vacation rentals within Pacific Grove contribute significantly to City revenues through the ~~10~~ 12 percent transient occupancy tax. ~~Motel, hotel, and inn guests~~Visitors also contribute to Pacific Grove's economy by patronizing local restaurants and retail businesses.

In 1986, Pacific Grove voters passed Measure C, an amendment to the City's Zoning Ordinance that placed additional limits on motel and hotel development in the city. As a result, parcels within the R-3-M district may be rezoned only to R-1, R-H, or R-2 where already developed as such, and no new R-3-M districts may be created.

Although most of the motels and hotels in Pacific Grove are developed to their zoned potential, several older motels are not. If occupancy rates drop in these older motels and they become unprofitable, the owners may consider replacing them with new, larger motels or with multi-family residential, which also is allowed in the R- 3-M district. Measure U, passed in 2011, eased some of the prior restrictions for hotels and motels in the R-3-M district, which allows for renovations and additional units. As the need for more housing units increases, ~~I~~it is not clear whether it would be more profitable for the owners to replace their motels with new motels or with apartment buildings. If they ~~are~~ were to be replaced with multi-family residential developments, the City ~~will~~ would lose ~~some~~ a portion of its current motel tax revenue and the possibility for any revenue increase.

POLICY ~~17~~20 **Discourage the replacement of motels with residential uses in areas zoned R-3-M as a means of protecting the City's revenue base.**

Program M Consider providing incentives to retain the existing motels in the R-3-M zone.

Program N Consider amending the Zoning Ordinance to carry out Policy ~~18~~720.

POLICY ~~18~~21 ~~Support~~ Maintain viability of hotel development in the Downtown, including redevelopment in the former Holman's block ~~of the Down- town~~, as allowed by adoption of an initiative measure by city's voters in June 1994.

Pacific Grove's Zoning Ordinance allows the conversion of large residential buildings, at least 75 years old, to bed and breakfast inns. As a means to preserve older houses, bed and breakfast inns are allowed with a use permit in the R-3-PGR, R-4, and C zoning districts. ~~However, t~~The City ~~wishes to control uses which may result in~~is cognizant this could create conflicts with existing uses on neighboring properties, therefore the City will carefully consider whether such projects would result in negative impacts on surrounding properties as part of the development and environmental review process.

Program O Permit expansions of bed and breakfast inns that do not have negative impacts on the surrounding residential neighborhoods. Proposals to add units that are separate from the original structure will be considered on a case-by-case basis.

Because the intent of the bed and breakfast ordinance is to preserve historic structures, potential expansions of these businesses are subject to guidelines that further this intent.

(1) Bed and breakfast inns are permitted to expand into structures that were located on the property when the inn was created, with a use permit;

Inns are permitted to expand into additional new structures, separate from the original historic structure, if there is space on the property to build and the new structure maintains the architectural integrity of the site, with a use permit;

(2) Inns may apply to the planning commission to expand onto properties contiguous to the original property, with a use permit, with such expansions to be decided on a case-by-case basis depending on the architectural and historic status of the structures proposed for expansion and the circumstances of the properties and the surrounding neighborhood.

2.7.3 Liquor Sales

Pacific Grove was the last "dry" city in California. The sale of alcoholic beverages was prohibited within the city limits until 1969 when the city council adopted an ordinance repealing prohibition. That action was ratified by voters when they defeated a referendum calling for repeal of the ordinance. Since then, the City has approved several permits for general on-site liquor sales outside the Downtown area.

In 1987, the City approved its first application for general on-site sales of hard liquor Downtown. While there are several restaurants in the city that serve beer and wine with meals, the approval of hard liquor raised concerns among elected officials and residents about the appropriateness of general on-site liquor sales Downtown and how they might affect the quality of life, traffic, parking, and general public safety in Pacific Grove.

POLICY 22~~19~~ Continue to allow on-site liquor sales only in conjunction with full food service.

2.8 DOWNTOWN

~~Downtown t~~The city's commercial core along Light- house Avenue is bounded approximately by Cypress Avenue, Central Avenue, 12th Street, and Pine Avenue. Most of Downtown is zoned C-~~1~~ D and is developed with older two-story buildings with ground floor retail commercial establishments and second floor residential, office and professional uses.

2.8.1 Existing Conditions and Trends

Pacific Grove's Downtown business district contains a mixture of commercial uses typical of many core business districts. ~~These businesses~~Additionally, restaurants and boutique retail stores serve both local ~~and area~~ residents and visitors. Although ~~local services seem to predominate, there is regional pressure to attract more tourism to compensate for the loss of the military component in the economy~~Downtown remains the predominant commercial center of the city, there is increasing redevelopment consisting of residential and mixed-uses.

Many Downtown commercial buildings are old and do not meet current codes. Bringing these buildings up to code when businesses are expanded or new uses are developed can be expensive. State legislation passed in 1986 (SB 547) requires that buildings that might be haz–ardous in the event of an earthquake be identified and that steps be taken to mitigate structural hazards. The City has done the work required by SB 547, and property owners have taken remedial measures.

In general, renovation of commercial buildings in downtown Pacific Grove is desirable and should be encouraged when it upgrades the safety of the buildings while maintaining historical character and provides for balanced and mixed uses.

~~In 1994, a number of Downtown buildings were vacant including the largest building which once housed an historic department store which served as the downtown commercial anchor.Existing~~ Increased transit opportunities

and additional parking facilities will ~~not be adequate~~be needed to accommodate~~ all~~ the commercial and residential development in ~~that might occur~~ Downtown ~~under existing zoning~~as forecasted. Certain housing developments may qualify for parking space reductions under State law. ~~A 1984 parking study commissioned by the City recommended a three-phase program to expand parking in the area, including construction of one or more parking struc- tures~~ As of 2025 there are five parking lots in the downtown area listed on the City's website.

Downtown's aesthetic ~~liabilities include inappropriate and out-of-scale street light fixtures,~~considerations will include creative reuse of historic buildings, such as the application of ~~inappropriate~~ appropriate facades ~~on historic buildings, and~~ and preserving other historical features ~~lack of trees and landscaping~~.

2.8.2 Downtown Quality and Character

The overall structure of Downtown is satisfactory and does not require major changes. The Downtown can be divided into sections, based on the difference in scale, architectural style, and setbacks of buildings along Lighthouse Avenue and those on the side streets. (See Section 8.1.4 for a discussion of Downtown's visual character.)

~~What is required is a comprehensive strategy to focus~~The City's focus is to ~~and private efforts on improvements to enhance~~ support the Downtown's ~~efficiency~~development at increased densities and~~,~~ ~~encourage~~ economic vitality through creative mixed uses, ~~and~~ while preserving~~appearance~~ historic resources.

GOAL 5 **Enhance and preserve the unique historical character of Downtown while supporting increased development intensity and mixed uses.**

POLICY 2~~3~~0 **Focus City and private efforts on improvements in a comprehensive strategy to enhance Downtown.**

POLICY 2~~4~~1 **Upgrade the visual quality of streets in the Downtown.**

Program P Review and revise development and design guidelines for projects in the Downtown business district and find ways to encourage good design.

Program Q Prepare a detailed plan for preserving the character of Downtown while enhancing its efficiency, economic vitality, and appearance.

The City should take the lead in preparing the plan and implementing it. Emphasis will be placed on increasing landscaping and expanding pedestrian facilities on Lighthouse Avenue without sacrificing parking opportunities. The plan should include considerations for street, pedestrian, and bikeway improvements. It should also address parking, sidewalks, and street trees~~, and street lights~~.

The City should attempt to establish architectural compatibility between major civic buildings. It should also consider the need for a parking garage and ~~inves-~~ investigate allowing "air space" development over Downtown parking lots.

Program R ~~Replace~~ Maintain Downtown street lights ~~with more appropriate fixtures as funding becomes available~~and ensure fixtures are energy-efficient and in working condition.

POLICY 2~~5~~2 **Review and revise ~~height and story limits to maintain compatibility of new and remodeled buildings with the existing character of Downtown~~development standards, including height requirements, for compatibility with higher density housing, particularly for affordable housing.**

POLICY 2~~6~~3 **Encourage new residential and mixed-use development and redevelopment of existing structures~~s~~ in the Downtown.~~, but limited to the upper stories of new and existing buildings~~**

The City will ~~consider providing a third-story floor area bonus for upper-story restaurant and /or residential use~~also evaluate garage parking requirements for multi-family housing in relation to improvements to transit service by Monterey-Salinas Transit.

Program S Consider establishing separate building standards for Downtown parcels fronting on Lighthouse Avenue and for parcels fronting on side streets.

Program T ~~Provide for~~Support implementation of the ~~expanded~~ mixed commercial/ residential uses ~~for~~ of the former Holman's block ~~such as mixed commer- cial/residential use and/or transient visitor services (*i.e.,* hotel/restaurant/shops)~~.

In 1994 ~~T~~the City took the lead in proposing a successful ballot measure allowing hotel and condominium development on the former Holman's block. ~~This change is intended to attract development of and investment in the~~ In 2015, an ordinance was approved allowing mixed uses on the Holman's anchor block (bounded by Lighthouse, Fountain, Central, and Grand Avenues). The historic Holman building underwent redevelopment to repurpose the

existing structure for mixed-use residential, office, and commercial purposes while maintaining the historic architectural features which was completed in 2019. The project included 25 condo units and 12 commercial retail spaces.

Underutilized or single-story buildings provide the potential for further mixed-use and residential redevelopment that will increase city revenue while maintaining the character of the Downtown and the city.

2.9 CENTRAL-EARDLEY



Central-Eardley commercial area

2.10 COMMERCIAL DISTRICT

The Central-Eardley commercial district is a transition from Monterey's Cannery Row/ Lighthouse Avenue Commercial District to the Pacific Grove Retreat residential neighborhood. Uses include retail com–mercial, restaurants, and offices, serving both visitors and local residents, and some residential. Zoning in the area has included R-4 (higher density residential and professional office uses), C-1 (low intensity commercial uses and residential), C-2 (heavier intensity commercial uses and residential), and V-C (visitor commercial uses).



Forest Hill commercial area

This area is experiencing spill-over from Cannery Row visitors using this commercial area.

Across the city line, the New Monterey Neighborhood and the Cannery Row/Lighthouse Neighborhood border Pacific Grove to the east. The New Monterey Neighborhood is primarily developed with residential uses, including single family homes and multi-family residential development with clusters of commercial and open space uses. ~~single-family homes, interspersed with multi- family.~~ The Cannery Row/Lighthouse Neighborhood is primarily commercial, with segments of open space and public / semi-public uses, catering to both visitors and resi~~–~~dents.

~~The City of Monterey Planning Department estimated in 1987 that existing zoning in the New Monterey Neighborhood would allow a net addition of 788 units—a 30 percent increase in the number of housing units in the area. The Monterey Planning Department also identified approximately 10.5 acres of underutil- ized commercially-zoned land and 7.6 acres of vacant commercially-zoned land in the Cannery Row/ Light- house Neighborhood that could be developed with commercial uses.~~

The Central-Eardley district is one of two major gate- ways to Pacific Grove. Existing development and land use patterns are exemplified by small-scale, standalone structures with associated parking lots, which provide an array of commercial zoning designations (C-1 and C-2), including low-intensity restaurants, retail and service-oriented establishments.

Zoning within the Central-Eardly District allows for a variety of commercial uses while also allowing opportunities for mixed-use development that encourage the incorporation of compatible, multi-family residential uses at higher densities, aimed at increasing housing supply in the area.

GOAL 6 **Encourage compatible mixed-use development allowing the city to achieve long-term housing and economic goals**

~~The City wants to continue to allow a variety of commercial uses in this district, but wants to limit any new or changed uses in the R-4 zone to high density residential by not permitting additional professional office uses.~~

POLICY ~~24~~27 ~~–~~ **~~Designate Central-Eardley as a special commercial district recognizing its gateway and transitional functions.~~ Promote and facilitate well-integrated mixed-use development patterns that support a range of commercial uses and allow for a range of compatible housing types within the Central-Eardly District.**

Program U Review and evaluate properties within the ~~the zoning in the~~ Central-Eardley district to identify areas suitable for mixed-use development.

~~Program V Restrict the uses in the R-4 zone to high density residential.~~

Program ~~W~~V Review development standards and land use regulations, including design and minimum parking and landscape ~~needs~~ requirements in the Central- Eardley district and consider amending the zoning ordinance to facilitate ~~the~~ mixed-use development. ~~consider a parking structure.~~

Program ~~X~~W ~~–~~Create a plan to enhance the area's role as a major gateway to the city through elements such as signs, paving, land-scaping, and lighting.

2.11 FOREST HILL

The Forest Hill Commercial (C-FH) district is located on both sides of Forest Avenue between David and Stuart Avenues. The district contains a mixture of retail, office, and multi-family residential uses. Most properties in this area are developed with low intensity single-story structures with surface parking lots, that are not developed to their full potential. Properties along Forest Avenue are surrounded by Single-Family Residential District (R-1) uses, the intersection of Forest Hill Boulevard and Ransford Avenue, and Multiple Family Residential/Professional Office District (R-4) along Prescott Lane. ~~C-1-zoned area along both sides of Forest Avenue between David and Stuart Avenues contains a mixture of retail, office, and multi-family residential uses. Most of the lots in this area are not developed to their zoned potential—most buildings are small and only one story in height. These lots back up against the R-1-zoned lots along Seaview and Ransford Avenues. Redevelopment of these commercial lots to their zoned potential could result in development incompatible with the adjacent single-family homes.~~

The Forest Hill Commercial District is one of two major gateways to Pacific Grove that has played a pivotal role in urban growth as a hub for economic activity. However, as changes in demographics, employment trends and housing supply (and demand) occur over time, areas limited to predominantly commercial development are considered a constraint to housing production. Existing commercial centers, such as the Forest Hill Commercial District, present opportunities for mixed-use development. Mixed-use development in this area would maintain commercial and retail uses while encouraging a variety of housing options. ~~While new commercial development could improve the appearance of Forest Hill, the City would like to reduce any potential incompatibilities with adjacent~~

~~single-family homes. At the same time, the City does not want to preclude reinvestment in or improvement of the area.~~

POLICY 2~~5~~6 **~~Draft~~ Review and amend the Forest Hill Specific Plan to be consistent with updates to the City's General Plan goals and policies and Zoning Ordinance. ~~and adopt guidelines for preparing a Specific Plan for the Forest Hill area,~~**



Sunset Drive commercial area

~~recognizing its function as a major gateway to the city.~~

Program ~~W~~X Review and amend, as necessary, the Zoning Ordinance and Forest Hill Specific Plan to ~~establish a~~ ensure development standards, including story maximum, ~~a~~ maximum height limit, ~~and a~~ required buffer zone~~s, through the use of~~ and design features, such as landscaping, in the rear yard setback in the Forest Hill Commercial District are consistent with the General Plan.

Program ~~X~~Y ~~Develop~~ Review and amend the Forest Hill Specific Plan to permit mixed-use development for consistency with the land use designation of the area. ~~a Specific Plan for the Forest Hill Commercial District that provides for the orderly improvement and redevelopment of the area while maintaining harmony with the adjacent residential areas.~~

The intent of the above policy and programs is to promote uses that are reasonable and compatible with adjoining residential areas. The plan should, in addition to provisions of Program ~~W~~X, address all aspects of a commercial area that is an entryway to Pacific Grove. The plan should include but not be limited to setbacks, architectural quality, landscaping, signs, lighting, traffic circulation, parking, and pedestrian access. Where possible the plan should mitigate adverse effects on neighboring residential areas.

2.12 SUNSET SERVICE COMMERCIAL ~~AREA~~

The Sunset Drive commercial district is at the south edge of the city between 17 Mile Drive and Asilomar Avenue. It contains a mix of uses including a lumber yard, light industrial uses, retail businesses, and City owned buildings, including the Public Works Yard. ~~It houses a mix of uses including a lumber yard, a motel, restaurants, light industrial uses, retail businesses, and the City Corporation Yard.~~ Most importantly, it is the ~~city's~~ City's only remaining industrial and heavy commercial area. The City's intent is to maintain a mix of industrial, service commercial~~, other commercial~~, and compatible residential use~~s area~~district. ~~area.~~

This ~~area~~ district also has scenic qualities important to the ~~city~~City—views of the ocean, hills, and pine forests.

POLICY 2~~8~~6 **Provide for retention of the commercial and industrially zoned properties in the Sunset Drive commercial district, while creating opportunities for mixed-use development and preserving the scenic qualities of this district. ~~/industrial uses in the Sunset Drive commercial district, while addressing the scenic qualities of this area.~~**

Program ~~Y~~ZAA ~~Consider~~ Amend the Zoning Ordinance to allow for increased flexibility of development standards, such as minimum parking requirements and height limitations that would allow for residential and commercial mixed-use development on existing commercially zoned properties within the Sunset Service Commercial District. ~~amending the Zoning Ordinance to eliminate uses incompatible with General Plan policy regarding the Sunset Service Commercial Area.~~

The intent of this program is to ~~consider eliminating residential uses, including mobile home parks, in order to preserve the limited land area available for industrial and heavy commercial uses within the city.~~ allow for residential uses of compatible density and intensity to surrounding uses, while maintaining the limited land area available for existing light industrial and commercial uses, and within the city.

Program ~~Z~~AA Utilize the development review and land use permitting process to incentivize mixed-use development comprising of compatible light

industrial, commercial, and residential uses, and ensuring building siting, mass and scale are compatible with surrounding properties. ~~amending the Zoning Ordinance to establish height limits and provisions for landscaping in the Sunset Service Commercial Area.~~

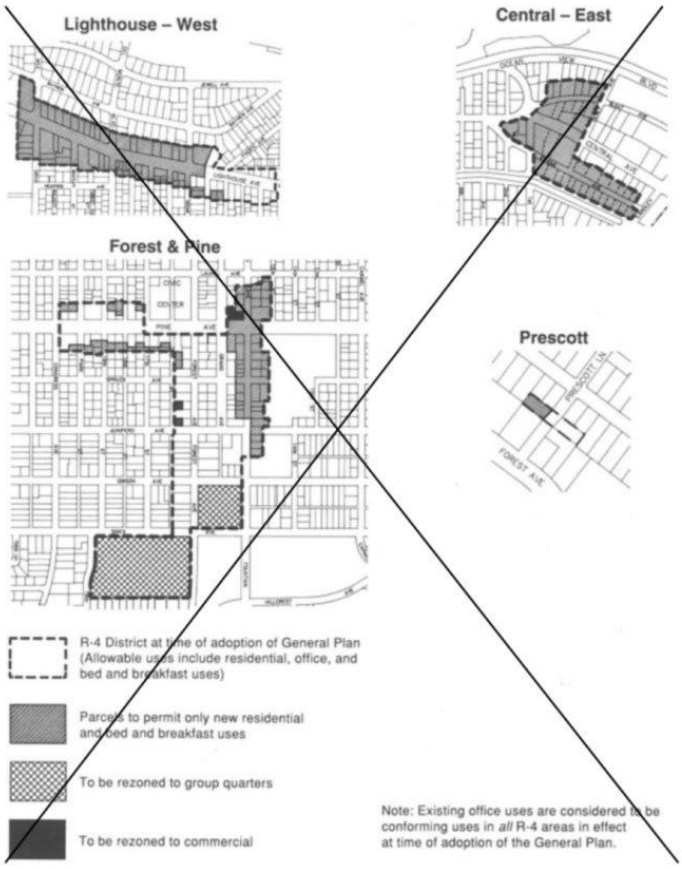
Program AABB Encourage a public/private effort to upgrade the visual quality of the Sunset Service Commercial Area.

2.13 PROFESSIONAL OFFICE DEVELOPMENT OUTSIDE COMMERCIAL DISTRICTS

Historically, the R-4 District regulations have allowed residential uses (single-family and multi-family) and professional offices. Over the years, many older residential units in R-4 areas have been converted to offices. These conversions have, in some cases, preserved buildings whose architecture is valued in Pacific Grove, but may also have reduced the supply of moderately-priced housing, and may have contributed to increased parking problems and traffic congestion, particularly along Forest Avenue.

The City will continue to allow office uses in ~~certain of~~ these areas, with a use permit, but will emphasize residential uses in others. Existing offices will be allowed to continue as conforming uses. ~~(See Figure 2-6.)~~

~~Figure 2-6 R-4 Zoning District Changes~~



POLICY 2~~9~~7 Permit office uses in the commercial districts and other areas historically used for such purposes.

POLICY ~~28~~30 Ensure that office development does not overbalance the residential character in the areas historically zoned R-4.

The City will look favorably on proposals where existing housing is preserved and/or where offices preserve the character of existing buildings in these areas.

Program BBCC Continue to allow professional office and multi-family residential uses: (a) on parcels along Forest Avenue between Pine Avenue and Sinex Avenue, with the exception of the Forest Hill Manor property, and require that offices front only on Forest Avenue; (b) on parcels along Grand Avenue between Pine Avenue and Gibson Avenue, including the midblock and corner parcels at the northwest corner of Fountain Avenue and Gibson Avenue, but with the exception of the parcel at the southeast corner of Grand Avenue and Pine Avenue which is developed with apartments that will remain a residential use only; (c) on parcels fronting on Pine Avenue between 17th Street and Congress Avenue, and on the south side of

Pine Avenue between Forest Avenue and 17th Street, and require that offices front only on Pine Avenue; (d) on parcels zoned R-4 on the date of the adoption of this General Plan between Cypress Avenue and Granite/Pacific Streets, on parcels fronting the south side of Lighthouse Avenue between Granite Street and Cedar Street, and on the midblock parcel along the north side of Lighthouse Avenue between Pacific Street and Cedar Street; (e) on the mid-block parcel along the south side of Prescott Lane between Forest Avenue and Seaview Avenue that has historically been zoned R-4.

Program ~~C~~CDD Rezone the following areas from professional office and multi-family residential uses to residential uses only: (a) parcels zoned R-4 on the date of the adoption of this General Plan on the easterly side of Fountain Avenue between Pine Avenue and Gibson Avenue, and on the westerly side of Fountain Avenue between Pine Avenue and Junipero Avenue, with the exception of the northwesterly parcel at the intersection of Fountain Avenue and Junipero Avenue; ~~(b) the parcels zoned R-4 on the date of the adoption of this General Plan between 16th Street and Congress Avenue excluding those parcels fronting on Pine Avenue;~~ (~~c~~b) parcels on Lighthouse Avenue west of Granite Street, excluding parcels along the south side of Lighthouse Avenue between Cedar Street and Granite Street, and excluding the midblock parcel along the north side of Lighthouse Avenue between Pacific Street and Cedar Street; (~~d~~c) the parcels zoned R-4 on the date of the adoption of this General Plan along the westerly side of 15th Street between Pine Avenue and Laurel Avenue, and along the easterly side of Fountain between Laurel Avenue and Pine Avenue, and the interior parcels on the westerly side of Fountain between Pine Avenue and Laurel Avenue; (e~~d~~) the parcels zoned R-4 on the date of the adoption of this General Plan between Eardley Avenue and 2nd Street and between Lighthouse Avenue and Sloat Avenue; (~~f~~e) the parcel zoned R-4 on the date of the adoption of this General Plan on the north side of Prescott Lane.

Program ~~D~~DEE Rezone the three parcels zoned R-4 on the date of the adoption of this General Plan on the north side of Pine Avenue between Fountain Avenue and Grand Avenue from professional office and multi-family residential uses to commercial uses.

2.14 NONCONFORMING USES

There are nonconforming uses throughout the city. Although they fail to meet current standards, these uses, for the most part, are not objectionable. Indeed, they make a positive contribution to the cherished eclectic character and historic resources of Pacific Grove.

Regulations for nonconforming uses and buildings were revised~~.~~ to allow their restoration if 25 percent or less of their usable floor area is damaged by fire or earthquake. If damage exceeds 25 percent of usable floor area, a case-by-case determination is made through the use permit process. In order to grant any use permit, the planning commission must make the finding that the use or building applied for will not be detrimental to persons or property in the neighborhood or to the general welfare of the city.

To address the concerns expressed during public hearings regarding difficulty in obtaining insurance and financing for nonconforming uses, this General Plan provides for restoration of nonconforming uses and buildings damaged by a catastrophic event without requiring a use permit or variance.

POLICY ~~29~~31 Permit nonconforming uses and structures damaged by fire or other calamity to continue or rebuild to their predamaged size and location, using the then-current Uniform Code requirements.

Program FF~~GG~~ Amend the Zoning Ordinance to provide for restoration of nonconforming uses and structures destroyed to any extent by fire or other catastrophic event without a use permit.

2.15 SUBSTANDARD VACANT LOTS

Minimum area and frontage requirements for building sites are established for the various zoning districts in the Zoning Ordinance. Vacant lots which have less area or width than required are called substandard lots and do not qualify as building sites. The City has amended the building site requirements in some areas to more closely correspond to existing lot sizes. However, a few vacant substandard lots remain unbuildable under current regulations.

Except where they were set by an initiative, as is the case in the First Addition which is zoned R-2, building site requirements can be amended by the city council. In the First Addition, approval by the voters would be required to

change the existing 4,000 and 5,000 square foot building site area requirements to allow building on a smaller vacant parcel~~,~~ (~~-~~e.g., 3,600 square feet).

The few, vacant, substandard lots are often located in areas where similar-sized lots have been built upon. The City needs to consider the conditions under which building on these vacant lots would be compatible with the orderly development of the city.

The Subdivision Map Act provides for merger by the City of contiguous substandard parcels held by the same owner, under certain specified conditions. A local ordinance in conformance with State law is required if the City chooses to implement this type of merger.

~~**POLICY 30 Establish regulations under which existing substandard vacant lots may become building sites based on neighborhood norms.**~~

~~Program HH Amend the Zoning Ordinance to specify conditions under which substandard vacant lots may be considered building sites.~~

~~**POLICY 31**~~ **3 ~~Study regulations to allow the City to initiate merger of contiguous substandard parcels held by the same owner.~~**

2.16 LAND USE MAP, CATEGORIES, AND STANDARDS

All land within Pacific Grove can be grouped into categories, as shown on the Land Use Map provided with this General Plan. The Land Use Map depicts proposed land use for Pacific Grove through the year ~~2010~~2031. ~~(A "map" is similar to a "diagram" which is all that the State planning law requires—but a map may be more specific. The Attorney General in 67 Ops. Cal. Atty. Gen. 75 [1984] discussed the difference between the words "map" and "diagram," stating that a "map" refers to preciseness whereas "diagram" represents approximation.) While the law does not require specificity as to individual parcels, t~~The California Subdivision Map Act requires that a proposed subdivision is consistent with its general plan before approving a subdivision map. The boundary lines of individual parcels between land use designations on Pacific Grove's Land Use Map are delineated as specifically as possible, ~~in most cases~~ following parcel lines.

Listed on the following pages are the land use categories that appear on the Land Use Map, along with their definitions. While the land use categories are implemented through more specific and detailed zoning designations, the General Plan provides the overall parameters of density and intensity. In addition, there is a brief description of where in the city the designation may be found.

By law, "standards of population density and building intensity" must be determined for each land use category. The Pacific Grove General Plan uses floor area ratio to establish measures of building intensity in non--residential land use districts, and employs dwelling units per net acre as the measure of building intensity in residential land use districts. ~~Residential land use districts employ measures of building intensity and of population density. Non-residential districts only employ measures of building intensity. .In this General Plan, in the event of a discrepancy between residential units per acre and persons per acre, the building intensity in units per net acre (and not the density of population) governs. The densities designated (in dwelling units and in persons per net acre) are maximums which are to be allowed only in developments that promote the City's goals for orderly, well-planned, and balanced development consistent with the historic nature of Pacific Grove and the capacity of and the limits imposed by the City's infrastructure, and ability to assimilate new growth. (See Land Use Goal 1.)~~

Although Pacific Grove ordinances are written with the intent of providing realistic standards for each zone, in the determination of allowable building density or intensity, whether residential or commercial, the maximums assigned to the various land use categories do not constitute an entitlement, nor is there any guarantee that any individual project, when tested against the policies of the General Plan, will be able to ~~or will be permitted to~~ achieve the maximums indicated due to other factors, such as infrastructure constraints or parking requirements.

Standards of building intensity for residential uses are stated as the allowable range of dwelling units per *net* acre. In the cases of the Low Density Residential (LDR) and Medium Density Residential (MDR) designations, the density ranges for specific neighborhoods have been tailored to ensure compatibility with adjacent residential development patterns. Neighborhood planning areas are shown in Figure 2-~~7~~6.

The dwelling unit densities apply only to the creation of new lots. Existing legal building sites which are smaller than permitted under these densities will remain conforming lots of record.

~~Standards of population density for residential uses were derived by multiplying the allowable number of dwelling units per net acre by the assumed average number of persons per dwelling unit. The average number of persons per dwelling unit for each residential designation was extrapolated from estimates by the California Department of Finance for Pacific Grove, and ranges from 2.0 to 2.25 persons per unit. These figures are averages, and they are not intended to be used as measures of how many people may be allowed to live in a dwelling unit; nor is there any intent by the City that these averages be used to deny the addition of rooms to dwelling units.~~

Standards of building intensity for non-residential uses are stated as maximum floor area ratios (FARs). FAR is defined in Figure 2-~~8~~ 7 and in the Glossary.

2.16.1 Residential

Low Density Residential (LDR). Four low density residential categories are specified. The LDR1.0 designation provides for single-family homes. It is the city's lowest density residential category, allowing a maximum of one unit per net acre. ~~Assuming an average of 2.25 persons per dwelling unit, this category allows up to 2.25 persons per acre.~~ It is applied on the General Plan Land Use Map to most of the Asilomar Dunes neighborhood.

The LDR2.0 designation provides for single-family homes, up to two units per net acre. ~~Assuming an average of 2.25 persons per dwelling unit, this category allows up to 4.5 persons per net acre.~~ It is applied on the General Plan Land Use Map to parcels in the Asilomar Dunes neighborhood that front on Asilomar Avenue north of Pico Avenue.

The LDR4.4 designation provides for single-family homes, ~~secondary residential units ("second units")~~ADUs, public and quasi-public uses, and similar and compatible uses. Residential densities are allowed to a maximum of 4.4 units per net acre. ~~Assuming an average of 2.25 per- sons per dwelling unit, the LDR4.4 designation allows up to 10~~

~~persons per acre.~~ It is applied on the General Plan Land Use Map to the Pacific Grove Acres neighborhood.

The LDR5.4 designation provides for single-family homes. Residential densities are allowed to a maximum of 5.4 units per net acre. ~~Assuming an average of 2.25 persons per dwelling unit, the LDR5.4 designation allows up to 12 persons per acre.~~ It is applied on the General Plan Land Use Map to the Glen Townhomes and Glen Heights condominium planned unit development. The several LDR designations, their maximum densities in units and persons per acre, and where they are applied on the General Plan Land Use Map are shown in Figure 2-~~9~~8.

Medium Density Residential (MDR). This designation provides for single-family, duplex, and multi-family residential units, public and quasi-public uses, and similar and compatible uses. Within the MDR designation, ~~secondary residential units~~ ADUs are allowed in all R-1 zones. This designation provides a residential density ranging from 7 to 17.4 units per net acre. ~~Assuming an average of 2.0 persons per dwelling unit, it allows between 14 and 34 persons per acre.~~ The several MDR designations, their maximum densities in units and persons per acre, and where they are applied on the General Plan Land Use Map are shown in Figure 2-10.

High Density Residential (HDR). This designation provides for single-family, duplex, and multi-family residential units, bed and breakfast inns, public and quasi-public uses, and similar and compatible uses. It has four tiers or levels: residential densities range up to 19.8 units per net acre in the HDR19.8 district; up to 21.8 units per net acre in the HDDR21.8 district; up to 24.8 units per net acre in the HDR24.8 district; and up to 29.0 units per net acre in the HDR29.0 district. ~~The High Density Residential designation assumes an average of~~

~~2.0 persons per dwelling unit, which would allow up to 58 persons per net acre in the HDR29.0 designation.~~ The several HDR designations, their maximum densities in units and persons per acre, and where they are applied on the General Plan Land Use Map are shown in Figure 2-11.

~~On adoption of this General Plan, the Zoning Ordinance will be revised to reflect that residential care facilities for six or fewer persons are allowed in any Residential district, and that residential care facilities for 7 to 24 persons are allowed in multi-family districts with a use permit.~~

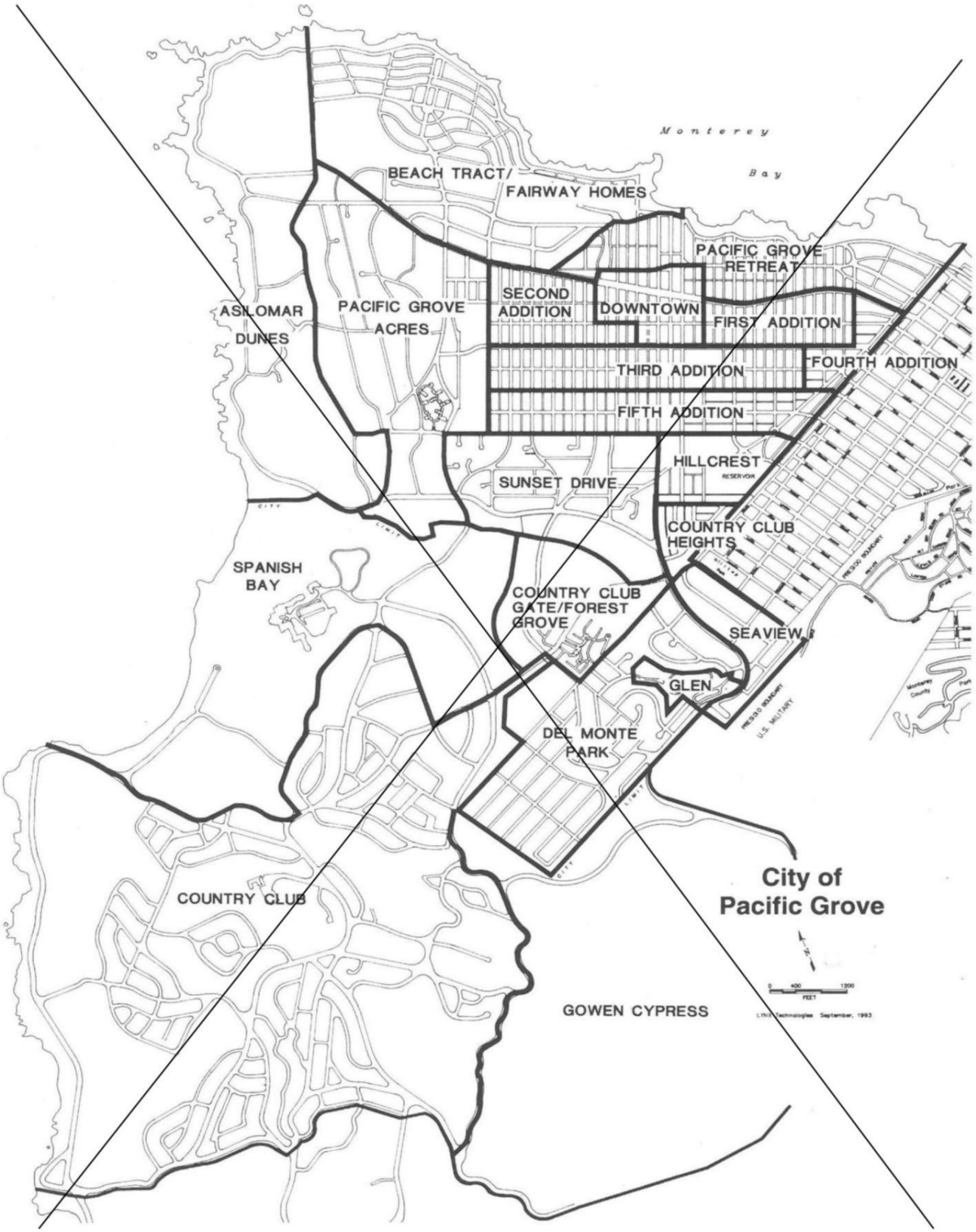
Professional Office or High Density Residential (PO/HDR). This designation provides for single-family, duplex, and multi-family residential units, professional offices, bed and breakfast inns, public and quasi-public uses, and similar and compatible uses. This designation provides for a residential density of up to 29.0 units per net acre. ~~Assuming an average of 2.0 persons per dwelling unit, it would allow up to 58 persons per net acre.~~ The PO/HDR designation is applied on the General Plan Land Use Map to Forest Avenue between Pine and Sinex Avenues, to Pine Avenue between Grand and Con~~-~~gress Avenues, and to Lighthouse Avenue between Cypress Avenue and Cedar Street.

Mobile Home Residential (MHR). This is a residential category that allows only mobile homes and accessory uses, up to ~~14~~ 10 units ~~(about 28 persons)~~ per net acre. Its primary purpose is to protect existing mobile home parks from being converted to other residential or non-residential uses. This designation is applied on the General Plan Land Use Map to the Monarch Pines Mobile Home Park.

Group Quarters (GQ). This category allows residential living arrangements other than the usual house, apartment, or mobile home in which two or more unrelated persons share living quarters and cooking facilities. Its purpose is to allow "institutional" group quarters, such as ~~licensed residential care facilities for 25 or more persons and~~ orphanages, and "non- institutional" group quarters, such as dormitories, ~~shelters,~~ and large boarding houses. Residential care facilities of less than 7 persons are allowed in any residential district and are treated as a single-family use in the Zoning Ordinance. ~~Residential densities range from 13 to 55 bedrooms per net acre.~~ This designation is applied on the General Plan Land Use Map to existing group quarters facilities: Canterbury Woods, Forest Hill Manor, Pacific Grove Senior Living, Del Monte Rest Home, and Gateway Center.

~~Group Quarters shall be limited to the boundaries shown on the Land Use Map.~~

Figure 2-6
Neighborhood Planning Areas



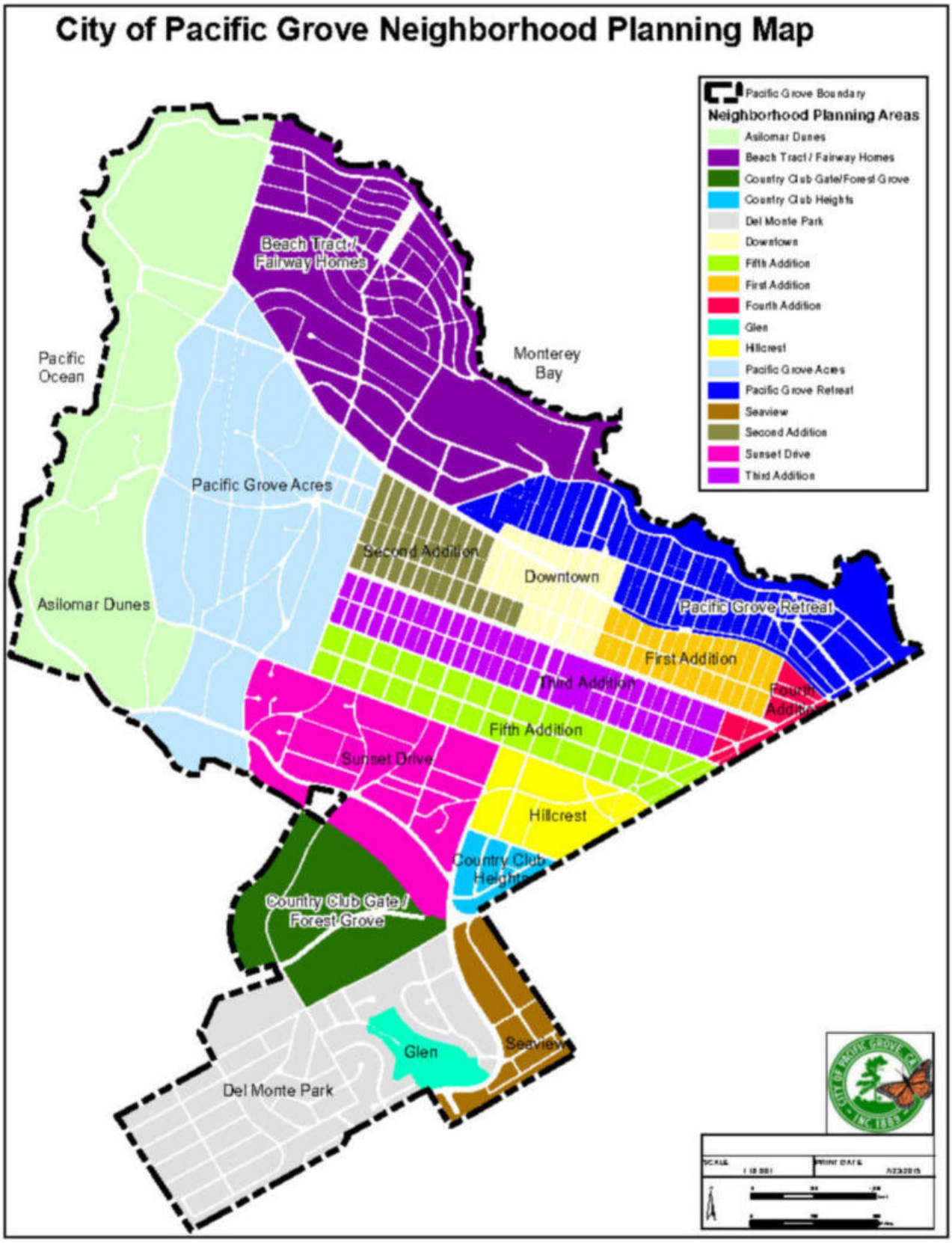
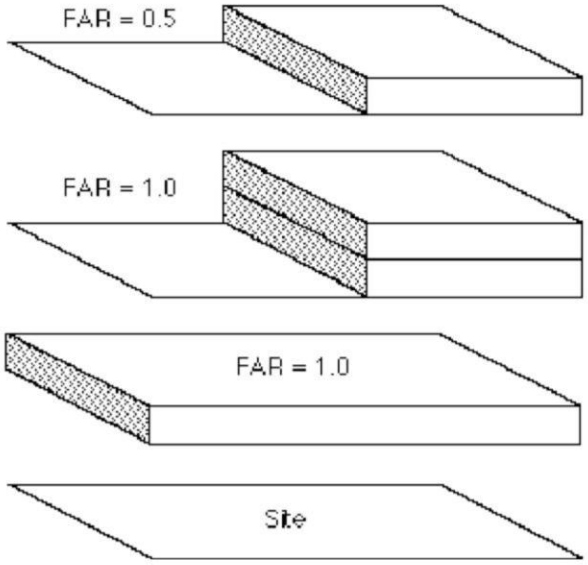

City of Pacific Grove Neighborhood Planning Map
Pacific Grove Boundary
Neighborhood Planning Areas
Asilomar Dunes
Beach Tract / Fairway Homes
Country Club Gate/Forest Grove
Country Club Heights
Del Monte Park
Downtown
Fifth Addition
First Addition
Fourth Addition
Glen
Hillcrest
Pacific Grove Acres
Pacific Grove Retreat
Seaview
Second Addition
Sunset Drive
Third Addition
Beach Tract / Fairway Homes
Pacific Ocean
Monterey Bay
Pacific Grove Acres
Second Addition
Downtown
Asilomar Dunes
Pacific Grove Retreat
First Addition
Third Addition
Fifth Addition
Sunset Drive
Hillcrest
Country Club Heights
Country Club Gate / Forest Grove
Glen
Seaview
Del Monte Park

Figure 2-7
Diagrammatic Examples of Floor Area Ratios



Source: Naphtali H. Knox & Associates, Inc.

Floor Area Ratio (FAR) is commonly used in zoning and is generally defined as the maximum gross floor area permitted on a site, divided by the total net area of the site, expressed in decimals to one or two places. For example, on a site with 10,000 net square feet of land area, a Floor Area Ratio of 1.0 will allow 10,000 gross square feet of building floor area to be built. On the same site, an FAR of 1.5 would allow 15,000 square feet of floor area; an FAR of 2.0 would allow 20,000 square feet; and an FAR of 0.5 would allow only 5,000 square feet.

Figure 2-8
Allowable Densities for Creating New Lots in Low Density Residential Neighborhoods

Designation	Neighborhood	Minimum Lot Size in Square Feet	Maximum Density Units per Acre	~~Maximum Persons per Acre~~	Most Intense Use Permitted
LDR 1.0	Asilomar Dunes	43,560	1.0	~~2.25~~	SFD & ADU
LDR 2.0	Asilomar Dunes along Asilomar Avenue north of Pico Avenue	21,780	2.0	~~4.5~~	SFD & ADU
LDR 4.4	Pacific Grove Acres	10,000	4.4	~~10~~	SFD & ~~SU~~ADU
LDR 5.4	The Glen	N/A	5.4	~~12~~	SFD & ADU

SFD = Single-family dwelling
~~SU~~ ADU = ~~Secondary~~ Accessory residential unit
Source: Community Development Department, ~~July 1992~~January 2025

Figure 2-9
Allowable Densities for Creating New Lots in Medium Density Residential Neighborhoods

Designation	Neighborhood	Minimum Lot Size in Square Feet	Maximum Density Units per Acre	~~Maximum Persons per Acre~~	Most Intense Use Permitted
MDR 7.0	Country Club Gate Condos	N/A	7.0	~~14~~	SFD & ADU
MDR 7.0	Seaview / Forest Hill Boulevard	6200	7.0	~~14~~	SFD & ~~SU~~ADU
MDR 7.3	Fairway Homes / Beach Tract/ Hillcrest / Country Club Heights/ Sunset /Methodist Church Site	6000	7.3	~~14~~	SFD & ~~SU~~ADU
~~MDDR 8.7~~	~~Dennett Duplex Block~~	~~10000~~	~~8.7~~	~~17~~	~~Duplex~~
MDR 9.3	Forest Grove Condos	N/A	9.3	~~18~~	SFD & ADU
MDR 9.7	Del Monte Park	4500	9.7	~~19~~	SFD & ~~SU~~ADU
MDR 10.0	Pine Garden Lane	4350	10.0	~~20~~	SFD & ~~SU~~ADU
MDR 10.9	Fourth and Fifth Additions	4000	10.9	~~21~~	SFD & ~~SU~~ADU
MDR 12.1	Second and Third Additions/ Forest Park Tract	3600	12.1	~~24~~	SFD & ~~SU~~ADU
MDDR 17.4	Corner of Congress & Sinex	5000	17.4	~~34~~	Duplex

SFD = Single-family dwelling

~~SU~~ ADU = ~~Secondary residential~~Accessory dwelling unit

Source: Community Development Department, ~~July 1992~~January 2025

~~**2-10**~~

~~**Allowable Densities for Creating New Lots in Medium Density Residential Neighborhoods**~~

~~Neighborhood~~	~~Minimum Lot Size in Square Feet~~	~~Maximum Density Units per Acre~~	~~Maximum Persons per Acre~~	~~Most Intense Use Permitted~~
~~Country Club Gate Condos~~	~~N/A~~	~~7.0~~	~~14~~	~~SFD~~
~~Seaview / Forest Hill Boulevard~~	~~6200~~	~~7.0~~	~~14~~	~~SFD & SU~~
~~Fairway Homes / Beach Tract/ Hillcrest / Country Club Heights/ Sunset /Methodist Church Site~~	~~6000~~	~~7.3~~	~~14~~	~~SFD & SU~~
~~Dennett Duplex Block~~	~~10000~~	~~8.7~~	~~17~~	~~Duplex~~
~~Forest Grove Condos~~	~~N/A~~	~~9.3~~	~~18~~	~~SFD~~
~~Del Monte Park~~	~~4500~~	~~9.7~~	~~19~~	~~SFD & SU~~
~~Pine Garden Lane~~	~~4350~~	~~10.0~~	~~20~~	~~SFD & SU~~
~~Fourth and Fifth Additions~~	~~4000~~	~~10.9~~	~~21~~	~~SFD & SU~~
~~Second and Third Additions/ Forest Park Tract~~	~~3600~~	~~12.1~~	~~24~~	~~SFD & SU~~
~~Corner of Congress & Sinex~~	~~5000~~	~~17.4~~	~~34~~	~~Duplex~~

~~*SFD = Single-family dwelling*~~

~~*SU = Secondary residential unit*~~

~~*Source: Community Development Department, July 1992*~~

2.16.2 Visitor Accommodations

Visitor Accommodation or Medium High Density Residential (VA/MHDR). This is a medium high density residential designation that also allows hotels, motels, adult communities, retirement homes, and rest homes. The maximum density for both visitor accommodation units and residential units is 17.4 units ~~(about 35 persons)~~ per net acre. The maximum density at 17 Mile Drive Village is 9.3 units per net acre. The VA/MHDR designation is applied on the General Plan Land Use Map to the western end of Lighthouse Avenue and to the western end of Sinex Avenue, and to the 17 Mile Drive Village site.

Visitor Accommodation (VA). This designation provides for overnight lodging facilities and limited appurtenant public restaurants and shops where appropriate (Land Use Plan (LUP) LUD-7~~, 3.3.4.2~~). The VA designation is applied on the Land Use Map to two existing motel sites (at Asilomar and Jewell Avenues and on Sunset Drive) within the coastal zone. Floor area ratio should not exceed 0.5.

2.16.3 Commercial

Downtown (D). This designation provides for retail and service uses, offices, restaurants, entertainment and cultural facilities, multi-family residential units above the ground floor, gasoline service stations, public and quasi-public uses, and similar and compatible uses. While many of these uses are allowed in other commercial districts, the intent of the D category is to promote personal services and retail sales while enhancing the vitality and character of the city's historic commercial area.

The combined floor area ratio for commercial and office uses should not exceed 2.0. However, a bonus of up to

0.3 FAR may be granted for specific upper floor uses that further the goals of the General Plan. The maximum residential density ~~will range from 20 to 30 units per net acre, and residential densities~~ will not exceed 45 units per acre. ~~the maximum density in the nearest residential designation unless a finding is made that a higher density will further the goals of the General Plan. An average of 2.0 persons per dwelling unit is assumed, for a maximum of 40 to 60 persons per acre. Use permits will be required for residential uses in the D classification.~~

The D designation is applied on the General Plan Land Use Map to the Downtown commercial core along Lighthouse Avenue. Downtown includes a portion of the Pacific Grove Retreat and is bounded roughly by Central Avenue, 12th Street, Pine Avenue, and Cypress Avenue.

Figure 2-11
Allowable Densities for Creating New Lots in High Density Residential Neighborhoods

Designation	Neighborhood	Minimum Lot Size in Square Feet	Maximum Density Units per Acre	~~Maximum Persons per Acre~~	Most Intense Use Permitted
HDR 19.8	Pacific Grove Retreat	3600	19.8	~~39~~	Multi-family 2200 sq.ft. per dwelling unit
HDDR 21.8	R-2 Section of First Addition (bounded by Lighthouse Avenue, the easterly city limits, Pine Avenue, and 14th Street)	3600	21.8	~~43~~	Duplex 2000 sq.ft. per dwelling unit
HDR 24.8	Mermaid Avenue neighborhood	1760	24.8	~~49~~	Multi-family 1760 sq.ft. per dwelling unit
HDR 29.0	Multi-family areas west and south of the Downtown; Sunset Drive west of Cedar and east of 17 Mile Dr; south of Dennett Avenue north of Sinex Avenue west of Grove Acre Avenue, Forest Avenue north of Country Club Gate Center; multi-family areas adjacent to Forest Hill; Presidio Boulevard/Funston Avenue multi-family area, area south of Sunset Drive east of 17 Mile Drive	3600 for Aadditions to the PG Retreat 4000 interior lot, 6000 corner lot for other areas	29.0	~~58~~	Multi-family 1500 sq.ft. per dwelling unit

Source: Community Development Department, ~~July~~ January ~~1992~~2025



Presidio-Austin commercial area

Central-Eardley Commercial (CEC). This designation provides for retail and service uses, offices, restaurants, parking lots, multi-family residential units, public and quasi-public uses, and similar and compatible uses. The floor area ratio should not exceed 1.5 for parcels fronting on Central Avenue and 2.5 for parcels fronting on the south side of Sloat Avenue between Dewey Avenue and Eardley Avenue. The floor area ratio for the American Tin Cannery site should not exceed 2.0.

This designation is applied on the General Plan Land Use Map to the commercial area bounded by the eastern city limits, Ocean View Boulevard, Dewey Avenue, and the rear property lines of parcels fronting on the south side of Central Avenue.

Forest Hill Commercial (FHC). This designation provides for retail and service uses, offices, restaurants, gasoline service stations, multi-family residential units, public and quasi-public uses, mixed-uses, and similar and compatible uses. The floor area ratio should not exceed ~~1~~2.0. This designation is applied on the General Plan Land Use Map to the Forest Hill commercial area south of David Avenue.

Country Club Gate Shopping Center (CCG). This designation provides for retail and service uses, grocery stores, restaurants, offices, residential and mixed-uses, public and quasi-public uses, and similar and compatible uses. The floor area ratio should not exceed 0.22 in accordance with Use Permit No. 1001. The CCG designation is applied on the General Plan Land Use Map to the Country Club Gate Shopping Center at Forest and David Avenues.

Presidio-Austin Commercial (PAC). This designation provides for retail and service uses, offices, multi-family residential units, public and quasi-public uses, and similar and compatible uses. The floor area ratio should not exceed 0.75. The PAC designation is applied on the General Plan Land Use Map to the Presidio-Austin commercial area.

Sunset Service Commercial (SSC). This designation is intended to provide for retail and services uses, offices, restaurants, gasoline service stations, fabrication, and light manufacturing. However, heavy commercial, industrial, and manufacturing uses are allowed with a use permit. The floor area ratio should not exceed 1.3. The SSC designation is applied on the General Plan Land Use Map to the Sunset Drive commercial/industrial area.

Visitor Commercial (VC). This designation provides for visitor accommodations, food and drink establishments, visitor-oriented retail commercial activities, public parking facilities, and public parking facilities in conjunction with residential use (LUP, 3.3.4.2). The floor area ratio should not exceed 1.5. The maximum density for residential use is 20 units per acre (or up to 30 units per acre if a density bonus is granted to provide housing for lower income households). The VC designation is applied to certain coastal zone areas in the vicinity of Lovers Point. Visitor accommodations are allowed only in the— R-3-M zoning district.

Neighborhood Commercial (NC). This designation provides for neighborhood and locally-oriented retail and service uses. The intent of this category is to limit uses to the current and historical uses of the properties to which the category is applied. ~~No use will be allowed without a use permit.~~ The floor area ratio for commercial uses should not exceed 0.4 or the prevailing floor area ratio in the surrounding neighborhood, whichever is greater~~, and buildings will be limited to one story~~. This designation is applied on the General Plan Land Use Map to the existing commercially-used site at the corner of Shafter and Buena Vista Avenues, to the former Mission Linen site at Congress Avenue and Sunset Drive, to the four parcels addressed 1013, 1015, 1017, and 1019 David Avenue ~~nursery site~~ (on David Avenue west of Patterson Lane), and to the mortuary site on the corner of Lighthouse Avenue and Monterey Avenue.

2.16.4 Public

Public (P). This designation provides for government-owned facilities, including government buildings and grounds, public schools and school district offices, and similar and compatible uses. Floor area ratio should not exceed the FAR for the zoning district in which the use is located. In the case of properties zoned "U" (Unclassified), the FAR should not exceed the floor area ratio of the least intensive adjacent district. The P designation is applied on the General Plan Land Use Map to all City facilities, to the post office, and to Pacific Grove Unified School District properties.

This designation does not include quasi-public uses such as private schools, hospitals, convalescent hospitals or nursing homes, churches, or utilities. Consistent with the General Plan, the Zoning Ordinance provides that churches, schools, hospitals, public utilities, and quasi-public buildings may, with a use permit, be permitted in any district.

2.16.5 Open Space

Open Space (O). This designation provides for recreation areas, wildlife and forest preserves, and waterfront areas. Parks, playgrounds, public or civic buildings, structures, and parking facilities, to the degree they are pertinent to and compatible with open land uses, are allowed with a use permit. On the Local Coastal Program Land Use Plan map, the use of coastal zone areas or facilities designated OS-R (Open Space Recreational) is limited to low-intensity, ~~day-use~~ recreational and educational activities (LUP LUD-10~~, 3.3.4.3~~). The FAR for development in O-designated areas should not exceed 0.1. The O designation is applied on the General Plan Land Use Map to City-, State-, and federally-owned parks and open space.

Open Space-Institutional (OSI). This designation provides for coastal-related facilities and activities within the coastal zone (LUP~~, 3.3.4.3~~ LUD-11). Floor area ratio should not exceed 0.2. The OSI designation is applied on the General Plan Land Use Map to Asilomar Conference Grounds, the shorefront lands east of Third Street (Hopkins Marine Station and Monterey Bay Aquarium), and existing City~~, Navy,~~ and Coast Guard facilities at the Lighthouse Reservation.

Appendix C

Proposed Health and Safety Element Revisions

Health and Safety

A wide range of hazards must be considered in planning for urban development. Some of these hazards are natural, such as seismic shaking; some are man-made, such as noise; and others are natural hazards exacerbated by human activity, such as development in areas sensitive to soil erosion or liquefaction. Many potential hazards can be avoided in the development process through locational decisions, while other hazards can be tolerated or minimized by including mitigation measures in the planning and land use regulation process.

This chapter inventories and assesses the major hazards confronting Pacific Grove, including seismic and geologic hazards, erosion, wildland and urban fires, flooding, and other safety issues, including noise and the impacts of climate change. It also covers fire and police, the emergency ~~forces~~ response agencies that ~~must deal with the~~respond to hazards and secure the safety of the community.

10.1 SEISMIC AND GEOLOGIC HAZARDS

10.1.1 Seismic Hazards

Monterey County is situated in a seismically active area. ~~(See Figure 10-1, Earthquake Faults.)~~ A number of faults traverse the county near the Monterey Peninsula, including the San Andreas Fault, which runs north-south about 28 miles east of Pacific Grove. The San Andreas Fault is considered capable of producing an earthquake with a magnitude of up to 8.5 on the Richter scale. The U.S. Geological Survey ~~in 1990~~ estimated that there is a ~~67~~ 6.4 percent chance of a magnitude 6.7 or larger earthquake on the San Andreas fault in the San Francisco Bay Area during the next 30 years ~~with an epicenter somewhere between San Jose and Santa Rosa~~.

Two other active fault zones affecting Pacific Grove are the Monterey Bay and the Palo Colorado-San Gregorio Fault Zones. These two areas, both of which have experienced movement along individual fault segments, are separated by the submerged Monterey Canyon.

The Monterey Bay Fault Zone is located offshore in the northern and southern areas of Monterey Bay. The maximum ~~magnitude earthquake~~ earthquake magnitude likely to be generated by this fault zone is about 6.5, which could generate tsunamis on the Pacific Grove coastline.

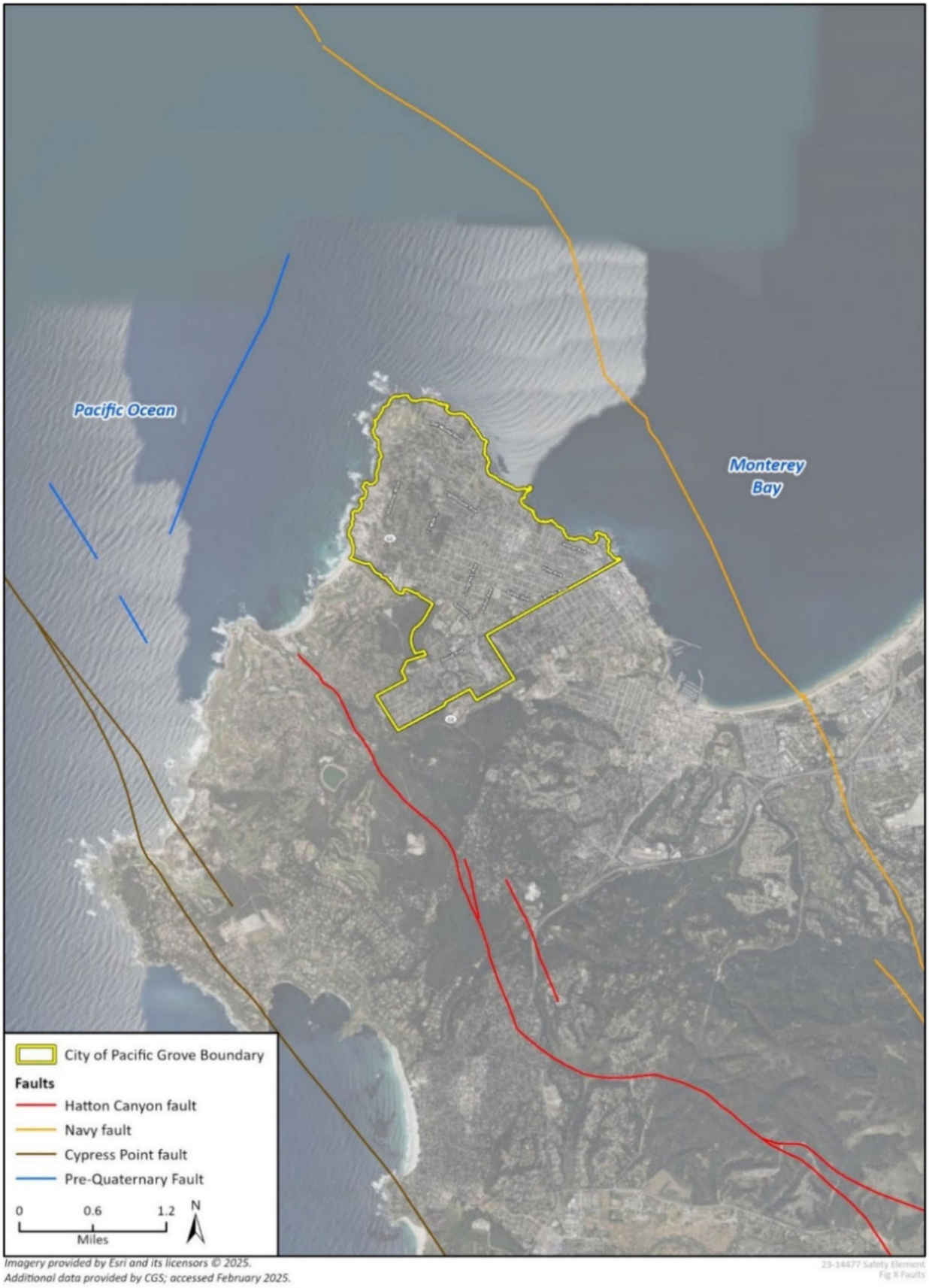
The Palo Colorado-San Gregorio Fault Zone is a northwest-trending zone located six miles southwest ~~and south~~ of Pacific Grove. This active fault zone connects the Palo Colorado Fault near Point Sur, south of Monterey, with the San Gregorio Fault near Point Año Nuevo, where it intersects the San Andreas Fault System. The Palo Colorado-San Gregorio Fault has the capability of producing an earthquake with an estimated maximum magnitude of 7.5 on the Richter scale.

Besides these three active fault zones, there are another 15 potentially active faults within Monterey County. Those closest to Pacific Grove are the Navy Fault, the Hatton Canyon Fault, and Cypress Point Fault. The Navy Fault is a northwest-trending fault that runs through the center of the City of Monterey into Monterey Bay. The Hatton Canyon Fault trends northwest, extending from Carmel Valley to just south of the city of Pacific Grove. The Cypress Point Fault also trends northwest, running through the southwestern portion of the Monterey Peninsula, just northeast of Pescadero and Cypress Points. These active faults are Quaternary faults and have been recorded to have been active within the last 1.6 million years. A few Pre-Quaternary Faults are also identified off the coast of Pacific Grove. Most faults in Monterey County run parallel to the San Andreas fault in a northwest direction, and are considered sub-units of the San Andreas Fault System. Earthquake faults closest to Pacific Grove are shown in Figure 10-1.

~~Seismic Hazards~~

Pacific Grove, while exposed to seismic hazards, is situated in a relatively stable area of granitic bedrock, and is relatively better off than other parts of the county. Since 1856 the three most severe quakes to affect Pacific Grove were the April 1906, October 1926, and October 1989 quakes. The 1989 Loma Prieta quake, which measured 7.1 on the Richter scale, caused very little damage in Pacific Grove.

Figure 10-1 Earthquake Faults



10.1.2 Groundshaking

Groundshaking is the vibration that radiates from the epicenter of an earthquake. Because it can damage or collapse buildings and other structures, and because the shaking effects can be damaging well beyond the fault trace that generates the shaking, groundshaking is considered the most serious and direct hazard produced by an earthquake. The intensity of the vibration or shaking and its potential impact on structures and urban development is determined by (1) the nature of the underlying rock and soil; (2) the structural characteristics of the building; (3) the quality of workmanship and building materials used; (4) the location of the epicenter and the magnitude of the earthquake; and (5) the duration and character of the ground motion.

The potential for damage is most likely to be minimal where bedrock is located close to the ground surface. Pacific Grove is situated in such an area and can be considered relatively stable. Nevertheless, older buildings constructed before building codes were in effect, and even newer buildings constructed before earthquake resistance provisions were included in building codes in 1933, are the most likely to suffer damage in an earthquake. However, most buildings in Pacific Grove are one or two stories and are predominantly wood frame, which makes them among the most structurally resistant to earthquake damage. In Pacific Grove there are only 12 of the older masonry buildings without earthquake resistant reinforcement that are the most susceptible to the sort of structural failure that causes the greatest loss of lives. The greatest concentration of old masonry buildings, some with cornices and parapets that are not firmly anchored, is in the Downtown area.

Fire is often the major form of damage resulting from groundshaking, largely as a result of the great number of buildings constructed of combustible materials, damage to the City's firefighting facilities, and the rupture of water mains. Ninety percent of the destruction in the 1906 San Francisco earthquake was caused by fire. Most earthquake-induced fires start because of ruptured power lines, damage to wood, gas, or electrical stoves, and damage to other gas or electrical equipment. This points to the need for greater use of non-combustible material and special construction techniques so that water mains will remain intact during large earthquakes. Critical facilities, such as hospitals and fire stations, must be sited, designed, and constructed to withstand severe groundshaking.

10.1.3 Ground Failure

In addition to structural damage, groundshaking can also cause ground failure, such as liquefaction, settlement, lurch cracking, lateral spreading, and earthquake-induced landslides.

Liquefaction is the loss of soil strength due to seismic forces acting on water-saturated granular soils. This loss of strength leads to a "quicksand" condition in which objects can either sink or float depending on their density. ~~The potential for liquefaction in~~Most of Pacific Grove has a low susceptibility for liquefaction. Areas with a high liquefaction susceptibility are~~ exists~~ primarily in beach and sand dune areas, ~~and~~ in fill areas close to the shoreline and Spanish Bay, and areas west of Asilomar Boulevard, shown in Figure 10-2. ~~This potential is greatest in the Spanish Bay and Asilomar areas.~~

Settlement is the vertical compaction of soils and alluvium caused by groundshaking. It may range from a land surface drop of a few inches to several feet, and may occur as far as 75 to 80 miles from the epicenter. There are no areas subject to settlement in Pacific Grove~~'s Planning Area~~.

Lurch cracking refers to fractures, cracks, and fissures from a few inches to many feet in length produced by groundshaking, settling, compaction of soil, and sliding. In a major earthquake, lurch cracking is likely to result in the extensive rippling and fracturing of pavements and curbs, and damage to sewer, gas, and water lines.

Lateral spreading is the horizontal movement or spreading of soil toward an open face such as a stream bank or the open side of fill embankments. In Pacific Grove~~'s Planning Area~~, the most likely locations to be affected are improperly engineered fill areas or steep, unstable banks. But because Pacific Grove is situated on stable bedrock, the potential for significant damage from either lurch cracking or lateral spreading is low.

An earthquake large enough to be felt can also cause rockfalls, landslides, rock avalanches, and mud and debris flows. Severe landslide damage and disruption of access could occur as the result of a moderate to major earthquake along Highway 68.

Figure 10-2 Liquefaction Susceptibility



10.1.4 Tsunami Hazards

~~A t~~Tsunamis ~~is a~~are large ocean waves generated by an earthquake in or near the ocean. ~~Submarine earthquakes of magnitudes in excess of 6.5 on the Richter scale appear to be the principal cause of tsunamis, although tsunamis also have been triggered by submarine landslides and volcanic eruptions.~~ Tsunamis ~~are actually~~present as a series of very long-period waves (lasting five minutes to several hours) that are low in height when traversing water of oceanic depth. But when tsunami waves approach shore where the water depth decreases rapidly, wave refraction, shoaling, and bay or harbor resonance may result in dramatically increased wave heights. Earthquakes below 6.5 magnitude are unlikely to cause a tsunami, while earthquakes between 6.5 and 7.5 magnitude may trigger a tsunami but these are rarely destructive. Earthquakes of magnitude 7.5 and higher can produce destructive tsunamis.

Most tsunamis that have struck the California coast in the past~~such as the 1964 Crescent City disaster~~ have ~~resulted from~~been a result of very distant earthquakes~~, primarily in the Aleutian Islands~~. Because of flooding and wave action, the tsunami hazard associated with large distant earthquakes appears to be high along beaches and within harbor facilities. Most notably, the 1964 Crescent City disaster, the 2010 Chilean tsunami and 2011 Tōhoku-oki tsunami have caused infrastructure loss, damage to docks and boats in harbor areas, injury, and loss of life in coastal communities along the Pacific coast.

The major California offshore faults close to Monterey Bay are ~~probably~~ strike-slip faults, and earthquakes generated on strike-slip faults are not likely to produce large-scale tsunamis. Thus, tsunami potential associated with a local offshore seismic event is low.

Nevertheless, tsunamis have occurred within the Monterey Bay region, resulting in significant damage to harbors and other coastal facilities. There is no record of any tsunamis more than 10 feet high occurring along the Monterey County Coast. The effect of a tsunami wave on the Pacific Grove shoreline would likely be comparable to a swiftly rising and falling tide.

For the Pacific Grove shoreline, the areas vulnerable to tsunami inundation are shown in Figure 10-3. Areas above the seacliff in Pacific Grove are considered to have a low tsunami hazard, while beaches and bluff areas below the seacliff are considered to have a high tsunami hazard. T~~t~~he main safety hazard from a tsunami is the possibility that residents on Ocean View Boulevard and other low altitude streets such as Coral Street and Acropolis Street who are not evacuated may be caught by the waves. There is also the possibility that sight-seers who evade police tsunami warning barriers and follow the tsunami drawdown into the exposed intertidal areas may be swept away by the following crest of the tsunami~~ as were 61 sightseers in Hilo, Hawaii, in 1960~~.

A national tsunami warning system ~~has been set up~~was established in 1967 with the Pacific Tsunami Warning Center in Hawaii, and the Alaska Tsunami Warning Center in Alaska. These Centers ~~will provide warnings to~~are operated by the National Weather Service and provide tsunami alerts on potential tsunami-generating seismic events. The messages are broadcast through various notification formats including local sirens and text message alerts. Information is relayed to ~~which will pass them on to~~ the Pacific Grove Police Department and other local officials. Pacific Grove is a certified TsunamiReady city. TsunamiReady is a voluntary recognition by the National Weather Service that promotes tsunami preparedness through collaboration among various agencies and the public. The program aims to enhance public safety by setting guidelines for communities to effectively mitigate, prepare for, and respond to tsunamis.

~~Areas above the seacliff in Pacific Grove are considered to have a low tsunami hazard, while beaches and areas below the seacliff are considered to have a high tsunami hazard.~~ Coastal erosion, later discussed in Section 10.2 Climate Change, and climate change induced sea level rise would likely amplify the impacts of tsunamis on coastal communities, such as Pacific Grove. Higher sea levels allow tsunamis to travel further inland, resulting in more extensive flooding, coastal erosion, and damage. Additionally, smaller tsunamis may have more severe effects due to the elevated sea levels.

10.1.5 Summary of Seismic and Tsunami Hazards

~~Potential seismic and tsunami hazards in the Pacific Grove Planning Area have been mapped in the Monterey County and Cities Seismic Element. The map is divided into zones of relative seismic hazard based on bedrock type, soil type, and proximity to known faults. Past studies and evaluation of seismic hazards in the region indicate~~ Pacific Grove is in a relatively stable area..

Figure 10-3 Tsunami Inundation



The principal danger to structures from seismic hazards is caused by groundshaking, ~~and the~~with a low to moderate potential for ~~such~~ damage ~~is only low to moderate~~. Liquefaction potential is limited mostly to the Spanish Bay area. Low-lying areas adjacent to beaches and the immediate shoreline are potentially subject to tsunami inundation

10.1.6 Landslide and Erosion Hazards

The potential for landslides and serious erosion exists wherever natural or man-made disturbances have created unstable soil and slope conditions. Erosion is a natural process that is affected by variables such as the amount and intensity of rainfall, ocean wave exposure, properties of soil type and underlying rock, and vegetative or organic debris cover. It becomes a serious problem only when man-made factors are also at work. Landslides are usually more destructive and can be triggered by either natural causes (such as seismic shaking or stream erosion) or by human activities such as grading, compaction, and filling, which can increase the load on unstable ground masses.

Soils. A number of soil properties have important implications for development and resource management. Soil-related issues to be addressed in planning and management include erosion, drainage, runoff, and expansive soils. The soils in ~~the Planning Area~~Pacific Grove have a ~~only a~~ moderate erosion hazard and a moderate runoff potential.

Landslides. Landslides are the movement of rock, debris, and soil down a slope. Unstable and potentially unstable slopes can be identified by bowl-shaped or step-like hillsides, broken and sheared bedrock and/or soil deposits, near-surface saturated conditions as evidenced by springs or seepage areas, slopes generally greater than

15 percent, and broken ground and/or tilted vegetation. All are indications of poor slope stability.

Most areas of Pacific Grove have an extremely low potential for landsliding, as shown in Figure 10-4. No significant landslides have been recorded in the city, and with the exception of a few low bluff areas along the waterfront that are used as parks and are protected by retaining walls, no significant areas of landslide susceptibility have been identified. Only a relatively small portion of the city contains slopes over 30 percent: Calabrese Canyon, some coastal bluffs, Benito Avenue, Piedmont Avenue, Hillside Avenue, Adobe Lane, and Syida Drive. Areas of steeper grades are at risk of landslides during heavy rains.

Extreme precipitation events are expected to occur more frequently and with greater intensity as a result of climate change, which will increase the frequency and magnitude of landslide events.

Erosion. Erosion and deposition are common natural geologic processes that result from gullying, rilling, ravelling, and bank cutting. In areas undisturbed by human activity, these processes may or may not pose a hazard. They may, however, be accelerated by concentrating natural surface flows into culverts or by removing vegetative cover. Then the chances of hazardous conditions increase.

~~The 1978 Pacific Grove environmental hazards element identified three areas as high erosion hazard zones. These areas have since been further developed and no longer pose a serious erosion problem. The areas were Calabrese Canyon, Spanish Bay, and an area adjacent to the Samuel F. B. Morse Reserve. The construction and landscaping associated with the housing development at Calabrese Canyon and the new golf course and hotel at Spanish Bay have reduced the overall erosion hazard.~~The majority of Pacific Grove is in a moderate erosion hazard zone. Figure 10-5 shows erosion hazards in Pacific Grove. Areas of the city most susceptible to erosion are concentrated on the western portion of the peninsula, specifically areas west of Asilomar Avenue along Sunset Drive containing the Hotel and Conference grounds and beach walking trails, as well as the northern portion of the city containing the Point Pinos Lighthouse Reservation.

The grading of sites can~~, nevertheless, present~~ result in increased erosion hazards which can affect not only the property being ~~developed~~ graded but also adjacent and downslope properties. Sediment traveling from eroded areas usually affects an area much larger than the site under construction. Section 24.~~06~~24.020 of Pacific Grove's Subdivision Ordinance is intended to control the erosion-inducing effects of development. ~~The~~ Through the Monterey Regional Stormwater Management Program, the City also requires that temporary cover or mulching be used to protect bare soil and slopes and certain activities be restricted during construction to mitigate erosion hazards ~~during construction~~ in the rainy ~~periods~~season (October to April).

10.1.7 Marine-~~related~~ Related Erosion Hazards

The ocean and bay shore on the north and west of the city are subject to weathering, erosion, and deposition of rocks and sand from both ocean winds and waves. Whereas sandstone and bedded cliffs have posed cliff--retreat problems for urban areas on the other side of Monterey Bay, Pacific Grove's shoreline is mostly dominated by exposed granitic rock that forms a relatively stable and durable barrier to protect shore–line development from the constant barrage of ocean waves. Although wave activity can become intense during winter storms, the Pacific Grove shore has not retreated significantly.

Approximately 80 percent of the city's shoreline is still in its natural state. ~~The remaining 20 percent (all between Point Pinos and Point Cabrillo)~~Approximately 4,695 feet of coastline ~~has~~have been altered with seawalls to provide protection from wave~~s action~~ and erosion. Two small areas (at Point Cabrillo and on the ocean side of Point Pinos) have either protective beaches or stable rock formations. The U.S. Department of Navigation and Ocean Development has classified four small areas where man-made shoreline improvements may be endangered, although damage may not have occurred recently. Along the rest of the natural shoreline, existing improvements are not considered in danger from wave damage.

The Coastal Hazards Modeling Technical Methods and Results Report prepared for the City in 2024 identified that the potential coastal erosion hazard is greatest in the Great Tide Pool Area, Crespi Pond, Asilomar Dunes neighborhood, and Pacific Grove Retreat neighborhood. Figure 10-6 shows the areas of the city susceptible to coastal erosion. This modeling overlaps with sea level rise by foot, or projected sea level rise by year.

Historically, the city has been affected by coastal erosion, experiencing shoreline changes and infrastructure damage over the years. Intense winter storm waves caused a 31-foot section of seawall and adjacent public overlook near 701 Ocean View Boulevard to collapse on January 20, 2017. In January 2023, a coastal storm wave event caused considerable erosion, specifically along the Asilomar Coastal Trail, where the natural dune was displaced 50 feet back and 5.5 feet of depth was lost. Near the Great Tide Pool a pedestrian boardwalk and lookout area were also destroyed.

Pedestrian traffic along the immediate shoreline can contribute to shoreline bluff erosion. Walkers can disturb protective vegetation in bluff-top areas. Loss of vegetative cover leads to further abrasion of the bluffs, and run-off and storm wave action increase erosion and sedimentation. The City's 2020~~seawall construction program has tried, since 1970, to remedy the conditions caused in part by heavy pedestrian use of the shoreline~~Shoreline Management Plan contains projects and programs to continue the provision of recreation coastal trail access while protecting public infrastructure, coastal access, and the city's natural and cultural resources. The seawall has enhanced public access in certain locations, and may also have had a beneficial effect on maintaining water clarity in the Marine Gardens Fish Refuge.

Very few structures in Pacific Grove have been built directly adjacent to the shoreline. Roadways (Ocean View Boulevard and Sunset Drive) separate urbanized land uses from the shore. ~~Those p~~Portions of Ocean View Boulevard adjacent to any steep drop to sea level are protected by retaining walls. ~~There is, therefore, no significant ocean wave related erosion hazard to existing urban development. i~~

The erosion hazard ~~from wind on sand dunes~~ along the shoreline ~~between the Lighthouse Reservation and the Spanish Bay area is significant~~in the Asilomar Dunes Neighborhood could have an impact to residential structures and recreation infrastructure; at least two residential structures and a gazebo fall within the hazard areas. Unless stabilized by vegetation or snow fences, dune sands will shift and change frequently. Without such stabilization, construction and siting of structures in the dune area constitutes a hazard to both the new structures and surrounding properties. Disturbance or removal of natural dunes will also increase wind damage hazards.

Figure 10-4 Landslide Susceptibility



Figure 10-5 Erosion Hazards



Figure 10-6 Coastal Erosion Hazard



SEISMIC, SOILS, AND GEOLOGIC GOALS, POLICIES, AND PROGRAMS

GOAL 1	**Prevent loss of life, injury, and property damage from geologic and seismic hazards.**
POLICY 1	**Design underground utilities, including water and natural gas mains, to withstand seismic forces.**
POLICY 2	**Continue City requirements for post-earthquake building replacement, reconstruction, and rehabilitation to conform to the latest City codes.**
POLICY 3	**Ensure that any hazardous conditions associated with unreinforced masonry (URM) buildings are mitigated to an acceptable level.**
POLICY 4	**Ensure future developments adequately address erosion and coastal erosion hazards through proper siting and design, the incorporation of appropriate mitigation measures, and compliance with Local Coastal Program policies related to coastal hazards.**
Program A	~~Prepare and adopt~~ Continue to enforce construction and design standards for underground utilities~~, particularly natural gas and water,~~ to minimize damage from seismic activity and soil-related problems.
Program B	~~Maintain, in the Pacific Grove Municipal Code, a~~Continue to implement the Seismic Hazards Identification Program ~~that~~ to ~~identifies~~ identify and mitigate potentially hazardous buildings.
Program C	Monitor coastal erosion and shoreline changes, and make coastal hazard mapping and policy modifications at least every five years, or as necessary.
~~Program D~~	Reevaluate coastal conditions after severe storms and other coastal erosion events and assess infrastructure risks.
Program E	All unreinforced masonry (URM) buildings that are potentially hazardous have been identified, and the City has developed and implemented a mitigation program to reduce the associated hazards. This program is outlined in Chapter 18.40 of the Municipal Code.

10.2 CLIMATE CHANGE

Climate change refers to any distinct change in measures of climate lasting for a long period of time, including major changes in temperature, rainfall, snow, or wind patterns. In recent times, climate change has been attributed to and accelerated by human activities that alter the atmosphere. These activities include the combustions of fossil fuels, which releases significant quantities of greenhouse gases like carbon dioxide and methane, and land-use changes such as deforestation and urbanization, which reduce the Earth's capacity to absorb carbon dioxide.

SB 379 amended Government Code Section 65302(g) to require jurisdictions incorporate climate adaptation and resiliency strategies into their general plan safety element. The Pacific Grove Climate Change Vulnerability Assessment (CCVA), included as Appendix A, was prepared using the vulnerability assessment process recommended by the California Governor's Office of Emergency Services, as documented in the 2020 California Adaptation Planning Guide. The CCVA uses data from the United States Census, American Community Survey 5-year estimates, Cal Adapt, California's Fourth Climate Change Assessment, and the most up to date Monterey County Multi-Jurisdictional Hazard Mitigation Plan.

Rincon Consultants, Inc. (hereinafter referred to as "Rincon") prepared vulnerability assessments that evaluate climate change hazards, including wildfire, based on numerous sources, including third party consultants, State and Federal mapping resources, and various software modeling programs that are considered industry standard best practices. The CCVA prepared for this Safety Element evaluated wildfire hazards based on CAL FIRE's Fire Hazard Severity Zones. Wildfire is an unpredictable hazard, and the specific conditions of wildfire could result in fire behavior that diverges from the assumptions used in any analysis. There is no guarantee that wildfire behavior and specific treatment to avoid such behavior will follow or prevent wildfire impacts.

10.2.1 Summary of Climate Hazards in Pacific Grove

Drought

Drought conditions are expected to worsen in Pacific Grove, potentially leading to water scarcity and stress on natural resources and priority populations. Climate change will likely result in prolonged dry spells and increased evaporation that would impact water availability and quality, affecting both community health and natural ecosystems.

Extreme Heat

Extreme heat events are not historically common in Pacific Grove. With climate change, extreme heat events, defined as days exceeding 88.7°F in Pacific Grove, are expected to become more common, posing health risks to vulnerable populations such as renters, adults 65 years or older, and children. Increased temperatures can also stress vegetation and wildlife, leading to habitat shifts and increased plant and animal mortality rates. The County of Monterey's Department of Emergency Management operates a webpage with current emergency information for extreme heat events, including cooling centers within the region.

Sea Level Rise

Rising sea levels will exacerbate coastal erosion, flooding, and storm surges, impacting coastal ecosystems, recreational areas, and critical infrastructure like wastewater systems. Coastal properties and natural habitats are at increasing risk of coastal erosion and wave damage. Sea level rise is discussed in Section 10.4.

Severe Storms and Stormwater Flooding

Increased intensity and frequency of severe storms may lead to more frequent flooding events, overwhelming stormwater systems and causing damage to properties and infrastructure. Coastal areas are particularly vulnerable to storm surges and wave action. Flooding is discussed in Section 10.3 Flooding and Storm Hazards are discussed in Section 10.6.

Wildfire

The frequency and intensity of wildfires are projected to increase, particularly in the southern forested areas of Pacific Grove. Wildfires pose risks to people and property, public health due to wildfire smoke, and infrastructure and service disruptions, such as power outages. Wildfire is discussed further in Section 10.10.

10.2.2 Climate Vulnerability Assessment

The CCVA analyzes vulnerabilities and priority populations in the city of Pacific Grove, focusing on impacts of the various climate hazards. Vulnerable populations are highly susceptible to drought, wildfire, severe storms and stormwater flooding, sea level rise, and extreme heat. In Pacific Grove, significant vulnerable populations include renters, adults 65 years and older, individuals with disabilities, military veterans, and individuals with cardiovascular disease. Individuals with chronic health conditions, including seniors, children, military veterans, and individuals with disabilities, are typically more sensitive to air and water pollutants and can experience mobility challenges that limit access to medical care, emergency resources, and evacuation. Renters are also particularly vulnerable to climate related hazards since they typically have limited control over housing conditions such as cooling systems, insulation, and home retrofits to protect against hazards such as flood and wildfire. In addition, residents living in overcrowded housing are more likely to face health and safety concerns and face financial barriers when preparing for and recovering from climate hazards. Overcrowding rates are low throughout Pacific Grove, but is higher among renter households compared to homeowners and is highest in Del Monte Parke neighborhood, which overlaps with high wildfire hazard zones.

Buildings infrastructure, and critical services, especially those located adjacent to the coast, are also vulnerable to climate change impacts. Critical facilities consist of the infrastructure and systems that are essential to maintain the health and welfare of the public and that enable the continuous operation of critical government and business functions. Critical infrastructure and services include water services, storm drainage and flood protection, fire services, emergency services, medical services, utilities and major utility corridors, public transportation, roadways, and active transportation routes. These assets are vulnerable to drought, stormwater flooding of roadways, increased hospital visits due to poor air quality, and increased energy demand during extreme heat events. The City's wastewater infrastructure is particularly vulnerable to sea level rise and coastal flooding due to its location within 150 feet of the shoreline.

CLIMATE CHANGE GOALS, POLICIES, AND PROGRAMS

GOAL 2 — Prevent loss of life, injury, and property damage from climate change related hazards.

POLICY 5 — **Ensure climate adaptation and hazard plans are designed to identify and address impacts to the city's most vulnerable populations.**

Program F — Collaborate with local and regional entities to establish climate resiliency centers (i.e. cooling centers for extreme heat events and emergency centers for climate related emergencies). Ensure resiliency centers are located in proximity to areas with high concentrations of vulnerable populations.

Program G — Identify areas with concentrations of vulnerable populations that may be disproportionately impacted by climate change and may need assistance and conduct education on climate change related impacts.

POLICY 6 — **Implement water conservation programs and education to increase drought resilience and reduce vulnerability to long-term water supply shortages.**

Program H — Upon the next update to the Urban Water Management, partner with the California American Water Company and Monterey County to review historical droughts and consider similar droughts in future projections to better plan for water supply shortages and support the City's Local Water Program.

Program I — Where feasible, implement a program to conduct water/energy nexus studies to inform the City's future public water and electricity rate structure during times of drought to ensure under-resourced individuals avoid inequitable pricing outcomes.

Program J — Promote drought-tolerant landscaping across all public and private properties.

Program K — Identify natural infrastructure that may be used in adaptation projects to address climate change hazards. Where feasible, incorporate natural features and ecosystem processes, or the restoration of natural features and processes when developing climate hazard implementation plans.

POLICY 7 — **Where feasible, install shade trees and cool pavement, expand the functionality and availability of cooling centers, and distribute low-cost cooling resources to reduce the impacts of extreme heat and poor air quality on climate vulnerable populations.**

Program L — Where feasible, partner with nearby jurisdictions to expand the availability of cooling centers to address a greater variety of needs as resilience centers facilitating health, food, medical, and emergency services during poor air quality events caused by climate hazards, including extreme heat events.

Program M — Seek funding to develop an Extreme Heat Plan to plan for and mitigate extreme heat, such as employing cool pavement technology and increasing the urban forest.

Program N — Encourage alternatives to air conditioners such as ceiling fans, air exchanges, and increased insulation to reduce high electricity demand during extreme heat events to increase reliability of electrical grid.

POLICY 8 — **Ensure the siting, design, and retrofit of critical facilities incorporate climate resilience measures to protect against current and projected climate change impacts, including extreme heat, flooding, wildfire, and sea level rise.**

Program O — Assess critical facilities, including those for first responders and critical service providers to identify retrofits needed for long-term climate resilience such as wildfire, sea level rise, increased wind/storm events and stormwater flooding, and increase in extreme heat events based on the best available science in climate projections.

Program P — Locate new critical facilities outside of high hazard areas, including high and very high fire hazard severity zones, 100-year flood zones, and tsunami inundation zones.

Program Q — Consider amending the local building code to require CALGreen Tier 2 Voluntary Standards Section A5.106.11.2 for cool roofs and Section A5.106.7.2 for cool walls by the next California Building Codes (CBC) update cycle to protect occupants from extreme heat.

Program R — Consider amending local building code to require indoor cooling and two-way air conditioning units in new multi-family buildings, monitoring the California Department of Public Health guidance regarding indoor cooling which will inform the next CBC update cycle.

POLICY 9 — **Incorporate climate change projections in future resource conservation plans and land use plans, including research and monitoring plans.**

Program S — Adopt a climate action and adaptation plan that includes climate change projections and policies and programs to reduce impacts of climate change and address climate adaptation.

Program T — Conduct citywide outreach on water conservation programs and education through print, digital, and in-person outreach (i.e. flyers, information booths at City attended events, social media posts).

POLICY 10 — **Inform the community of natural and human-made hazards, climate change hazards and disaster preparedness through education and outreach events.**

Program U — Conduct community education efforts via local media coordination, City sponsored activities and events, and other methods to reach the broader community regarding emergency evacuation, potential hazards, and mitigation efforts.

Program V — Provide online information for preparing homes and business for extreme weather events, such as resources on what to have at home in an emergency kit.

10.3 FLOODING

The potential for flooding exists whenever excess surface runoff collects and concentrates. This may occur because of inadequate storm drainage or because the natural capacity of a stream or drainage system has been exceeded.

The natural landscape of Pacific Grove peaks near the city boundary with the Presidio of Monterey and slopes gently downward north and west toward Monterey Bay and the Pacific Ocean. This slope gives the city a mostly unobstructed natural gravity drainage system. Pacific Grove is on a peninsula without any significant streams or rivers and no true floodplains.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs), most of Pacific Grove has low flood risk, as shown in Figure 10-7. FEMA FIRMs use historical data to determine flood hazard, identifying areas of low, moderate, and high flood risk. In Pacific Grove, only very small areas directly adjacent from the coastline are within the 100-year flood plain (one percent annual chance of flooding). With climate change anticipated to increase the frequency and severity of extreme precipitation events, Pacific Grove may experience more frequent and severe flooding. This could result in temporary disruption of emergency services and potentially overwhelm wastewater and storm drainage systems. Several low-lying areas of the city, including transportation routes near Asilomar State Beach and Conference Grounds, in particular portions of Ocean View Boulevard and Sunset Drive between Esplanade Street and Asilomar Avenue, are identified as flood prone in the most up to date Multi-Jurisdictional Hazard Mitigation Plan. Although located outside of City limits, the Del Monte Boulevard tunnel in Monterey is an especially critical transportation route that provides one of two major access routes into/out of the City and could be prone to flooding.~~, however, were designated as "flood prone" in the 1978 Pacific Grove environmental hazards element~~ Flooding in these areas still presents an issue when high tides and large surf occurs simultaneously. ~~has since been mitigated Source: by installation of new storm drains, and there is no significant flood danger to the city.~~

In Pacific Grove precipitation changes due to climate change are expected to increase the risk of flooding in the city, including localized flooding which could cause property damage or cause access issues due to street closures. The compounding effects of climate change impacts can lead to greater risks. Storm events after a wildfire can lead to mudslides and debris flows, which in Monterey County led to a local emergency following a severe winter storm in 2021.

10.4 SEA LEVEL RISE

Increasing temperatures caused by climate change are expected to raise global sea levels. Sea level rise increases the risk of coastal erosion, coastal flooding, and damage to resources and infrastructure. A coastal hazard modeling assessment was conducted in August 2024 as part of the Local Coastal Program update. The study analyzed citywide parcel vulnerability using topographic data and erosion modeling to identify areas that would become at risk for cliff erosion and storm wave hazards under various sea level rise scenarios. The study projected significant coastal erosion due to sea level rise by the year 2100, particularly along the shoreline and bluff at Pacific Grove State Beach. The Great Tide Pool and Crespi Pond area could retreat up to 85 and 54 feet respectively. Residential structures and public amenities in the Asilomar Dunes Neighborhood, Beach Tract / Fairway Homes Neighborhood, and Pacific Grove Retreat Neighborhood could become increasingly vulnerable to coastal erosion with an increase in frequency and severity of storm surges, and rising mean water level due to climate change. The study identified 69 parcels and 28 built structures to be at risk from coastal wave hazards and 23 parcels with one structure at risk of coastal erosion. Figure 10-8 shows the sea level rise projections for Pacific Grove along with coastal erosion risk.

10.5 DAM FAILURE

The closest operable dam is located southwest of Pacific Grove outside City boundaries in Monterey County. The California-American Water Company (Cal-Am) ~~recently~~ reconstructed the Forest Lake Reservoir in 1994 to make it more resistant to earthquake and storm damage that could cause local flooding as well as constructing the reclamation and recycling system. In 1998 the reservoir was purchased by the Pebble Beach Community Services District and has since increased the storage capacity. The Pacific Grove Dam, located on the eastern side of the city, is still owned by Cal-Am~~'s~~ and is the only reservoir within the city limits. The dam has been considered inoperative since 2003, poses no significant inundation hazard, and ~~. It~~ is no longer ~~being~~ used for potable water storage. Figure 10-9 shows areas of the city subject to dam inundation hazard.

~~Program W Program C Explore the use of the California- American Reservoir for potential storage of reclaimed water.~~

10.6 STORM HAZARDS

Winter storms along the Pacific Grove shoreline have the potential of producing breaking waves exceeding 20 feet in height at the 20-foot depth contour. Although the offshore reef areas dissipate much of the storm wave energy, run-up can reach the low-lying shoreline areas below or at the 20-foot elevation (including the waterfront parklands and roadways). Boulders and other debris flung onto the shore are the primary storm hazards in the area.

Another potential storm hazard results from the configuration of Monterey Bay. The bay tends to produce sets of larger waves followed by quiet periods. These quiet periods may lure the unwary too close to the shoreline. The City has recognized the hazard these unexpected large waves pose by posting warning signs along the shoreline.

Climate change is expected to increase the rate and severity of storms. Extreme wind and precipitation events often overwhelm storm drainage systems which could impact properties and infrastructure due to localized flooding or downed trees and power lines.

A study of storm damage in the vicinity of Monterey Harbor from 1910 to 1960 indicates periodic damage to harbor structures and moored boats, but little loss of life. The winter storms of 1982-83 downed trees, damaged piers and some seawalls, and flooded part of the Asilomar area. Although recreational use of the shoreline has intensified substantially since 1970, the heaviest use is during the summer months when storm activity is rare. (Most storms occur between October and April.)

~~POLICY 4 Maintain adequate storm warning communication systems.~~

The Pacific Grove Police Department receives weather warnings directly from the National Weather Service's Forecast Office for the San Francisco Bay

Region. A ~~new~~ National Weather Service office for the area is located in the city of Monterey at 21 Grace Hopper Avenue. Several forecast stations broadcast information for the coastal counties, including stations at Mount Umunhum in Santa Clara County~~at the~~ and the Monterey Peninsula Airport~~, focusing on the coastal counties between Sonoma and San Luis Obispo counties, opened in 1994~~.

Figure 10-7 100-Year Flood Zones

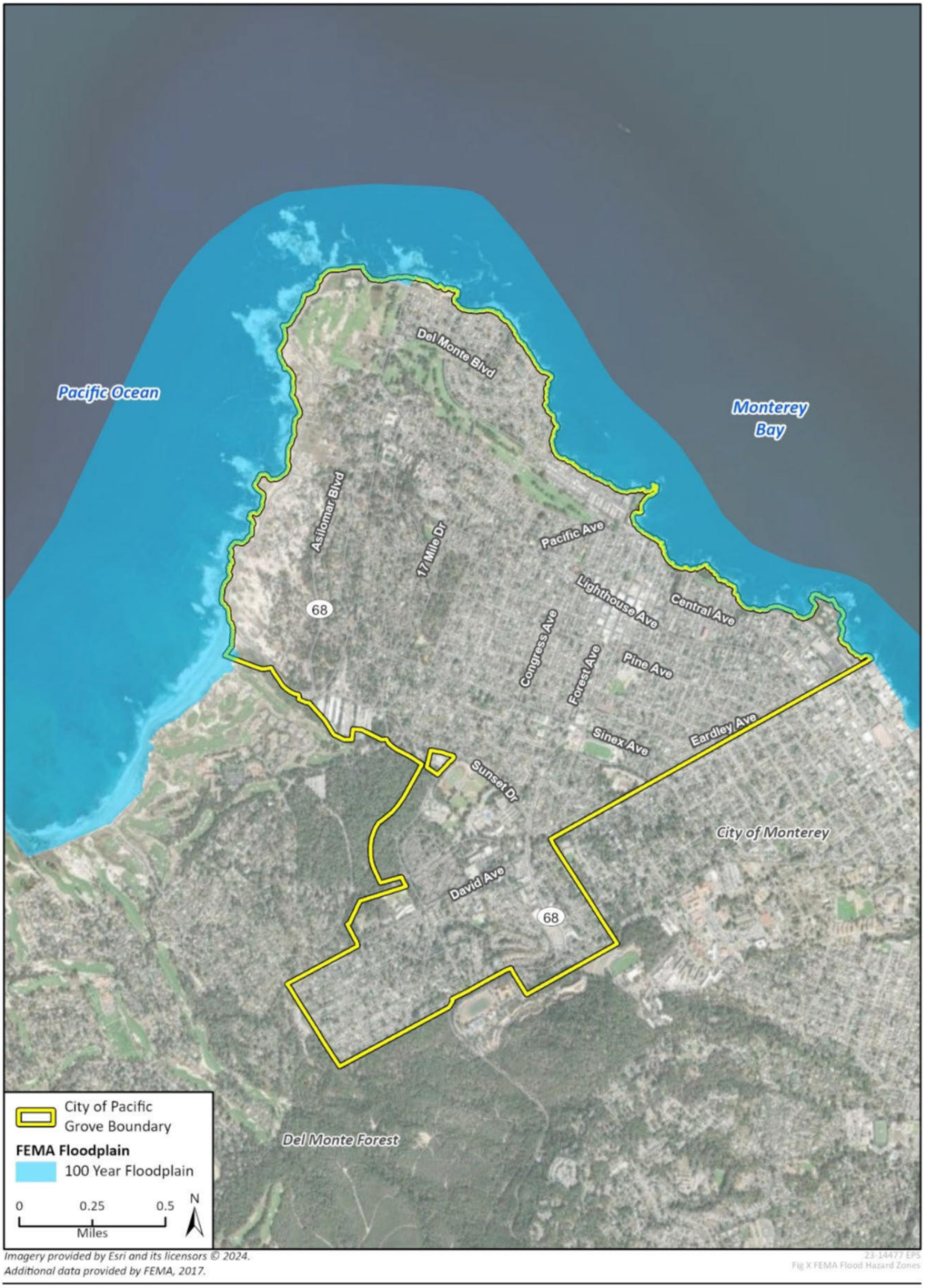


Figure 10-8 Sea Level Rise

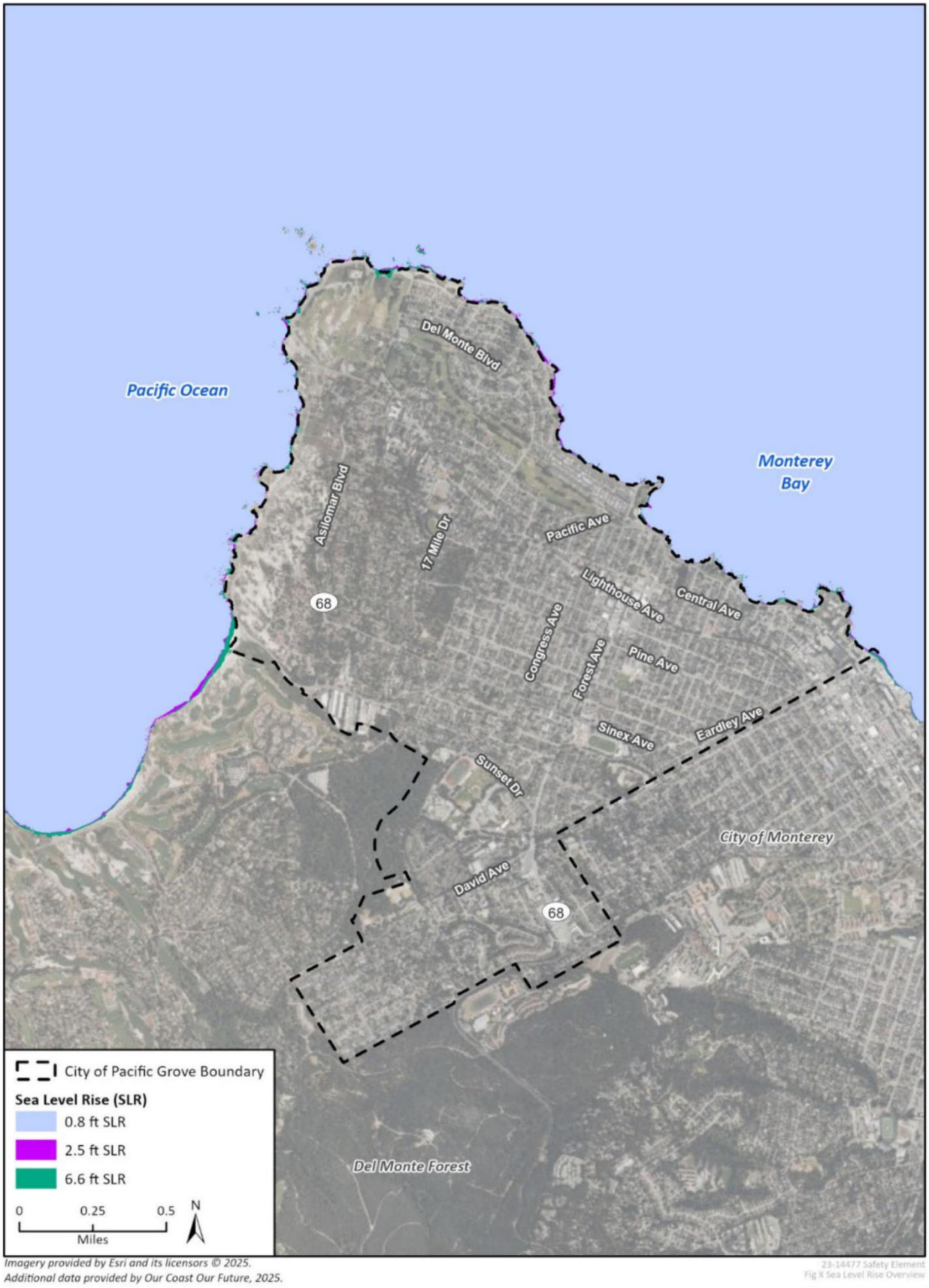


Figure 10-9 Dam Inundation Areas



STORM, FLOODING, and SEA LEVEL RISE GOALS, POLICIES, AND PROGRAMS

GOAL 3	**Prevent injury, property damage, and infrastructure loss from flooding and erosion.**

POLICY 11 **~~Restrict parking, construction permits, or right-of-way encroachment permits on high fire hazard days in neighborhoods in and near fire hazard zones; on days with potential storm surges, atmospheric rivers, in flood zones near Asilomar State Beach and Conference Grounds, and~~ Upgrade and maintain the city's stormwater drainage system to increase capacity and reduce flooding to account for projected precipitation rates due to climate change.**

Program X Strengthen storm drain maintenance to prevent local flooding during strong storms.

Program Y Require prompt revegetation and/or construction of newly graded sites to control erosion.

Program Z Encourage projects requiring development permits incorporate low impact design to reduce runoff, such as permeable paving, on-site detention ponds, and bioswales.

POLICY 12 **Enhance the resilience of the city's stormwater drainage and wastewater systems to accommodate potential impacts including sea level rise and severe storm events.**

Program AA Adopt, implement, and periodically update a drainage system master plan that inventories the city's stormwater drainage system, identifies deficiencies and capacity constraints, and recommends infrastructure improvements to address identified issues. The drainage system master plan should incorporate future climate change projections and address anticipated impacts to the system.

Program BB Update the City's Sewer System Master Plan every five to 10 years to accommodate city growth and address climate change impacts.

~~POLICY 13~~ **Ensure new development and redevelopment projects effectively mitigate potential risks associated with sea level rise through the coastal development permit review process.**

POLICY 14

Program CC Encourage development projects to deposit dredge spoils on Pacific Grove State Beach to mitigate coastal erosion, as identified in the MJHMP and CCVA if the material is suitable for sand replenishment and is consistent with environmental protection policies.

Program DD Require removal or relocation of structures away from sea level rise hazards, especially those identified in the CCVA, if public health and safety risks exist, if essential services can no longer be maintained, if the structures are no longer on private property due to shoreline migration, or if the development requires new or augmented shoreline protective devices that would not otherwise be permitted.

POLICY 15 **Coordinate with other local, regional, state, and federal agencies to monitor local sea level rise impacts and plan and implement adaptation initiatives and restoration or enhancement of natural ecosystems.**

Program EE Develop sea level rise adaptation plans for assets vulnerable to sea level rise.

Program FF Continue to build community awareness about sea level rise hazards and future vulnerabilities.

10.7 AIRCRAFT/AIRPORT ~~CRASH~~ HAZARDS

The Monterey Regional Airport is located approximately 3.5 miles to the southeast of Pacific Grove. The Monterey County Airport Land Use Commission prepared the 2019 Airport Land Use Compatibility Plan (ALUCP) to promote the safety and welfare of the communities affected by airport activities, in which Pacific Grove is within the Airport Influence Area (AIA). Figure 10-10 shows Pacific Grove in relation to the safety overlay areas. ~~Under some wind conditions, commercial, private, and military a~~Airplanes fly over Pacific Grove on their approach to land at the Monterey ~~Peninsula~~ Regional Airport and the Point Pinos Lighthouse is a landmark in pilot's visual approach procedures. ~~This is a potential~~ Potential hazards arise during certain weather

conditions. The ALUCP establishes safety measures for jurisdictions within the AIA. For Pacific Grove this would include a maximum non-residential intensity of 300 persons per acre, a requirement for 10 percent open land, and various restrictions including prohibitions on hazards to flight, outdoor stadiums, structures over 100 feet, and uses involving vulnerable occupants within specified distances from the runway, with additional airspace analysis and airport disclosure notices required. Aircraft noise exposure is later discussed in Section 10.13.2.

AIRCRAFT/AIRPORT HAZARDS GOALS, POLICIES, AND PROGRAMS

GOAL 4	**Prevent injury, property damage, and infrastructure loss from airport hazards.**

POLICY 16	**Maintain adequate storm warning communication systems.**
POLICY 17	~~**POLICY 5 —**~~**Work with the Monterey Peninsula Airport District to monitor safety ~~and noise~~ concerns for Pacific Grove.**
POLICY 18	**Continue to review development projects to ensure consistency with the ALUCP requirements for the AIA.**

10.8 TOXIC AND HAZARDOUS ~~WASTES~~MATERIALS

The generation, storage, disposal, and transportation of toxic or hazardous wastes in Pacific Grove is not a significant issue. Household hazardous waste is accepted and processed by Monterey Regional Waste Management District at the ReGen Household Hazardous Waste Facility in the city of Marina, as well as through curbside pickup through the GreenWaste Recovery services. The City ~~maintains a~~ 's hazardous materials storage area was previously located at the City Corporation Yard, at 2100 Sunset Drive, but is now considered inactive. Pacific Grove Public Works Department maintains an inventory of materials by location for pesticides.

There are no permitted hazardous waste facilities in the city. There are few locations with active hazardous materials identified and a number of inactive sites, such as sites with previous uses that may have resulted in contamination and hazardous material: including a prior naval fueling station, and the historic Point Pinos lighthouse. Figure 10-10 shows active and inactive hazardous material sites in the city.

The City has the following goals, policies, and programs related to hazardous materials.

HAZARDOUS MATERIALS GOALS, POLICIES, AND PROGRAMS

GOAL 5	**Prevent injury, property damage, and infrastructure loss from hazardous materials exposure.**

POLICY 19	**Require businesses that manufacture, store, use, or transport significant quantities of hazardous and toxic materials to annually identify such materials and their quantities and to notify the Fire Department of any changes in such materials or activities.**
Program GG	Maintain a current inventory of hazardous and toxic materials by location, for use by the Fire Department and the Community Development Department.
~~**POLICY 20 —**~~	~~**The City supports the establishment of a substation in the city for the collection of hazardous materials. See Program L in Section 6.6 of Chapter 6, Natural Resources.**~~
~~**POLICY 21 —**~~	~~**Program L Continue to maintain appropriate li- censes and permits for the storage of hazardous materials.**~~

Figure 10-10 Monterey County Airport Land Use Plan Safety Zones

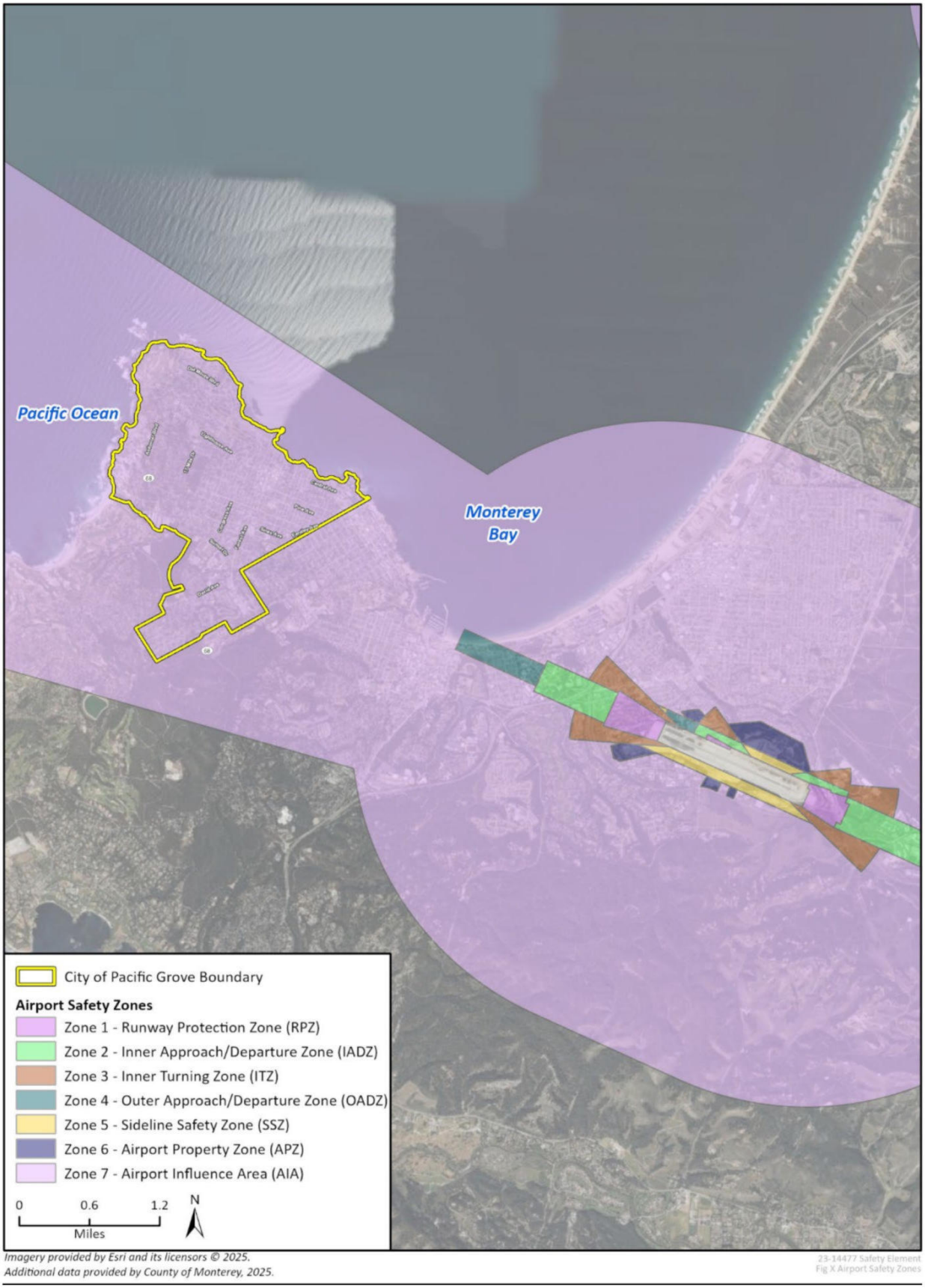
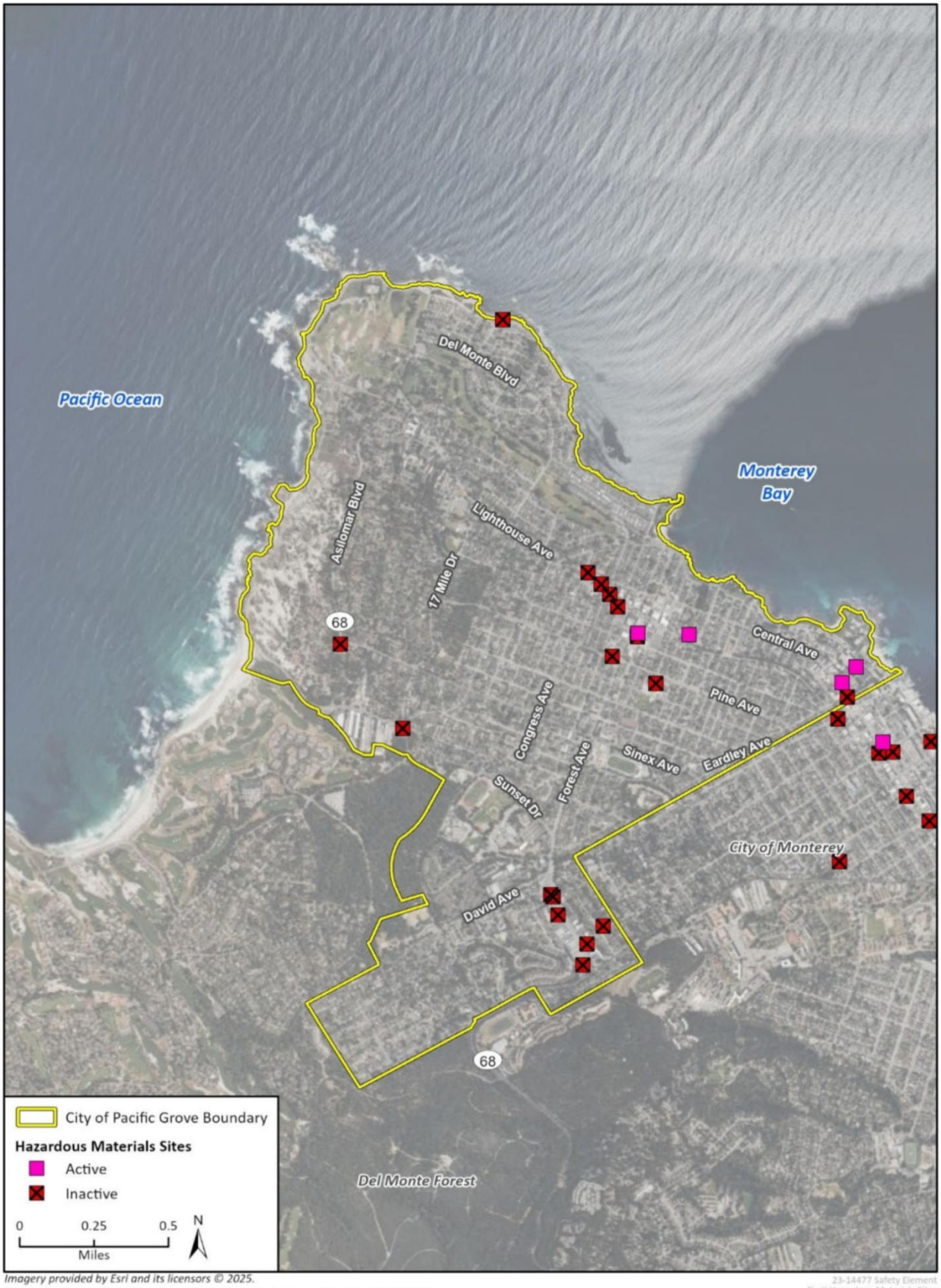


Figure 10-11 Hazardous Materials Sites



10.9 AIR AND WATER POLLUTION

There are no significant air or water quality problems in ~~the Planning Area~~Pacific Grove. (Water quality and the City's intention to control non-source pollutants are dis~~—~~cussed in Chapter 6 Natural Resources, Sections 6.2 Water Resources and Water Quality and 6.6. Natural Resources Goals, Policies, and Programs)

The excellent ventilation provided by the weather patterns generally inhibits the buildup of air pollutants. ~~How ever,~~ Pacific Grove is part of the North Central Coast Air Basin.~~,~~ According to the California Air Resources Board air quality standards designation tool, the city ~~which~~ is within federal attainment status for ozone and particulate standards and State attainment for fine particulate matter (PM2.5). However. the city is located in a non-attainment area for State ~~and federal~~ ozone ~~standards and for State~~ and inhalable particulate standards for coarse particulate matter (PM10). Attainment means complying with State and federal ambient air quality standards within an air basin.

The Monterey Bay Air Resources District (MBARD) is responsible for conducting air monitoring, permitting, enforcement, long-range air quality planning, regulatory development, and education and public information activities related to air pollution for Monterey County.

There are few industrial sources of air pollution in Pacific Grove. Sources of air pollutant ~~e~~Emissions relevant to Pacific Grove include passenger and commercial vehicles, wildfire smoke, ~~from sources such as,~~ residential cooking and heating, dry cleaners, and gasoline dispensers.

The City has the following air and water quality goals, policies, and programs.

AIR AND WATER POLLUTION GOALS, POLICIES, AND PROGRAMS

GOAL ~~3~~6	**Promote attainment, and insofar as possible, improve air quality in Pacific Grove and the Monterey Bay area.**
POLICY 22	**Address State and federal regulations to keep funding to maintain attainment.**
Program HH	Support and participate in regional air quality planning programs.
POLICY 23	**Use the CEQA process to identify and avoid or mitigate potentially significant air and water quality impacts of development.**

In doing so, the City will consult with the Monterey Bay Air Resources District ~~Unified Air Pollution Control District~~ concerning air quality issues associated with specific development proposals.

POLICY 24	**Continue to support the efforts of the Transportation Agency for Monterey County to implement the ~~Monterey County Congestion Management Plan~~Regional Transportation Plan.**
Program II	Ensure that new development, or major rehabilitation, redevelopment, or conversion, incorporates the infrastructure, facilities, and design standards necessary to encourage and accommodate public transportation, ridesharing, and non~~—~~automobile travel modes.

10.10 FIRE HAZARDS

There is ~~a~~ potential for both wildland and structural fires to threaten life and property in Pacific Grove. Wildland fires, which result from both human activity and natural causes, occur in forests, brush, or grasslands, but can threaten structures and urban development. Local and regional wildfires can also generate smoke that can cause hazardous air quality conditions impacting public health, particularly those with respiratory conditions such as asthma. Structural fires usually result from human activity. Substandard structures present the highest potential for injury, death, or loss of property.

10.10.1 Wildland Fire Hazards

Wildland fires ~~are unlikely to present a hazard to Pacific Grove during most of the year, but such fires do occur periodically~~can occur year-round and typically occur most frequently during the annual dry season (May to October). Wildfires can be naturally occurring or caused by human activity. The buildup of understory brush and vegetation (which under natural conditions would be periodically burned off) creates conditions conducive to large and intense fires. Variables such as humidity, drought, rainfall, wind velocity, type of vegetation, and fuel buildup determine the start, spread, and control of wildland fires. Increased temperatures, decreased precipitation, and prolonged dry spells due to climate change are likely to cause greater fuel loads and fuel dryness, resulting in more frequent and severe wildfires. These climate patterns are extending the fire

season, which historically occurred from May to October throughout California. Furthermore, fire suppression and development within the wildland urban interface, the area of transition between human development and unoccupied land, has led to increased fuel load and risk of ignition. ~~The most hazardous fire conditions occur during the annual dry season (May to October).~~Historical wildfires that have occurred in proximity to the city are shown in Figure 10-12.

The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for fire suppression and prevention within all "State Responsibility Areas" (SRA). CAL FIRE has developed a classification of wildland fire hazards for SRAs in proximity to Pacific Grove, all of which are unincorporated. These areas west and south of Pacific Grove are designated as moderate, high, and very high fire hazard severity zones, based on the most up to date CAL FIRE designations. Federal Responsibility Areas (FRA) fall under the responsibility of federal agencies. In and near Pacific Grove this includes the Presidio of Monterey to the east of city limits, National Oceanic and Atmospheric Administration (NOAA) Southwest Fisheries Science Center on Lighthouse Avenue, and Naval Reserve Center within the Point Pinos Lighthouse Reserve.

Local Responsibility Areas (LRA) are zones where local and regional fire suppression agencies are responsible for fire protection and prevention. Monterey City Fire Department is responsible for fire suppression and prevention in Pacific Grove and the surrounding cities. According to the most up to date designations from CAL FIRE, LRAs that are of highest risk to wildfire are located in the southern limits of the City. The border of the Del Monte Forest with Pacific Grove, where development is adjacent to dense vegetation, has a potential for wildland fires that can endanger ~~urban development~~people and property. Undeveloped forested areas directly behind houses in this area are highly hazardous because of the accumulation of large amounts of dry brush and dead wood that can become fuel for a wildland fire. These areas are considered by CAL FIRE to be Moderate to High Fire Hazard Severity Zones (HFHSZ) and Very High Fire Hazard Severity Zones (VHFHSZ), based on the most up to date designations. Figure 10-12 shows wildfire hazard areas in the city. Figure 10-14 shows existing development within HFHSZs and VHFHSZs. The existing uses in these areas are primarily residential, but also contain the existing Forest Hill commercial corridor, shopping center, and city owned educational facilities. The General Plan land use designations for these areas include Low to High Density Residential, Open Space, Public, Forest Hill Commercial, Group Quarters, and Country Club Shopping Center.

Several Pacific Grove Unified School District schools are located within fire hazard severity zones in the southern part of the city. The School District has prepared a Districtwide Threat and Risk Assessment and individual Site Safety Plans for each school to identify and address safety issues, including fire. These plans evaluate each schools existing fire protection system and provide evacuation routes and shelter in place procedures in the event of a fire within the area.

A May 31, 1987, fire in Del Monte Forest burned 160 acres, destroyed 32 houses, and caused an estimated $16 million in damage. Monterey County contracts with the ~~California Department of Forestry~~CAL FIRE for fire protection in this part of the Planning Area.

Some areas within the ~~city limits~~interior of the city also pose a wildland fire hazard. In Pacific Grove Acres, ~~structure~~ structural and other fires can set off wildland fires. The forested portions of the Lynn "Rip" Van Winkle Open Space could pose a fire threat to the schools and housing across Congress Avenue. Washington Park, and Asilomar State Beach and Conference Grounds have a ~~smaller~~ lower wildfire potential ~~for an outbreak of wildland fire~~, since they are well-maintained and regularly cleared of fire-prone debris and brush and are broken up by pavements and cleared areas.

~~The California Department of Forestry has developed a classification of wildland fire hazards for all "State responsibility lands." The State responsibility lands within the Pacific Grove Planning Area, all of which are unincorporated, have been designated as having a moderate fire potential.~~

The cities of Monterey, Pacific Grove and Carmel-by-the-Sea participated in the creation of a Community Wildfire Protection Plan (CWPP) to prepare for and adapt to the increasing impact of wildfires. The CWPP development was led by the Monterey Fire Department in response to the federal Healthy Forest Restoration Act of 2003 and adopted by the Pacific Grove City Council in 2024. The CWPP contains recommended actions in order to identify effective, prioritized wildfire mitigation and fuel reduction projects.

10.10.2 Structural Fire Hazards

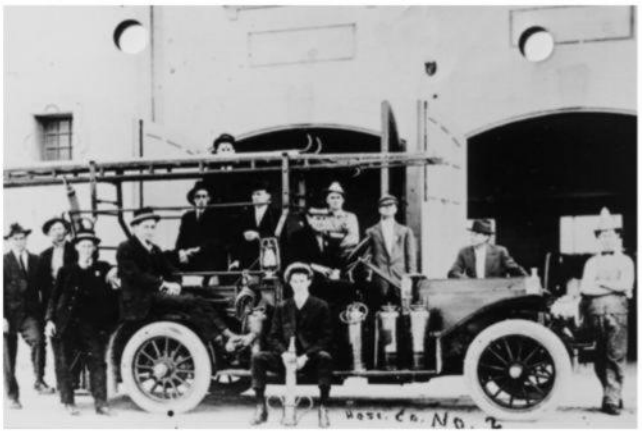
A large number of structures within the original Retreat are substandard in terms of current State and local fire and building codes. These older buildings were constructed on small lots with little or no yard space between them. Many are of single-wall construction, and nearly all are wood frame. Many have original

electrical wiring and circuits that fail to meet the electrical demands of large numbers of modern household appliances. In addition, many older two- and three-story dwellings throughout the city have been converted into apartments or rooming houses. ; and iIncreasing the number of family units within a building places additional demand on building infrastructure which increases the fire risk if buildings are not brought up to local code.

A number of wood-frame commercial buildings in the Downtown lack adequate fire protection. Some of the masonry buildings have common basements without fire-wall separations between properties. The lack of fire walls at property lines and within buildings gives the Downtown the city's greatest potential for structural fires.

Lack of water supply and low pressure can seriously constrain fire-fighting capabilities. The topography of the city affects the fire flow water supply as pressure decreases at higher elevation areas. Most of Pacific Grove has adequate water supply for fire suppression; areas that have inadequate water supply need to be upgraded. As of 1994, the areas within the city with inadequate water supply for normal fire protection were:

- The 1100 and 1200 blocks of Forest Avenue; The 600 block of Spazier;
- The 600 block of Hillcrest;
- The 300 and 400 blocks of Bishop;
- The area bounded by the 1000 block of Forest, between Beaumont Avenue and Morse Drive;
- The 1200 block of Adobe Lane; and
- The 600 and 700 blocks of Mermaid Avenue.



A tradition of public safety, 1920

Source: The Pat Hathaway Collection

Although ~~California-American Water Company~~ Cal-Am has a water main improvement program, its priorities are based on customer complaints and leaks not on fire-fighting needs. Therefore, the City will need to include a water main improvement program in its capital improvement planning.

The original Retreat and Mermaid Avenue areas are designated "target hazard areas" because of the density of buildings and type of building construction. In addition, Mermaid Avenue has inadequate fire flow. To increase the fire flow, a new water main was extended from Lovers Point Park 950 feet westerly into the 700 block of Ocean View Boulevard, and a new hydrant was installed at the end of this main.

10.11 FIRE PROTECTION

The Pacific Grove Fire Department servedes the city from a single, centrally located fire station at 600 Pine Avenue until 2008. The department then merged with the Monterey City Fire Department to provide better services with an increased capability and depth of service to the greater community. This department, as of 2024, is staffed by ~~approximately 18 full-time, paid professional firefighterspersonnel~~ 24 fire engineers and 30 firefighters across six stations. The Pine Avenue Station No.11 primarily serves a geographical area of 2.5 miles, which includes the city of Pacific Grove. All members of the department have diverse emergency medical and fire suppression related responsibilities and are able to respond to a wide variety of hazard events. As reported in the 2024 Annual Report for the Monterey Fire Department, all jurisdictions achieved an Insurance Services Office (ISO) rating of 2. ISO ratings range from one to ten (Class 1 being the best and Class 10 being the worst) in terms of a communities fire protection capabilities. ~~For all fires and emergencies, the department maintains "running orders" which determine the number and type of equipment to be dispatched and personnel required. In first-alarm or greater fire situations, off-duty personnel are called in to staff reserve or back-up equipment located at the station, and volunteers are dispatched directly to the fire scene.~~

~~In addition to fire volunteers, the department has a volunteer ocean rescue unit that provides service on a countywide basis. Those involved in the ocean rescue program have diving experience and are not involved with fire suppression.I~~

Pacific Grove has a mutual aid agreement with all fire agencies in Monterey County. The County Communications Center in Monterey handles communications and dispatches units. ~~During 1990, the department's average response time was approxi-~~

~~mately three minutes, with response times rarely exceeding five minutePeninsula Medics Ambulance Company provides paramedic service on the Monterey Peninsula with one full-time ambulance stationed behind the Pacific Grove Fire Department.~~

~~As required by the Public Utilities Commission, t~~The City has established ~~minimum acceptable flow rates~~regulations and standards for fire protection pursuant to Sections 17922, 17958, 17958.5 and 17958.7 of the California Health and Safety Code by adopting provisions of the California Building Code. The City has adopted the 2022 edition of the California Building Code and regularly updates their building codes to be consistent with new editions of the California Building Code as they are released, including changes that further enhance protection from wildfire hazards. The City has adopted several local amendments to the California Fire Code, to include additional fire protection measures including defensible space requirements, hazardous material storage, burning prohibitions, and fire sprinkler regulations. ~~These m~~Additionally, to ensure adequate fire-fighting capabilities for developments, minimum water flow rates are listed in the latest adopted edition of the ~~Uniform~~ California Fire Code, Appendix ~~III-A~~ BB, ~~Division III,~~ "Fire-flow Requirements for Buildings."



School children learn fire prevention



An ocean rescue

Figure 10-12 Historical Wildfires 1950 to Present



Figure 10-13 Fire Hazard Severity Zones

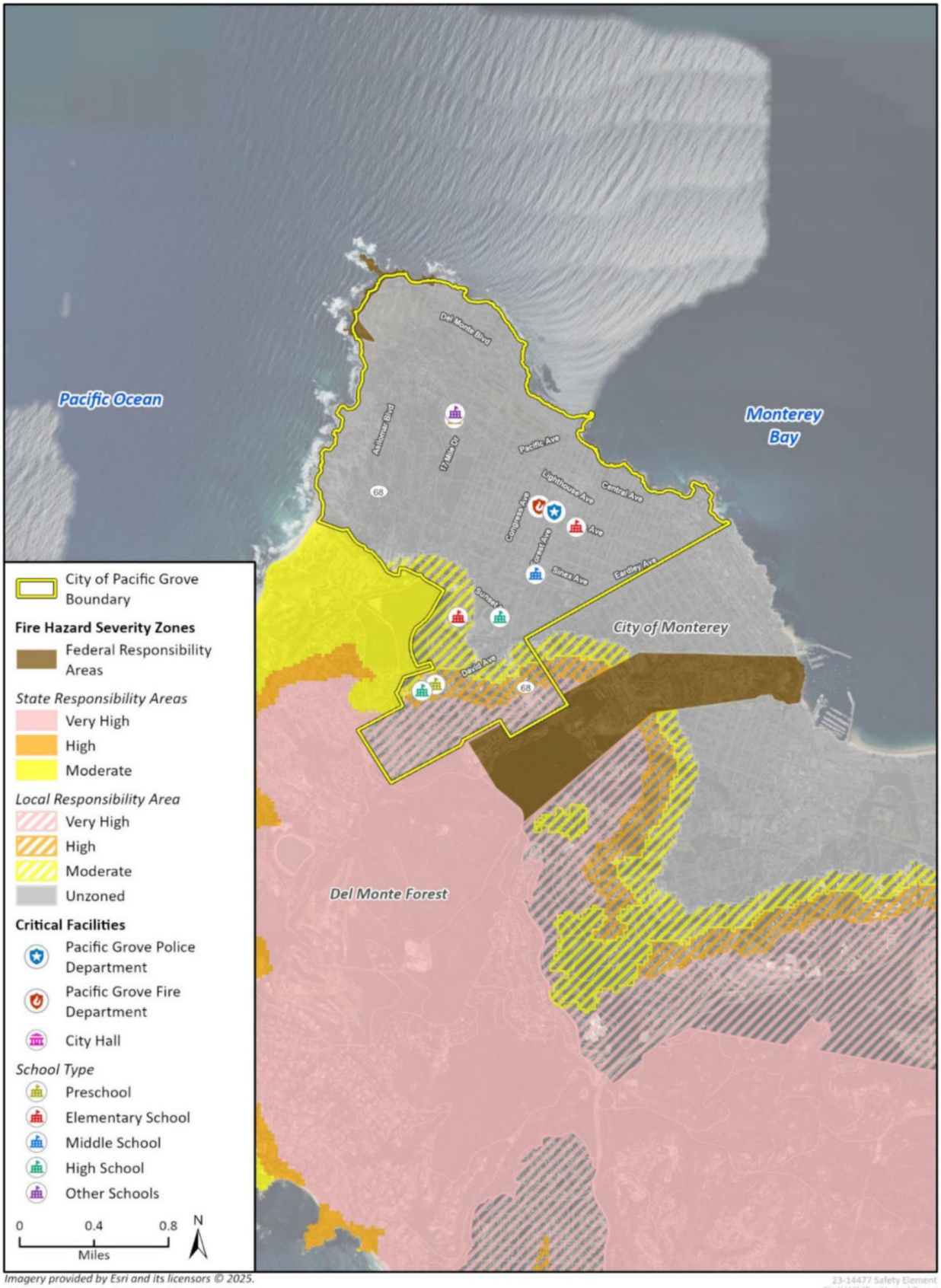
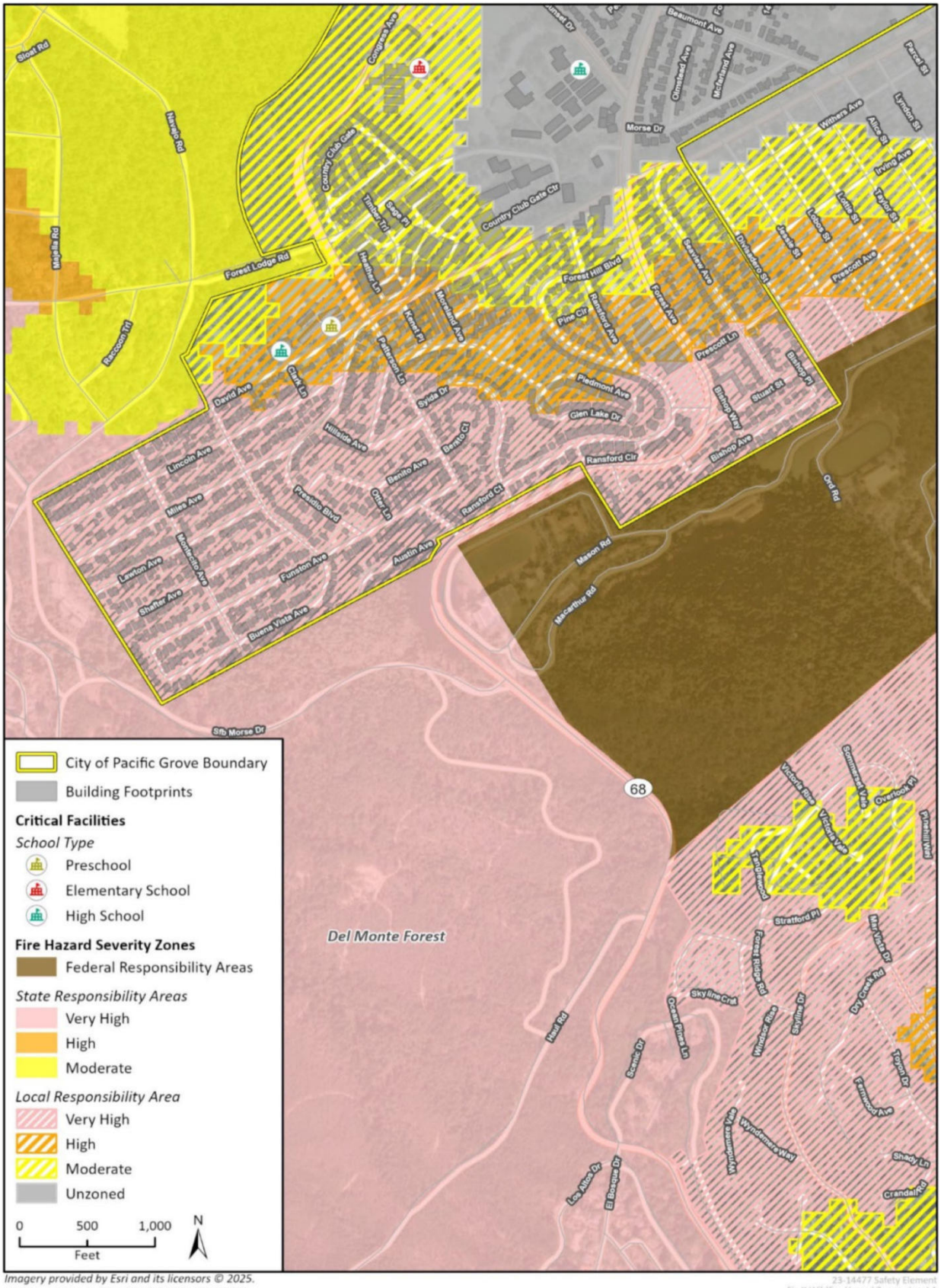


Figure 10-14 Buildings and Roadways Within High and Very High Fire Hazard Severity Zones



Imagery provided by Esri and its licensors © 2025.
Additional data provided by CALFIRE, 2024/2025.

23-14477 Safety Element
Fig X Wildfire Hazard Zones - Inset 1

FIRE PROTECTION GOALS, POLICIES, AND PROGRAMS

Policies herein are consistent with the requirements of California Government Code Section 65302(g) and are based on CAL FIRE's General Plan Safety Element Assessment and recommendations from CAL FIRE and the California State Board of Forestry and Fire Protection. Rincon did not develop original policies to mitigate wildfire.

~~GOAL 4~~ **~~Prevent loss of life, injury, and property damage from fires, release of hazardous materials, natural disasters, and exposure to other hazardous conditions.~~**

GOAL ~~5~~7 **~~Ensure an adequate level of fire and medical emergency service to the community~~Prevent loss of life, injury, and property damage from fires and wildfire hazards.**

POLICY 25 **Require new development ~~to~~ provide all necessary water service, fire hydrants, and ~~roads~~ fire access, and minimum flow rates consistent with Fire Department standards and City requirements which relate to the project.**

~~Program JJ~~ ~~POLICY 14 Require new development to comply with the minimum fire-flow rates contained in Appendix III-A in the most recent and locally-adopted edition of the Uniform Fire Code.~~

Program KK ~~POLICY 15~~ Require all construction to meet the applicable current City codes for fire and life safety.

Program LL Whenever feasible, locate new critical facilities and new essential public facilities outside fire hazard zones, such as healthcare facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities.

~~**POLICY 26** **Ensure adequate fire equipment access through the development review process.**~~

POLICY 27 **~~Ensure~~ Coordinate with Cal-Am to ensure adequate water fire-flow throughout the city as set in the City's Fire Code.**

POLICY 28 **Promote implementation of building retrofits to enhance structural resilience to wildfire and fire hazards.**

Program MM Review the capacity of ~~application of~~ the City's ~~requirements for~~ on-site fire suppression systems, including sprinklers and pumps, in all new construction and update where feasible.

Program NN ~~Program P Regularly~~ Support Cal-Am in monitoring fire-flow throughout the city to ensure adequacy. Report any identified deficiencies to Cal-Am and collaborate on implementing infrastructure improvements to address deficiencies.

Program OO Collaborate with Cal-Am, the Monterey Peninsula Water Management District, and Monterey One Water to identify and secure additional sources of water to support fire suppression activities.

Program PP Schedule the improvement of water mains in the City's Capital Improvements Program (CIP).

POLICY 29 **Maintain an ongoing fire and life safety inspection program for all occupancies~~, except one- and two-family dwellings~~.**

Program QQ Coordinate with the Pacific Grove Unified School District to support efforts to update and implement school Site Safety Plans and Risk Assessments to address fire risk.

Program RR Partner with the Pacific Grove Unified School District and associated schools to incorporate evacuation and safety of students into citywide emergency planning efforts.

Program SS Establish regulatory incentives to encourage property owners to implement building retrofits, such as permit streamlining and fee waivers and reductions,

Program TT Develop a community education program to increase awareness of home hardening and retrofit options to reduce structural vulnerabilities to wildfire and fire hazards. This program can include educational workshops and digital flyers providing information on maintaining defensible space, home retrofits, and other practices for reducing fire risk.

Program UU Collaborate with the Fire Department to encourage property owners in VHFHSZs to participate in the Fire Department's defensible space and home hardening inspection program to identify wildfire risks. Provide homeowners and participants with information on building retrofits to address safety issues identified during inspection.

Program VV Collaborate with the County of Monterey and neighboring jurisdictions to apply for funding to establish a home hardening assistance program to provide subsidies or low/no-interest loans for low- and moderate-income households to help cover home hardening retrofit costs.

Program WW ~~Continue to inspect all occupancies annually, except one- and two-family dwellings~~Work with the Fire District to enforce all existing codes and ordinances regarding fire protection, building inspection, and vegetation management.

POLICY 30 ~~**POLICY 19 –**~~**Maintain an ongoing comprehensive hazard abatement program that requires property owners to remove fire hazards, including vegetation, hazardous structures and materials, and debris~~**, as directed by the Fire Department**~~**, pursuant to State and local requirements.**

Program XX Require all properties in the FHSZs to implement precautionary measures to create defensible space in compliance with regulations set forth in Senate Bill 63 and Assembly Bill 3074.

Program YY Require public properties in MFHSZs, HFHSZs, and VHFHSZs and private properties in VHFHSZs maintain fuel breaks around structures by removing brush and flammable vegetation located within 100 feet of the property, maintain a five-foot ember resistant zone around structures, continuing annual brush inspections, maintaining any tree adjacent to or overhanging any building free of dead or dying wood, and maintaining rooves free of leaves, needles, or other dead vegetation growth.

POLICY 31 **Require new and expanded development in the wildland urban interface and High and Very High Fire Hazard Severity Zones incorporate fire-resilient design, defensible space and vegetation management practices, and adequate emergency and evacuation capacity.**

Program ZZ Require all new developments to have adequate water supply to meet fire suppression needs and comply with applicable fire flow requirements.

Program AAA Require that all homes have visible street addresses and signage and impose parking limitations to ensure that access roads are not blocked by parked vehicles.

Program BBB Construct additional points of ingress and egress in single access neighborhoods and CAL FIRE subdivisions whenever feasible, especially those located in VHFHSZs in the southern part of the city and modify evacuation routes to minimize or avoid increasing evacuation times or emergency access response times in these neighborhoods.

POLICY 32 **Following any future fires, reevaluate fire prevention policies and regulations on redevelopment.**

Program CCC Require visible home and street addressing signage in fire hazard severity zones to aid in emergency response.

Program DDD Establish minimum standards for evacuation and emergency vehicle access to and from the new or planned development in HFHSZs and VHFHSZs, including regulations for weight and vertical clearance, dead-end, one-way, and single-lane conditions.

Program EEE Ensure that, after a large fire, redevelopment of damaged property complies with the requirements of construction in the VHFHSZs and includes adequate provisions for emergency access, vegetation management, and firefighting, in compliance with California Fire Code. After a large fire, promptly evaluate whether existing VHFHSZ designations are adequate.

POLICY 33 **Actively collaborate with regional, State and federal fire agencies to coordinate and implement wildfire mitigation measures and fuel load modifications reduction zones, including load clearing, prescribed burns, fire breaks, livestock grazing, and public and private road clearance and other mitigation activities for areas proximal to the city.**

Program FFF Encourage residents to partake in water conservation efforts and leak-reporting by promoting California American Water (Cal-Am) and the Monterey Peninsula Water Management District water waste and leak reporting program and other water-saving resources.

Program GGG Coordinate with Pacific Gas and Electric Company to explore feasibility of the electrical undergrounding of utility lines with a focus on critical evacuation roadways and areas with highest wildfire risk.

Program HHH Establish and maintain community fuel breaks and fuel modification/reduction zones, including public and private road clearance in neighborhoods located in the WUI and VHFHSZs, especially in the southern portion of the city.

Special conditions may apply in natural areas or where endangered species occur.

Program III Continue to enforce the ~~current~~ annual weed abatement program, defensible space and vertical clearance standards for vegetation.

Program JJJ Require fuel modification plans for all new subdivisions in VHFHSZs.

Program KKK Continue and improve current fire prevention practices, including the current annual city fuel reduction program, in close cooperation with the ~~City Forester~~Public Works Forestry Division.

Program LLL Partner with the Monterey Fire Department to ~~Incorporate a~~update and maintain ~~fire safety component in~~ the ~~forestry management plan~~Community Wildfire Prevention Plan (CWPP) ~~which takes into consideration the preservation of natural forest characteristics~~to incorporate updated data on wildfire hazards and include appropriate fire hazard reduction projects in the city.

Program MMM Establish fire-safe landscaping requirements standards to increase wildfire resistance for landscaping.

Program NNN Develop a list of approved fire-safe plants that can be used in landscaping in the wildland urban interface, High and Very High Fire Hazard Severity Zones.

Program OOO Publish guidelines for strategic placement of fire-safe plants and vegetation maintenance to minimize fire risk.

~~Program PPP Require businesses that manufacture, store, use, or transport significant quantities of hazardous and toxic materials to annually identify such materials and their quantities and to notify the Fire Department of any changes in such materials or activities.~~

~~Program QQQ Maintain a current inventory of hazardous and toxic materials by location, for use by the Fire Department and the Community Development Department.~~

Program RRR Provide public education programs to enhance public awareness of fire safety, including the storage of flammable materials, use of fire-retardant building materials, and vegetation management in the perimeter of structures.~~Continue all existing health, safety, and education programs.~~

POLICY 34 **~~Endeavor to achieve and m~~Maintain an overall fire ~~insurance (~~ISO~~)~~ rating of ~~3~~ 2 or better.**

Program SSS Monitor fire and emergency response times, staffing levels, facilities, and equipment.

POLICY 35 **Maintain an average response time of three minutes or less for Priority 1 (emergency) calls.**

~~**POLICY 36 Program Z Work with the 911 reporting system to shorten response time.**~~

POLICY 37 **Maintain a high level of fire apparatus performance.**

Program TTT ~~Program AA Include~~ Identify and replace~~ment of~~ment aging or insufficient fire apparatus in the City's Capital Improvements Program (CIP).

Program UUU Identify alternative water sources for firefighting purposes for use during a disaster scenario.

~~**Program VVV** Program **BB** Remove fire hydrants from Mermaid Avenue.~~

~~The street is too narrow, and there is inadequate flow from the hydrants.~~

~~**POLICY 38 Maintain and enhance the current level of emergency medical service to the community.**~~

~~Program WWW Program CC Maintain all line, full-time fire personnel as certified Emergency Medical/ Defibrillator Technicians (EMT-D).~~

~~Program XXX Program DD Conduct a service level/cost-analysis study to determine if an increase in Fire Department personnel's current level of training would improve current emergency medical services. Implement findings as appropriate.~~

~~**POLICY 39 Ensure that training programs sensitize emergency personnel to the special needs of persons with disabilities.**~~

10.12 POLICE

The Pacific Grove Police Department is located at 580 Pine Avenue, adjacent to City Hall and the Fire Department. The police facility includes a booking room, an interviewing room, and three short-term holding cells.

As of ~~1994~~2025, the department has 22 officers and ten support professionals ~~37 full-time and 11 part-time staff~~. Police are dispatched through the Monterey County Communications ~~Center~~ Department in Monterey~~., although City patrol units maintain radio contact with the Pacific Grove Police Department for warrant checks and teletype information~~. In 2024, a total of 1,584 crimes were reported in Pacific Grove.

~~Total criminal offenses reported in Pacific Grove declined from 967 in 1992 to 921 in 1993, a decrease of 5 percent. For the same period, crimes against people increased 14.6 percent, from 121 in 1992 to 140 in 1993. Crimes against property increased from 635 reports in 1992 to 654 in 1993. Citations for moving violations increased 14.2 percent, from 3,004 in 1992 to 3,498 in 1993. Parking citations decreased, from 20,763 in 1992 to 13,836 in 1993, a drop of 33.37 percent.~~

~~Response times for the Police Department are categorized according to the severity of the reported offense or complaint. During the period between 1990 and 1993, the department responded to calls in an average of between two and five minutes.~~



Patrolling the Monterey Peninsula Recreation Trail

POLICE RESPONSE GOALS, POLICIES, AND PROGRAMS

GOAL 8~~6~~ Prevent crime and promote the protection of people and property.

POLICY 40 **Maintain an adequate level of police equipment and personnel consistent with city growth and development.**

POLICY 41 **Provide minimum response time for Priority 1 (emergency) calls.**

Program YYY Work with Monterey County Emergency Communications 911 Dispatch Services to shorten response time~~s~~.

POLICY 42 **Encourage the use of private patrols and security personnel in large residential and commercial developments to supplement police services.**

Program ZZZ Monitor response times and report annually on the results of the monitoring.

Program AAAA Continue to provide neighborhood security and crime prevention information and training to neighborhood groups and homeowners associations.

Program BBBB Develop a community safety program that addresses youth and gangs.

The police department maintains several community relations programs: McGruff for crime prevention, Neighborhood Watch for crime suppression, Citizens Police Academy classes, local citizen 'Ride-Along' Program, and ~~DARE (~~Drug ~~Awareness~~ Abuse ~~Response~~ Resistance ~~in~~ Education ~~)~~(DARE) Program.

10.13 NOISE

Pacific Grove has a number of potentially significant noise sources. They include traffic on Highway 68 and major city streets, construction noise, and operations at the Monterey Peninsula Airport~~, and one identified stationary noise source (the Mission Linen Service Plant).~~

10.13.1 ~~Highway~~ Traffic Noise

Existing ~~N~~noise exposure contours for major sources of traffic noise within the city are shown in Figure 10-15. The 60, 65, and 70 dBA noise contours are used to illustrate areas affected by traffic noise. ~~The Ldn contours generally are based on annual average conditions and are not intended to be site-specific. Since the calculations did not take into account the shielding provided by local buildings or topographic features, the distances shown on Figure 10-15 should be considered worst-case estimates of noise exposure along roadways in the community. (Noise exposure behind the first row of buildings along a roadway will typically be reduced between 5 and 15 dB.)~~ Portions of properties along the section of Highway 68/Forest Avenue, south of David Avenue, are exposed to the highest existing and projected traffic noise levels in the city (Figure 10-16). Properties along the remaining northern portion of Forest Avenue, and the portions of Lighthouse Avenue and Central Avenue east of Forest Avenue also have higher levels of traffic noise exposure (Figure 10-17). Parcels along these arterial roads, as well as along Sunset drive are exposed to traffic noise at the 70 dBA level.

10.13.2 Aircraft Noise

Aircraft arriving and leaving the Monterey Regional~~Peninsula~~ Airport, located approximately 3.5 miles to the east of Pacific Grove, generate some noise in Pacific Grove when aircraft approach to land along the flight path and take off from the airport. The ALUCP calculated noise contours for the Monterey Regional Airport using 2013 data and a 20-year modeling forecast. The noise contours are in Community Noise Equivalent Level (CNEL); an average decibel over a 24-hour period which weighs the data to account for increased sensitivity to noise at night. Airport noise standards are established by the State under Title 21, Section 5000 et seq, which states that the maximum noise levels for persons living near airports shall be less than 65 CNEL. ~~Measurements were last conducted in Pacific Grove near the vicinity of Sinex and Carmel Avenues in October 1987. This data indicated that maximum noise levels from individual arriving aircraft following the Instrument Landing System (ILS) for Runway 10 ranged from approximately 60-70 dBA for light propeller aircraft to approximately 65-80 dBA for commuter and jet aircraft. Departing aircraft turning north over the bay produced maximum noise levels from 62 dBA for a twin engine commuter aircraft (Swearingen Metroliner) to 75 dBA for a B727. According to airport management, overflights of Pacific Grove by arriving aircraft occur most frequently during the summer months, especially during the morning.~~ The ALUCP updated noise contour forecasts for increased use of the Monterey Regional Airport, however, the 75 CNEL contour continues to encompass only Airport property, and the 65 and 70 CNEL noise exposure contours extends off Airport property approximately 500 feet to the northwest and approximately 400 feet southeast. Based on noise contours prepared by the airport, shown in Figure 10-15, annual average noise exposure ~~is~~ remains less than 60~~dB~~ CNEL within Pacific Grove for existing airport operations. The ALUCP regulates land use compatibility based on noise level exposure for areas exposed to 65 CNEL and higher, which does not include any land within Pacific Grove. Additionally, the Airport has an adopted Noise Abatement Program in order to minimize airport noise to surrounding communities. Therefore, noise from the Monterey Regional Airport is not a major issue in Pacific Grove. ~~Noise from helicopters is now minimized with the closing of Fort Ord.~~

10.13.3 Commercial, Industrial and ~~Other~~ Stationary Noise Sources

~~Only one stationary noise source has been identified within Pacific Grove: the Mission Linen Service Plant located in an unincorporated area at Sunset Drive and Congress Avenue. The plant normally operates between 7:30 a.m. and 4:00 p.m. Monday through Friday, and occasionally somewhat later than 4:00 p.m. and on Saturday. Major sources of noise associated with the plant are delivery trucks moving about the loading areas of the plant, and roof-mounted fans associated with lint collection equipment and dryers. Noise measurements conducted in October 1987 indicated that noise levels from the fans ranged from approximately 52-53 dBA along Congress Avenue to~~

~~approximately 57-59 dBA in front of multi-family residential uses across Sunset Drive from the plant. Noise levels 240 feet west of the plant were approximately 56 dBA. Based on the above-described hours of operation and noise level measurements, noise exposure exceeding 60 dB Ldn from this operation does not affect existing noise-sensitive land uses. The Police Department and Monterey County Sheriff have no records of any noise complaints from this source since the date of the 1987 noise survey. Periodic use of the fog horn at Point Pinos may create unavoidable noise. The U.S. Coast Guard has deflected much of the sound seaward through the use of baffles.~~Pacific Grove has very little land available for industrial uses, and no sources of significant stationary noise. Some periodic noise is generated from construction activities, which are regulated by the City's Noise ordinance which limits noise-generating construction activities to the hours of 8:00 a.m. to 6:00 p.m.~~,~~ Monday through Saturday, and 10:00 a.m. to 5:00 p.m. on Sunday. Noise-generating commercial uses and events involving amplified noise such as restaurants with specialty uses, bars, pubs, wine tasting, catering services and events, may occur periodically. For such uses, amplified and unamplified music and entertainment is subject to the regulations and time restrictions of Title 23 of the Pacific Grove Municipal Code.

10.13.4 1994 Community Noise Survey

A community noise survey was conducted in 1994 as part of the Safety Element update to document noise exposure in areas of the community containing noise-sensitive land uses: all residential uses, schools, and long-term care medical facilities (such as hospitals and nursing homes). The community noise survey results indicate that noise levels within the city of Pacific Grove are generally typical of a quiet sub–urban community with estimated L_{dn} values ranging from 39-61 dB. Maximum noise levels are generally caused by local traffic or intermittent aircraft overflights.

-

Figure 10-15 ~~1992 and 2012~~ 2025 and 2031 Traffic Noise Contours




Ocean View Blvd
Del Monte Blvd
68
Lighthouse Ave
Asilomar Blvd
17 Mile Dr
Dennett St
Sunset Dr
Central Ave
Pine Ave
Congress Ave
Sinex Ave
Eardley Ave
Forest Ave
David Ave
Pine St
Prescott Ave
Veterans Dr
Skyline Dr
City Limits
2031 with Project Noise Contours (Ldn)
60 dBA
65 dBA
70 dBA
0
1,000
2,000
Feet
N
Imagery provided by Microsoft Bing and its licensors © 2025.

Figure 10-16 Traffic Noise Contours Highway 68/ Forest Avenue

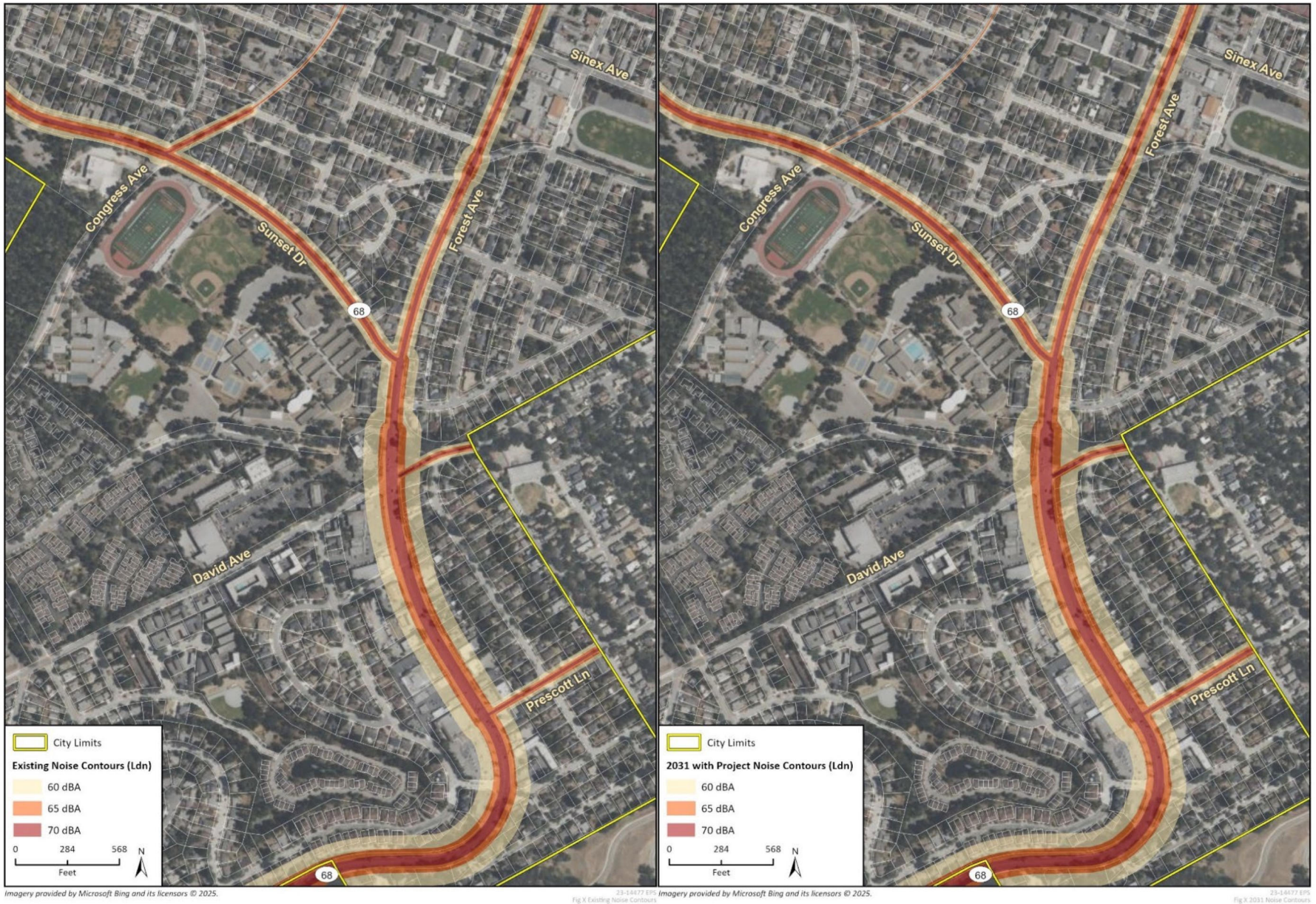


Figure 10-17 Traffic Noise Contours Lighthouse Avenue



NOISE GOALS, POLICIES, AND PROGRAMS

GOAL 7~~9~~ **Protect Pacific Grove residents from the harmful effects of excessive noise.**

POLICY 43 **Review possible noise-producing uses and mitigate, as necessary.**

POLICY 44 **Prevent encroachment of ~~noise-sensitive land uses on existing~~ industrial facilities or other stationary noise sources near noise-sensitive land uses.**

POLICY 45 **Prevent the expansion or intensification of existing noise-producing commercial/utility uses on adjacent residential properties.**

Recommended allowable noise exposures for noise-sensitive land uses are shown in Table 118.

Program CCCC Require that new noise-sensitive uses in proximity to existing noise sources include receiver-based mitigation measures.

Program DDDD Prevent new noise-sensitive land uses from locating in areas exposed to existing or projected future levels of noise from transportation noise sources that exceed 60 dB Ldn/CNEL (70 dB Ldn/CNEL in playgrounds and parks) unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas and interior spaces to the levels specified in Table 118.

Program EEEE Mitigate any noise created by new transportation and roadway improvement projects so that they will not exceed the levels specified in Table 1 within the outdoor activity areas and interior spaces of existing noise-sensitive land uses.

Program FFFF Mitigate any noise created by new proposed stationary noise sources so that they will not exceed the noise level standards of Table 2 on lands designated for noise-sensitive uses.

This program does not apply to noise levels associated with agricultural operations on land designated or zoned for industrial uses.

Program GGGG Review proposed noise-producing commercial uses in residential areas through the use permit process and mitigate potential noise impacts.

Program HHHH Enforce the most current sections of the California Vehicle Code relating to adequate vehicle mufflers and modified exhaust systems.

Program IIII Purchase only equipment and vehicles that comply with noise level standards consistent with the best available noise control technology.

Program JJJJ Review and modify as necessary the City's noise ordinance.

The ordinance should (1) employ guidelines of the ~~California Office of Noise Control~~California Health and Safety Code; (2) be designed to protect persons from excessive levels of noise that interfere with sleep, communication, relaxation, health, or legally permitted use of property, whether such noise is from existing or future sources; (3) make it unlawful to create noise that exceeds the standards of Table 118, as measured at the exterior of noise--sensitive land uses; (4) contain maximum allowable levels of interior noise created by exterior sources; (5) provide for exemptions or modifications to noise requirements for construction activities, school functions, property maintenance, heating and cooling equipment, utility facilities, waste collection, and other sources; and (6) establish responsibilities and procedures for noise measurements, enforcement, abatement, and variances.

Program KKKK Continue to enforce existing ordinances relating to inappropriate and unnecessary noise.

Table 1~~8~~ Recommended Allowable Noise Exposure

Transportation Noise Services	Outdoor Activity Areas[1]	Interior Spaces	
Land Use	**L_{dn}/CNEL, dB**	**L_{dn}/CNEL, dB**	**L_{eq}, dB[2]**
Residential	60[3]	45	–
Transient Lodging	60[3]	45	–
Hospitals, Nursing Homes	60[3]	45	–
Theatres, Auditoriums, Music Halls	–	–	35
Churches, Meeting Halls	60[3]	–	40
Office Buildings	60[3]	–	45
Schools, Libraries, Museums	–	–	45
Playgrounds, Neighborhood Parks	70	–	–

[1] Where the location of outdoor activity areas is unknown, the exterior noise level standard is applied to the property line of the receiving land use.

[2] As determined for a typical worst-case hour during periods of use.

[3] Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed, provided that available exterior noise level reduction measures have been implemented and interior noise levels comply with this table.

Source: Brown-Buntin Associates, Inc.

Table 2 Maximum Allowable Noise Exposure, Stationary Noise Sources*

	Daytime	Nighttime
	(7 a.m. to 10 p.m.)	**(10 p.m. to 7 a.m.)**
Hourly L_{eq}, dB	50	45
Maximum level, dB	70	65

**As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.*

Source: Brown-Buntin Associates, Inc.

10.14 EMERGENCY RESPONSE

The most up to date 2022 County of Monterey Multi-Jurisdictional Hazard Mitigation Plan, which includes a jurisdictional specific, Annex I for the City of Pacific Grove, was developed in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) and followed FEMA's LHMP guidance. The LHMP incorporates a process where hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions are developed to reduce or eliminate hazard risk. The implementation of these mitigation actions, which include both short and long-term strategies, involve planning, policy changes, programs, projects, and other activities (https://www.countyofmonterey.gov/government/departments-a-h/department-of-emergency-management/hazard-mitigation).

Pacific Grove ~~has a Multi-Hazard Emergency Plan which was revised and updated in January 1992~~ adopted the most up to date County of Monterey Multi-Jurisdictional Hazard Mitigation Plan. The plan for Pacific Grove covers a variety of hazards, vulnerabilities, and responses specific to the city, including earthquakes, coastal erosion and sea level rise, wildfire, drought and water shortage, storms and hazardous stormwater flooding, hazardous materials, cyber threats and terrorism incidents and ocean oil spills, tsunamis, transportation incidents including aircraft and highway accidents, and nuclear emergencies.

The plan provides overall organizational and operational concepts for responding to the various hazards in the area. This plan is to be used in conjunction with the City's Emergency ~~Operating~~ Operations Plan (EOP)~~Center Standard Operating Procedures and the City's Radio Amateur Civil Emergency Service Plan~~. The City's EOP works in conjunction with the Monterey County Emergency Operations Plan to establish emergency response and communication protocols in coordination with State and federal agencies and tribal partners

The City uses AlertMontereyCounty to communicate with residents in the event of an emergency. This system utilizes the Monterey County Emergency Communications 911 database to call and deliver a recorded message to landline phone numbers. Residents can also sign up to be alerted via mobile phone or email.

The City identified a potential temporary shelter location in the event of a disaster to serve as an evacuation collection point in its 2017 EOP. The Pacific Grove Community Center located at 515 Junipero Avenue is the designated Temporary Assistance Center in the event of an emergency to convene and distribute information. The City identified the Monterey Fairgrounds as the most likely location to be used for shelter in an emergency.

~~Evacuation routes are shown in . See Figure 10-3 for major sanitary sewer and storm drain collection systems. Figure 10-4 shows major water mains.~~



Victorian ladies flirting with danger, 1910

Source: The Pat Hathaway Collection

EMERGENCY RESPONSE GOALS, POLICIES, AND PROGRAMS

GOAL ~~2~~10 **Provide aid to the community as needed in the event of natural or man-made disasters.**

POLICY 46 **~~POLICY 6~~ Ensure that City emergency response procedures are adequate to deal with natural or man-made disasters in the community.**

Program LLLL Develop and implement public information programs concerning disaster response and emergency preparedness to encourage home retrofits and educate on current standards for structure hardening and defensible space standards.

POLICY 47 **~~Periodically~~ Participate in future updates and test the effec~~-~~tiveness of the ~~City's~~ Monterey County Multi-Jurisdictional Local Hazard Emergency Mitigation Plan.**

POLICY 48 **Ensure that individuals and agencies assigned emergency responsibilities under the most up to date Monterey County Multi-Jurisdictional Local Hazard Mitigation Plan~~Multi-Hazard Emergency Plan~~ prepare appropriate supporting plans and related standard operating procedures.**

POLICY 49 **Locate new critical facilities outside of high hazard areas, including in VHFHSZs, 100-year flood zones, and tsunami inundation zones. Maintain a level of preparedness adequate to implement all parts of the Multi-Hazard Emergency Plan.**

Program MMMM ~~Program D~~ Periodically review and update alerting procedures and resources lists.

POLICY 50 **Maintain and enhance the current level of emergency medical service to the community in coordination with Monterey County Emergency Medical Services Agency.**

Program NNNN Work with the Monterey County Emergency Communications (911) reporting system to shorten response time.

Program OOOO In coordination with Monterey Fire Department, maintain all line, full-time fire personnel as certified Emergency Medical/ Defibrillator Technicians (EMT-D).

POLICY 51 **Ensure that training programs sensitize emergency personnel to the special needs of persons with disabilities.**

10.15 EMERGENCY EVACUATION

To comply with AB 747 and AB 1407 (Government Code Section 65302(g)), the Safety Element includes a residential emergency evacuation analysis, included as Appendix B.

The City has identified primary and secondary evacuation routes and evacuation locations to guide residents out of an impacted area in a disaster or hazard event and provide shelter during an evacuation. The evacuation routes in the city identified in the regional plan are Highway 68 (primary evacuation route), Lighthouse Avenue, 17 Mile Drive, David Avenue, Forest Avenue Oak Street, and Hoffman Avenue (Figure 10-19). The most probable evacuation location identifies is the Monterey Fairgrounds.

An evacuation capacity analysis was prepared by Kimley-Horn to identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios (Appendix B) to comply with AB 747 and 1409 evacuation requirements. The evacuation capacity scenarios are intended to model a potential range of different evacuation scenarios, but not all possible scenarios. Emergency evacuations can occur due to any number of events and at any location, beyond those specifically identified in the appendix report. In addition, emergency movement is unpredictable, and the specific conditions of an emergency evacuation could result in evacuation behavior that diverges from the assumptions used in the analysis. This analysis serves only to represent informed estimates of likely potential evacuation scenario footprints and capacity constraints based on available data and does not guarantee that evacuations will follow modeling that is used for analysis purposes. Emergency evacuation assessment is an emerging field, and the legislative requirement does not specify a standard methodology to follow.

Pacific Grove faces topographical and geographical constraints that impact evacuation feasibility. There are dense forested areas and steeply graded slopes in the city resulting in narrow or curved roadways. Additionally, during a wildfire event, evacuation routes including Highway 68 in the southern portion of the city may become impassible. As evacuation routes exceed capacity, residents may take smaller local streets that are more difficult to navigate. The modeled evacuation scenario as part of the evacuation analysis identified that David Avenue and Forest Avenue leading to Lighthouse Avenue would exceed capacity limits and experience severe congestion (Figure 10-20).

In compliance with SB 99 (Government Code Section 65302), the City identified residential developments with less than two evacuation routes located within any hazard zone defined in this Safety Element (Figure 10-21). Residential properties with a single emergency access/evacuation route are located in the Del Monte Park, Glen, Seaview, and Country Club Gate/Forest Grove Neighborhoods. Some of these residences are located in HFHSZs and VHFHSZs (Figure 10-22). Limited access affects residents ability to evacuate efficiently under short notice emergency conditions such as a wildfire, and restricts access for emergency responders.

The evacuation capacity analysis informed the programs and policies to ensure adequate infrastructure and operations for emergency evacuation in the city.

EMERGENCY EVACUATION GOALS, POLICIES, AND PROGRAMS

GOAL 11	**Maintain safe and efficient emergency access, evacuation routes and locations.**
POLICY 52	**Improve emergency access and evacuation capacity for neighborhoods that have a single ingress/egress, prioritizing those in high risk hazard areas including HFHSZs and VHFHSZs.**
Program PPPP	Review the city's road network to identify roadway segments that may exceed capacity during an evacuation and identify opportunities to improve connectivity between neighborhoods for improved evacuation efficiency.
Program QQQQ	Coordinate with Monterey Fire Department and State Fire Marshall personnel to provide and maintain two points of emergency evacuation, as required by SB 99.
Program RRRR	Implement early evacuations under high-risk conditions for vulnerable communities and neighborhoods with limited egress routes, including single-access neighborhoods.

Program SSSS In coordination with the Monterey Fire Department and Pacific Grove Police Department, identify and publicize evacuation routes for individual neighborhoods and conduct annual evacuation trainings for residents, with specific emphasis on evacuation education for residents living in single-access neighborhoods and high risk hazard zones including HFHSZs and VHFHSZs, coastal hazard areas, and tsunami inundation zones to educate residents on their evacuation zone, nearby emergency shelters, and plan evacuation routes.

Program TTTT For neighborhoods in HFHSZ and VHFHSZs, and in wildland urban interface zones, increase evacuation capacity and efficiency.

Program UUUU Prioritize community engagement efforts and emergency preparedness trainings for single access neighborhoods.

POLICY 53 Ensure well-maintained evacuation routes that are clear of obstruction.

Program VVVV Establish traffic control points along designated evacuation routes with emergency management personnel to maintain a greater degree of evacuation management, ensure efficiency during an evacuation, reduce public confusion, and allow increased operational flexibility during an evacuation.

Program WWWW Work with the County and adjacent cities of Seaside and Monterey to coordinate evacuation efforts and traffic management.

Program XXXX Employ dynamic message signs and adaptive traffic signal control systems that respond to real-time traffic conditions, giving priority to evacuation traffic to enhance evacuation efficiency during emergencies.

POLICY 54 Coordinate with neighboring communities and emergency response personnel under mutual aid agreements to ensure well-maintained evacuation routes and plans are established prior to an evacuation event.

Program YYYY Work with the County and adjacent cities of Seaside and Monterey to coordinate evacuation efforts and traffic management.

Program ZZZZ Coordinate with adjacent cities and Monterey County to synchronize evacuation efforts and planning, and to implement improvements to evacuation capacity.

Program AAAAA Coordinate with Monterey-Salinas Transit and other service providers to ensure evacuation options for residents without vehicles.

Program BBBBB Maintain mutual aid agreements and support communications links with surrounding jurisdictions for assistance during emergencies.

POLICY 55 Maintain and update the City's Evacuation Plan, in conjunction with the Emergency Operations Plan updates.

Program CCCCC Establish minimum standards for evacuation in the City's Emergency Operations Plan. Alongside updates to the Emergency Operations Plan, reassess access evacuation route capacity throughout the city and identify and implement necessary roadway improvements to address evacuation constraints plans in place if needed.

Program DDDDD In coordination with the Monterey Fire Department and Pacific Grove Police Department, identify and publicize evacuation routes for individual neighborhoods and conduct annual evacuation trainings for residents, with specific emphasis on evacuation education for residents living in single-access neighborhoods and high risk hazard zones including HFHSZs and VHFHSZs, coastal hazard areas, and tsunami inundation zones to educate residents on their evacuation zone, nearby emergency shelters, and plan evacuation routes.

Program EEEEE Evaluate evacuation roadways to identify areas in need of maintenance or evacuation capacity improvements to accommodate emergency access and evacuation needs. Ensure road surfaces are resilient to all weather conditions including severe storms.

Program FFFFF Prioritize Capital Improvement Program (CIP) projects for evacuation capacity improvements based on feasibility and benefit.

Program GGGGG Require new development to provide adequate access (ingress, egress) and a minimum of two roadways with widths and lengths in compliance with California Building Code Chapter 7A requirements.

Program HHHHH Review County and State emergency response plans and procedures to ensure coordination with the City's ~~Multi- Hazard Emergency Plan~~Emergency Operations Plan as part of the periodic update of the City's plan.

Program IIIII ~~Program F Develop and implement public information programs concerning disaster response and emergency preparedness.~~Include provisions for vulnerable populations, seniors and persons with disabilities in emergency response plans.

~~Program JJJJJ Program I Identify alternative water sources for fire- fighting purposes for use during a disaster.~~

Program KKKKK ~~Program J D~~Ensure designated ~~and develop a command center~~Emergency Operations Center support facilities are prepared for use during emergencies.

~~Program LLLLL Program K Develop and maintain mutual aid agreements and support communications links with surrounding jurisdictions for assistance during emergencies.~~

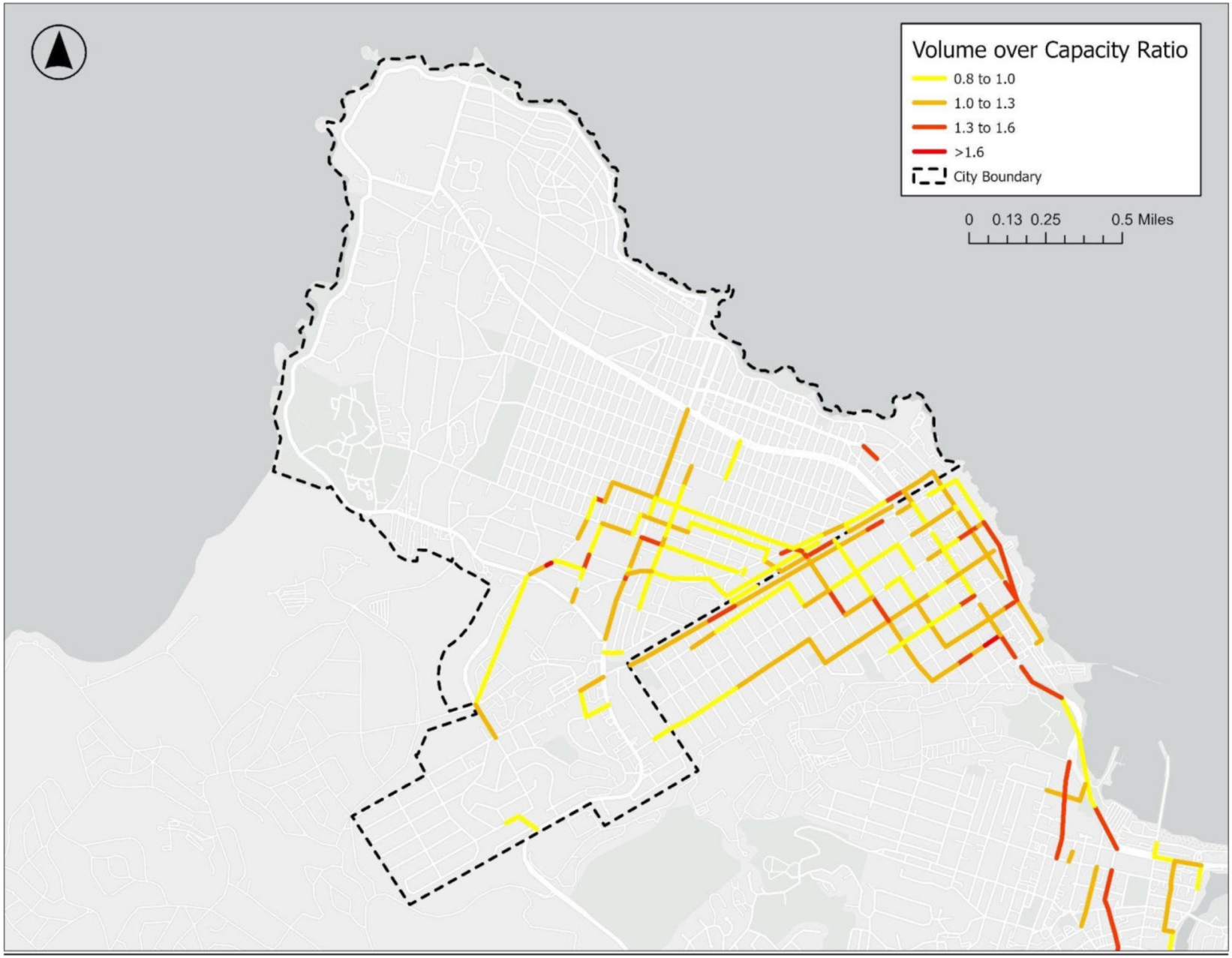
Figure 10- Major Sanitary Sewer and Storm Drain Collection Systems

X

Figure 10-19 Evacuation Routes

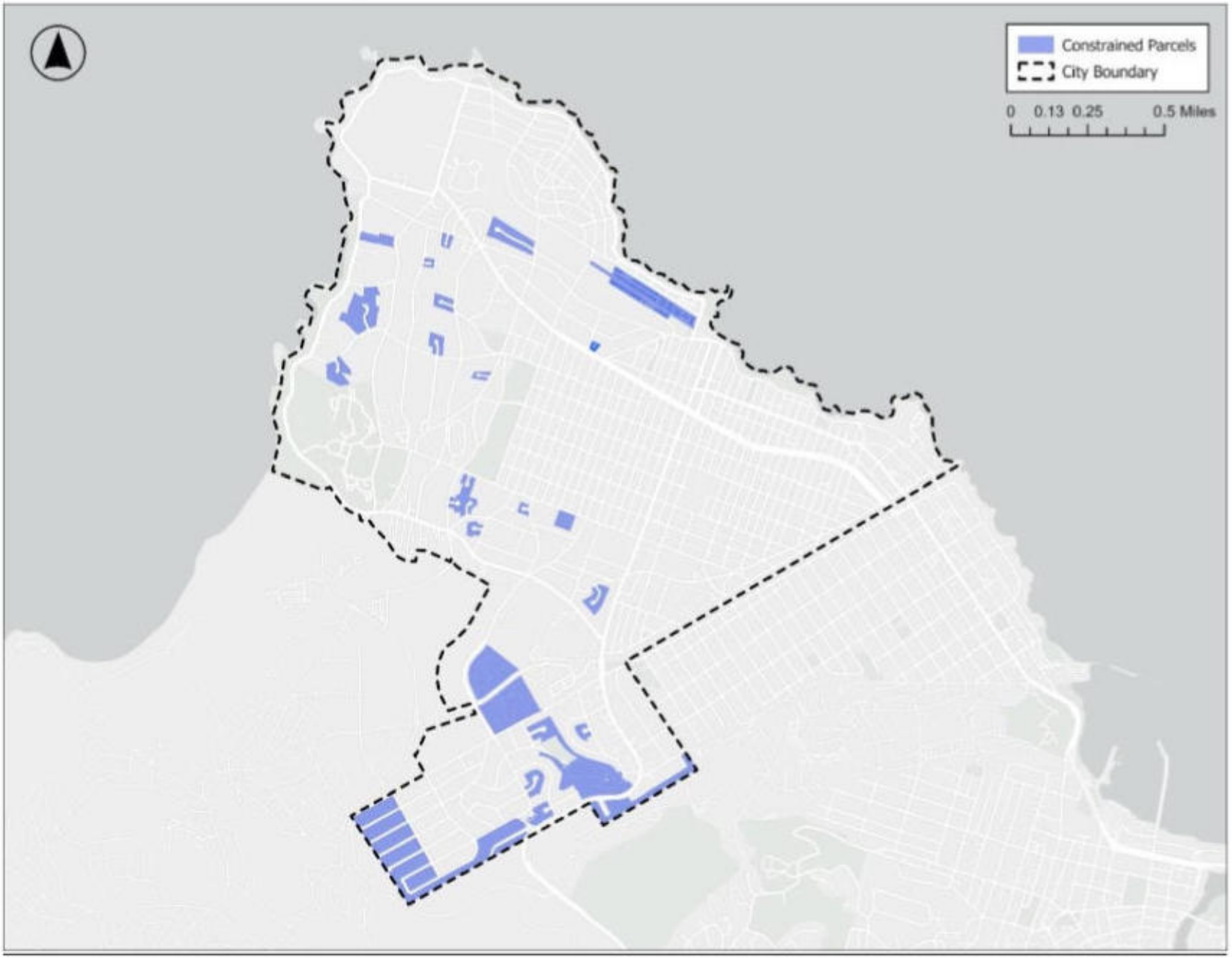


Figure 10-20 Evacuation Assessment Scenario Roadway Capacity



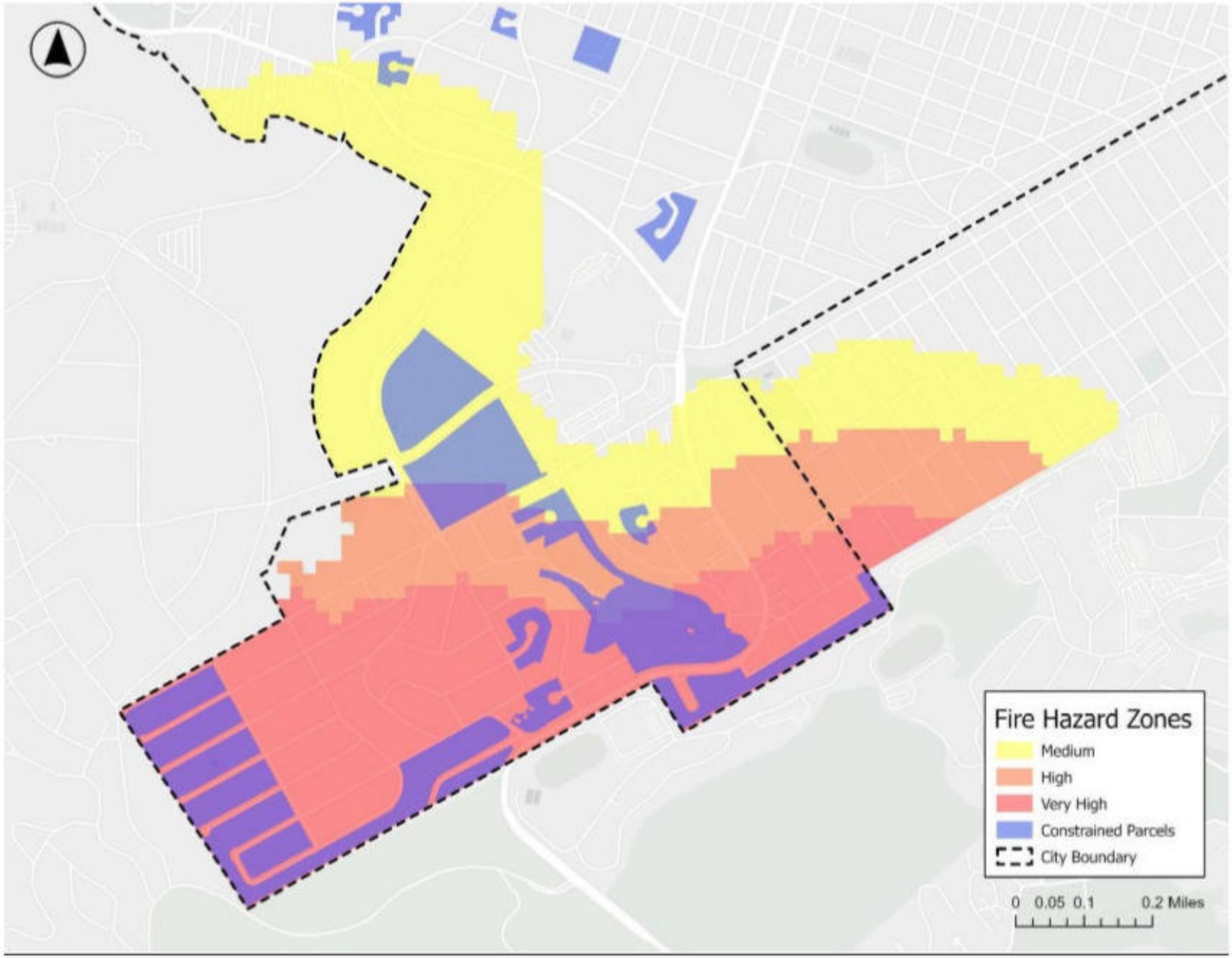
Source: City of Pacific Grove Evacuation Assessment, Kimley-Horn and Associates, 2025

Figure 10-21 Single Access Neighborhoods



Source: City of Pacific Grove Evacuation Assessment, Kimley-Horn and Associates, 2025

Figure 10-22 Single Access Neighborhoods in Fire Hazard Severity Zones



Source: City of Pacific Grove Evacuation Assessment, Kimley-Horn and Associates, 2025

~~**Figure 10-23 Major Water Mains**~~

~~X~~

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Appendix D

Buildout Assumptions Memorandum

Rincon Consultants, Inc.
80 Garden Court, Suite 240
Monterey, California 93940
831-333-0310

RINCON CONSULTANTS, INC. SINCE 1994

M E M O R A N D U M

Date:	December 13, 2024
To:	Karen Vaughn, AICP, City of Pacific Grove Community Development Director kvaughn@cityofpacificgrove.org
Via:	Email
From:	Kassandra Gale, Rincon Consultants, Inc. Project Manager kgale@rinconconsultants.com
Subject:	Pacific Grove Housing Element Update, Zoning Amendments, and General Plan Amendments Environmental Impact Report Buildout Potential
Project Number:	23-14477

Introduction

The purpose of this memorandum is to summarize the buildout scenario and the methods used to calculate residential and commercial buildout potential in Pacific Grove as part of the Housing Element Update, Zoning Amendments, and General Plan Amendments. Changes in assumptions in specific areas of the city are related to the rezoning (changing the zoning designation) and upzoning (increasing development capacity without changing the zoning designation) proposed by the Housing Element update (referred to herein as the "project"). Parcels proposed for rezoning will also have their General Plan land use designation updated to ensure consistency between the Zoning Ordinance and the General Plan. These rezoning and upzoning efforts are driven by the need to meet the City's future housing obligations under the California Department of Housing and Community Development's Regional Housing Needs Assessment. The buildout scenario presents the anticipated development, including the total increase in residential housing units and total square footage of commercial space. The results of the buildout analysis will be used in the General Plan Amendments Environmental Impact Report (EIR), which will evaluate the environmental impacts of the proposed rezoning and upzoning. The EIR will evaluate 15 additional sites zoned residential, commercial, and industrial as well as upzoning of the I zone for parcels outside of the Coastal Zone. These sites and upzoning of the I zone are not included in the Housing Element Update, Zoning Amendments, and General Plan Amendments.

Change in Development Capacity

The project buildout calculates changes in development capacity by comparing the existing number of housing units and commercial square footage to the potential number of housing units and commercial space that could be developed under the project. To determine the residential and commercial development capacity of the rezoned and upzoned parcels, the project buildout assumes that all parcels zoned for commercial and industrial uses would be developed as mixed-use sites; see *Residential Buildout Assumptions* and *Commercial Buildout Assumptions* below.

The following areas are proposed for upzoning or rezoning:

- **Commercial Downtown District:** All parcels within the City's Commercial Downtown District, which are zoned C-D, would be upzoned. The upzoning would increase the maximum residential density, which is currently based on the maximum density of the nearest General Plan residential land use, to 45 units per acre. No changes in General Plan land use designation are proposed in the Commercial Downtown District.
- **Forest Hill Commercial District:** All parcels within the City's Forest Hill Commercial District, which are zoned C-FH, would be upzoned. The upzoning would increase the maximum residential density, which is currently based on the maximum density of the nearest General Plan residential land use, to 45 units per acre. No changes in General Plan land use designation are proposed in the Forest Hill Commercial District.
- **Parcels zoned C-1 and C-2:** All parcels zoned C-1 and C-2 that are outside of the Coastal Zone would be upzoned. The upzoning would increase the allowable residential density on C-1 and C-2 zoned parcels by removing the requirement that maximum density is based on the maximum density of the nearest General Plan residential land use designation, up to 30 units per acre. As a result, the maximum density in the C-1 and C-2 zones would be 30 units per acre, regardless of the nearest residential land use designation. This includes commercial parcels in the Central-Eardley Commercial, Sunset Service Commercial, Neighborhood Commercial, and Presidio-Austin Commercial Districts. Parcels zoned C-1 and C-2 within the Coastal Zone would not be rezoned and the existing density would remain unchanged. This includes commercial parcels in the Central-Eardley Commercial, Sunset Service Commercial, and Visitor Commercial Districts. No changes in General Plan land use designation are proposed in any commercial districts.
- **Dennett Street, Sinex Avenue, and Grove Acre Neighborhood:** The residential area bounded by Dennett Street, Sinex Avenue, and Grove Acre Avenue would be rezoned. Currently, this neighborhood is zoned R-2-B-3, which would be rezoned to R-3. This neighborhood is also proposed to change the General Plan land use designation from Medium Density Residential 8.7 to High Density Residential 29.0. The maximum allowed density of this neighborhood would increase from 8.7 units per acre to 29.0 units per acre.
- **915 Sunset Drive (APN 7101007000):** The 5.76 acre parcel located at 915 Sunset Drive, Site 50 in the Housing Element Site Inventory, would be rezoned from R-2 to R-3. This neighborhood is also proposed to change the General Plan land use designation from Medium Density Residential 17.4 to High Density Residential 29.0. The maximum allowed density of this parcel would increase from 17.4 units per acre to 29.0 units per acre.

The following additional sites are included in the project buildout and will be analyzed under the EIR for upzoning, but are not included in the Housing Element Update, Zoning Amendments, and General Plan Amendments:

- **Parcels zoned I:** All parcels zoned I that are outside the Coastal Zone would be upzoned. The upzoning would increase the allowable residential density on I zoned parcels by removing the requirement that maximum density is based on the maximum density of the nearest General Plan residential land use designation, up to 30 units per acre. As a result, the maximum density on any parcel in the I zone would be 30 units per acre, regardless of the nearest residential land use designation. This includes the I zoned commercial parcels in the Sunset Service Commercial District. Sunset Service Commercial District sites within the Coastal Zone would not be upzoned and the existing maximum density would remain unchanged. No changes in General Plan land use designation would be necessary to upzone the I zone.

Residential Buildout Assumptions

The project buildout assumes that residential development on all commercial and residential parcels proposed for rezoning or upzoning would reach the maximum allowed residential density (100 percent of the maximum allowed residential capacity of each parcel). For commercial parcels, the buildout assumes development as mixed-use, combining both residential and commercial uses. Many of the commercial parcels proposed for upzoning are located in important commercial corridors, including Downtown and Central Eardley, where recent developments indicate a trend towards residential use although commercial activity is expected to remain prominent. Therefore, the assumption that these parcels would develop at 100 percent of the maximum residential capacity is a conservative estimate for the purposes of the EIR analysis.

Commercial Buildout Assumptions

The project buildout assumes commercial parcels proposed for upzoning will be developed as mixed-use sites, with 40 percent of the allowed Floor Area Ratio (FAR) allocated for commercial space. This assumption aligns with recent mixed-use development and historic growth trends in these areas. For example, two recent projects in the Commercial Downtown District, 520 Lighthouse Avenue and 301 Grand Avenue, developed at 39 percent and 40 percent of the maximum allowed FAR, respectively, with commercial uses on the ground floor and residential units above. Additionally, the Holman Building, a five-story mixed-use project in the same district, developed commercial uses at 20 percent of the maximum allowed FAR. These trends suggest that the 40 percent FAR assumption is appropriate for the purposes of the EIR analysis.

Although existing parcels are developed at lower commercial densities than 40 percent, market conditions, recent mixed-use projects, and a growing preference for incorporating both residential and commercial uses in key commercial areas suggest that future commercial developments will be denser. This assumption is particularly relevant for mixed-use districts like the Commercial Downtown District and Visitor Commercial District, where ground floor commercial uses are expected to remain prominent. The same logic applies to other commercial areas, such as the Forest Hill and Central-Eardley Commercial Districts, where commercial uses will likely occupy a significant portion of the parcel. For smaller commercial areas like the Sunset Service, Neighborhood, and Presidio-Austin Commercial Districts, the 40 percent FAR assumption is considered conservative, as commercial uses in these areas are likely to be smaller in scale and serve local needs rather than visitors or offices. These smaller areas generally have lower maximum FARs compared to the City's main commercial corridors.

The Commercial Downtown District has experienced most of the recent redevelopment activity in Pacific Grove. Properties in other commercial zones, including the Forest Hill and Central-Eardley Commercial districts, have not seen significant commercial redevelopment in recent years, with very few projects located in these districts being presented to the Planning Commission. The City conducted a market report in 2022 that observed lower vacancy rates and higher absorption rates in Downtown and slower absorption rates and higher vacancies outside of Downtown[1]. This analysis suggests lower redevelopment potential in these other commercial districts. An additional study on Pacific Grove's 2023/2024 Fiscal Year sales tax generated from targeted retail categories indicates that there is unmet demand in several categories, including family apparel, department stores, quick-service restaurants, and electronics stores[2]. This retail supply and demand gap suggests a high likelihood of development with a commercial or retail component in the Downtown and Central-Eardley Districts

[1] INSIGHT Market Analytics, HdL ECONSolutions, 11 October, 2023
[2] City of Pacific Grove Per Capita Sales Tax Surplus/Gap Comparison - Fiscal Year 2023-24, HdL ECONSolutions, 8 October, 2024

where retail is concentrated. In order to assume a realistic buildout scenario and not drastically overestimate the amount of redevelopment that would occur, the project buildout considers these market indicators as well as recent redevelopment trends in the different commercial zones in the city.

To reflect distinctions among the commercial zones, the project buildout assumes that each commercial zone would build out to varying degrees. The project buildout assumes 80 percent of parcels in the Commercial Downtown District, 50 percent in the Central-Eardley Commercial and Forest Hill Commercial Districts, and 30 percent in C-1 and C-2 Districts (outside of the Coastal Zone) are assumed to redevelop as a result of the project. This reflects lower demand and a decrease in economic activity in districts outside of the Downtown, along with increased development facilitated by other incentives through the implementation of the City's Housing Element programs.

No commercial component is assumed in the buildout analysis in residentially zoned areas, such as those between Dennett Street, Sinex Avenue, and Grove Acre Avenue.

Buildout Assumptions on Housing Opportunity Sites

Residential buildout for housing opportunity sites included in the Housing Element's Site Inventory is assumed to match the number of units specified in the Site Inventory. However, for housing opportunity sites with commercial zoning, the commercial buildout follows the same assumptions as other commercial parcels proposed for upzoning that are not included in the Site Inventory, which is set at 40 percent of the maximum allowed FAR.

Buildout Assumptions on Recently Redeveloped Sites

The project buildout assumed that recently redeveloped parcels would not be redeveloped within the project timeline, resulting in no change in the number of housing units or commercial square footage on these sites. These sites include developments at 520 Lighthouse Avenue, 301 Grand Avenue, and the Holman Building at 542 Lighthouse Avenue.

Buildout Assumptions on Additional Sites

The General Plan EIR analysis includes 15 vacant and underutilized sites throughout the city on parcels with residential, commercial, and industrial zoning that are not included in the Site Inventory. The project buildout assumes additional sites and upzoning of sites zoned I that are outside of the Coastal Zone follow the same assumptions as the residential and commercial parcels proposed for upzoning, which is set at 100 percent of the maximum allowed residential density and 40 percent of the maximum allowed FAR.

Buildout Methodology

To calculate the change in buildout potential, the project team compared the anticipated buildout on all parcels proposed for rezoning or upzoning to the existing development. Project buildout includes the number of residential units and, for parcels with commercial zoning, the amount of commercial square footage.

$$Change\ in\ Buildout\ Potential = Future\ Buildout - Existing\ Development$$

The existing buildout, including the number of existing dwelling units and commercial square footage for all parcels proposed for rezoning or upzoning, was identified using property data obtained from the County of Monterey Assessor's Office.

Future Buildout

Future buildout was determined by calculating the anticipated number of dwelling units and square footage of commercial development of each parcel included in the project. The anticipated number of dwelling units was calculated by multiplying the parcel size by 100 percent of the maximum allowed density of the parcel (maximum density is based on the parcel's proposed zoning and land use designation).

$$Anticipated\ Dwelling\ Units\ =\ Parcel\ Size\ \times\ Maximum\ Density\ \times\ 100\%$$

The anticipated commercial development on parcels with commercial zoning was calculated by multiplying the parcel's size by the maximum FAR allowed, based on the land use designation of the parcel. The total anticipated commercial square footage for each commercial district was multiplied by the percent of parcels anticipated to be redeveloped (80 percent in the Commercial Downtown District, 50 percent in the Forest Hill Commercial and Central-Eardley Commercial District, and 30 percent in C-1 and C-2 Districts outside the Coastal Zone) and the resulting Commercial District totals were added together to equal the total net increase in commercial square footage. The project buildout assumes that residentially zoned parcels would only be developed with residential uses.

$$Anticipated\ Commercial\ Square\ Footage\ Per\ Parcel\ =\ Parcel\ Size\ \times\ Maximum\ FAR\ \times\ 40\%$$

$$Net\ Increase\ Commercial\ Square\ Footage\ Per\ District\ =\ Change\ in\ Commercial\ Square\ Footage\ \times 80\%, 50\%, or\ 30\%$$

Table 1 Commercial Buildout Potential by District

Characteristic	Existing (square feet)	Calculated Change (square feet)	Buildout Potential Factor (square feet)	Net District Increase (square feet)
Commercial Downtown District	579,518	131,988	80%	105,590
Forest Hill Commercial District	309,531	202,275	50%	101,137
Central-Eardley Commercial District	29,734	17,002	50%	8,501
C-1 and C-2 Districts (outside of Coastal Zone)	43,478	180,536	30%	54,160
Industrial District/EIR Alternatives (outside of Coastal Zone)	26,412	77,297	30%	23,189
Total Commercial*	**988,673**	**609,097**		**292,578**

*Note: Due to rounding, the sum of individual components may not precisely equal the total.

Summary of Buildout Potential

The buildout analysis, as shown in Table 2 below, indicates that 2,335 net new housing units and 292,578 net additional square feet of commercial development could be built in the city as a result of the project. This is within the threshold of the estimated build out of the City's current General Plan, which assumes that the City could accommodate an additional 5,431 residential units and 1,000,000 square feet of commercial space.

Table 2 Buildout Potential Analyzed for the EIR

Characteristic	Existing	Anticipated Buildout Facilitated by Project	Net Increase (Project Minus Existing)
Housing	160 units	2,495 units	2,335 units
Commercial	988,673 square feet	1,281,251 square feet	292,578 square feet

Appendix E

Transportation Memorandum

Kimley»Horn

Memorandum

To: Limbach, Kayleigh

From: Kocatepe, Ayberk, PhD, PTP
Venter, Frederik, PE
Schmitt, Michael, AICP CTP, PTP, RSP2B
Cipinko, Asher

Subject: DRAFT: *City of Pacific Grove General Plan Housing Element*
Transportation Studies to Support CEQA Analysis

Date: April 23, 2025

This memorandum documents the California Environmental Quality Act (CEQA) transportation analysis completed for the City of Pacific Grove General Plan Housing Element ("proposed Project" or "Housing Element") located in Pacific Grove, California. Specifically, this memorandum evaluates how the Project might affect vehicle miles traveled (VMT), active transportation and transit (multimodal), hazards, and emergency access. The analyses were completed based on the following checklist items as identified in the 2024 CEQA Statute Guidelines Appendix G Section XVII:

1. **Multimodal**: Does the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
2. **Vehicle Miles Traveled (VMT)**: Does the project conflict or be inconsistent with CEQA Guidelines 15064.3, subdivision (b)?
3. **Hazards**: Does the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
4. **Emergency Access**: Does the project result in inadequate emergency access?

The proposed Project seeks to address the housing unit shortfall identified in the 6th Cycle Housing Element Regional Housing Needs Assessment (RHNA) by incorporating plans for new housing and commercial development. These land use adjustments will comply with the policies set forth in the City's existing General Plan and other adopted plans. **Table 1** below provides a summary of the land use changes within the proposed Project.

Table 1 – Project Land Use

Description	Housing Units Added	Employees Added
Housing Element	2,335	400

Vehicle Miles Traveled (VMT) Analysis

With the passage of SB 743 in 2013, and particularly since 2020 when Level of Service (LOS) was eliminated as a CEQA threshold for a significant transportation impact, vehicle miles traveled (VMT) has become an important indicator for determining if new development will result in a significant transportation impact. To determine whether there were significant impacts related to transportation, VMT from residential and employment-based land uses was analyzed as described in the methodology section below.

The most recent version of the Association of Monterey Bay Area Governments Regional Travel Demand Model (AMBAG RTDM), which was released in 2022[1], served as a tool for calculating VMT. The land uses were evaluated based on the following scenarios:

- Baseline – 2023 land use in the incorporated and unincorporated areas of the County
- 2031 No Project –2031 land uses in the incorporated and unincorporated areas based on the housing element (HE) update in the County, excluding the City of Pacific Grove
- 2031 With Project – 2031 land uses in the incorporated and unincorporated areas based on the housing element (HE) update in the County, including the City of Pacific Grove.

Methodology

The AMBAG RTDM has a base year of 2015 and a future year of 2045, however the baseline year for the proposed Project is 2023 and the horizon year is 2031. Additionally, the AMBAG model is calibrated to a tri-County area. To address the discrepancy in the baseline year and the horizon year, as well as conduct a more locally specific VMT analysis, Replica, a big data platform, was used to calculate the baseline VMT per capita and VMT per employee. The growth over time was obtained using the AMBAG RTDM by calculating the percent difference in VMT for each land use and applying that percentage as growth to the Replica baseline VMT.

Replica data is provided by Census Block Group rather than by Traffic analysis zone (TAZ). To account for this each TAZ was associated with a Block Group. The percent difference was calculated using a weighted average for population and employment within each Block Group. This percent difference was then applied to the Replica VMT per capita and VMT per employee for each Block Group to calculate VMT growth for the 2031 No Project and 2031 with Project scenario.

To obtain residential VMT, the production VMT for all Home-Based trip purposes was combined. VMT for non-residential land uses was computed from the attraction Home-Based Work VMT. As noted previously, Replica data was used to supplement the model. The employment land use VMT was calculated by dividing the number of trips by the share of each employment category. The share of employment was obtained from the model's underlying trip generation rates.

Replica data was also used in the calculation of external VMT. For residential land uses, calibrated trip distances from Replica were multiplied by the total internal-external (I-X) Home-Based trips for each TAZ. For non-residential uses, calibrated trip distances from Replica were multiplied by internal-external (I-X) Home-Based Work trips for each TAZ.

VMT per Capita and VMT per Employee was computed by dividing the residential and non-residential VMT by TAZ by the total population or total employees.

Model Inputs

Development projections for the Housing Element were sourced from the Client and City staff and required modifications to the AMBAG RTDM land use data. The resulting land use totals for the scenarios are summarized in Table 2 below.

- For the Environmental Impact Report (EIR) to mirror the city's actual conditions, the employment assumptions for the 2023 Baseline were adjusted based on Census, LEHD, and previous work in the region. However, the total employment growth (control total) between 2023 and 2045 was kept consistent.
- Employment growth between 2023 and 2045 was redistributed to the relevant County Traffic Analysis Zones (TAZs) to reflect land use and zoning changes that would be made for implementation of the 2031 Housing Element.

[1] The AMBAG RTDM was provided to Kimley-Horn by AMBAG staff in September 2022.

- The growth of housing units (i.e., The growth of households) in the City of Pacific Grove from 2023 to 2031 without the Project is 185 units.
- The AMBAG RTDM does not feature interim years such as the 2031 analysis year: the model includes a base year of 2015 and a horizon year of 2045. To develop land use inputs for the 2023 year, data from the Census, LEHD, and the County was used for demographics. For 2031 land use, values were interpolated based on the growth observed in the AMBAG RTDM.
- The 2031 No Project scenario includes projected land use changes for 2023-2031 in both other Cities in the AMBAG RTDM, and the unincorporated County, but Pacific Grove. The 2031 With Project scenario includes projected land use changes for 2023-2031 across the County, including 2,333 additional units and 400 employments located within the City of Pacific Grove.

Table 2 – Land Use Inputs

Scenario	Households (Pacific Grove)	Employment (Pacific Grove)	Households (Entire County)	Employment (Entire County)
2023 Baseline	7,267	9,615	132,414	212,118
2031 No Project	7,452	9,991	155,673	227,883
2031 With Project	9,787	10,391	158,008	228,283

The AMBAG RTDM adopted in 2022 provides land uses based on residential and employment classifications. Employment classifications are broken into eleven categories that group together various industries based on similar trip-making characteristics. Note that the eleven employment categories were an expansion compared to the previously adopted AMBAG model, which only contained six employment categories. Table 3 below shows the cross-reference between the North American Industry Classification System (NAICS) industries and AMBAG sectors.

Table 3 – AMBAG RTDM Employment Categories

Category	Description and NAICS codes
Agriculture (AGR)	Agriculture, Forestry, Fishing, and Hunting (11)*
Construction (TR_CON)	Construction (23), Utilities (22), Transportation and Warehousing (48-49), Administrative and Support and Waste Management and Remediation Services (56), Public Administration (92)*
Manufacturing and Mining (MFG)	Mining (21), Manufacturing (22, 31-33),
Wholesale (WHL)	Wholesale Trave (42), Agriculture, Forestry, Fishing, and Hunting (11)*
Retail (RET)	Retail Trade (44-45), Agriculture, Forestry, Fishing, and Hunting (11)*
Finance and Real Estate (FIRE)	Information (51), Finance and Insurance (52), Real Estate Rental and Leasing (53), Professional, Scientific, and Technical Services (54), Management of Companies and Enterprises (55)
Education (EDU)	Educational Services (61), Public Administration (92)*
Healthcare (HLT)	Health Care and Social Assistance (62)
Service (SER)	Art, Entertainment, and Recreation (71), Accommodation and Food Service (72), and Other Services (81)
Public (PUB)	Public Administration (92)*
Self	Self-Employed
*Note: Some NAICS industry sectors have been divided up, based on business operations and transportation demand, across AMBAG sectors.	

Roadway Network Assumptions

Kimley-Horn updated AMBAG RTDM's baseline and future year roadway network based on the current data available for the AMBAG area, including anticipated roadway network improvements from the Monterey County General Plan. Future roadway projects in Santa Cruz County and San Benito County were sourced from the AMBAG RTDM. The land use and roadway network modifications were based on the County and approved projects/developments.

VMT Thresholds of Significance

In January 2019, the California Natural Resources Agency finalized updates to the CEQA Guidelines including the incorporation of SB 743 modifications. The Guidelines' changes were approved by the Office of Administrative Law and are now in effect. Specific to SB 743, CEQA Guidelines Section 15064.3(c) states, "The provisions apply statewide as of July 1, 2020." To aid lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR), now referred to as the Office of Land Use and Climate Innovation (LUCI) produced a VMT Analysis Guidelines[2] document that included detailed guidance about the variety of implementation questions with respect to shifting to a VMT metric.

Analysis was performed for the proposed Project based on the OPR guidelines for the determination of VMT related impacts. The resulting VMT thresholds consider the VMT performance of residential and

[2] *Technical Advisory on Evaluating Transportation Impacts in CEQA.* Governor's Office of Planning and Research, State of California. December 2018.

non-residential components of a project separately, using the efficiency metrics of VMT per capita and VMT per employee, respectively. It should be noted that the County has not officially adopted thresholds. However, the thresholds presented here are based on OPR Guidance. Thresholds of significance are summarized below and in Table 4.

- *Residential* – 15% below baseline (existing) average VMT per capita
- *Employment-based land uses: office, service, professional services* – 15% below baseline (existing) average VMT per employee
- *Retail* – net change

The City's VMT thresholds were developed using trip data for Monterey County supplied by the Replica platform. The residential VMT for the City was computed by summing the trip distance for every production trip for all home-based trip purposes. The VMT for employee-based land uses for the City was computed by totaling the trip distances for every commute trip. The total residential and work VMT was divided by the total population or employees to determine the average VMT per capita and VMT per employee. The City's VMT thresholds were determined by setting them 15-percent lower than the baseline countywide average VMT per capita and VMT per employee

VMT Findings and Mitigation

Table 4 summarizes VMT results as compared to the thresholds. The thresholds were calculated to be 14.3 VMT per capita for residential uses and 18.9 VMT per employee for employment using the 15% below baseline guideline. The 2031 No Project scenario resulted in a VMT per capita of 15.1 and VMT per employee of 19.8. The 2031 Plus Project scenario resulted in a VMT per capita of 14.1 and VMT per employee of 18.6. VMT per capita value is reduced by 1.4 VMT per capita between the 2031 No Project and 2031 Plus Project scenarios for residential uses. Similarly, the VMT per employee value is reduced by 1.2 VMT per employee between the 2031 No Project and 2031 Plus Project scenarios for employment uses. The 2031 No Project scenario results in VMT per employee and per capita exceeding the thresholds, whereas the 2031 With Project scenario remains under the thresholds

Table 4 – Vehicle Miles Traveled (VMT) by Scenario

Jurisdiction	2031 No Project		2031 Plus Project	
	VMT/Capita	VMT/Employee	VMT/Capita	VMT/Employee
Countywide Average	**16.8**	**22.2**	**16.8**	**22.2**
Threshold	**14.3**	**18.9**	**14.3**	**18.9**
City of Pacific Grove	15.5	19.8	14.1	18.6
Percent of Threshold	108.3%	104.6%	98.5%	98.4%
Over Threshold?	**Yes**	**Yes**	**No**	**No**

Based on analysis displayed in Table 4 , the Project is determined to not have a significant transportation impact. Below are key technical and planning reasons why the Project results in less-than-significant VMT impacts:

Increase in Density Results in Shorter Travel Distances

- The Project concentrates housing growth within a walkable, transit-accessible city center, increasing the density of residents and employees.

- Denser development typically leads to shorter trip lengths, as people live closer to where they work, shop, or go to school.
- This effect is reflected in the model through lower average trip distances, which directly reduces per capita and per employee VMT.

Internal Trip Capture

- More housing in Pacific Grove means a larger share of people that work within the City can live within the city.
- Internal capture of trips (e.g., people living in Pacific Grove who also work or shop there) reduces external commute distances.
- The model accounts for this by tracking origin-destination flows between zones, and shifts more trips to shorter, local connections in the "Plus Project" scenario.

Efficiency-Based Metrics Favor Compact Growth

- VMT per capita and per employee are efficiency metrics rather than VMT totals.
- While the total number of trips increases with new development, the VMT per person goes down due to better accessibility and shorter travel distances.
- These metrics are specifically designed to evaluate development fairly under SB 743, recognizing that infill development is better for the environment as it reduces greenhouse gas emissions associated with the transportation sector.

Policies and Multimodal Analysis

The following plans, policies, performance metrics, and goals are considered important to considering whether the proposed action would result in a conflict as described in (a) of the 2024 CEQA Statute Guidelines Appendix G Section XVII.

1. City of Pacific Grove General Plan (1994):

   The City of Pacific Grove General Plan is a guide for future development and land use in Pacific Grove, California. It sets rules and goals to help make sure that growth is safe, protects the environment, and meets the needs of the community. The General Plan, specifically the Transportation Chapter, identifies the general location and extent of existing and proposed major transportation facilities for vehicle, rail, air, water, and bicycle transportation.

The policies relating to transportation are shown in ***The proposed*** Project supports these policies by creating opportunities for more affordable housing near transportation corridors and will not conflict with the planned improvements in the RTP.

> Table *5* *along with an explanation of whether the Project conflicts with or supports each policy. The General Plan includes a number of policies related to level of service (LOS). However, because LOS is no longer considered to be an impact under CEQA those goals and policies are included below but not considered as part of the transportation impacts analysis included here.*

2. Certified Local Coastal Program (2020)

   The Local Coastal Program (LCP) governs land use and development in the Pacific Grove Coastal Zone. The Land Use plan for the LCP preformed a transportation analysis including an assessment of Transit Service, Bicycle Facilities, Pedestrian Facilities and Parking to ensure growth will not adversely impact circulation in accordance with CEQA, while also satisfying goals within the City of Pacific Grove's General Plan. The LCP outlines policies INF-14 through 24 discussing expanding complete street corridors, traffic control plans for new development, increasing transit service,

designating continuous bike routes, and improve or relocate parking in close proximity to environmentally sensitive areas.

The proposed Project does not conflict with improvements or policies outlined in the LCP, and promotes density within close proximity to transit, multimodal transportation, and minimizing the impact of automobile travel on the existing circulation plan in Pacific Grove.

3. Forest Hill Specific Plan (1998)

   The Forest Hill Specific Plan supplements the General Plan and provides additional policy direction for the past development of the 15.6 acre commercial area. The area represented about one quarter of the commercial land area available in Pacific Grove at the time of its adoption. The plan proposed new pedestrian facilities, parking, and improvement projects on top of those outlined and documented in the General Plan.

   The proposed Project does not conflict with improvements outlined or fulfilled as a result of the Forest Hill Specific Plan, and expands upon the benefits discussed with expanded pedestrian facilities as a result of densification throughout the city within close proximity to multimodal roadways.

4. Active Transportation Plan for Monterey County (2018), TAMC

   The 2018 Transportation Agency for Monterey County Active Transportation Plan (ATP) is an update of the 2011 Bicycle and Pedestrian Master Plan, which identified all existing and proposed bicycle and pedestrian facilities in Monterey County. This ATP identifies remaining gaps in the bicycle and pedestrian network and opportunity areas for innovative bicycle facility design. The vision for the ATP is that active transportation will be an integral, convenient and safe part of daily life in all of Monterey County, including the City of Pacific Grove, for residents and visitors of all ages and abilities.

   100% of the proposed housing units are located within TAZs within a ½ mile vicinity of bicycle facilities in Pacific Grove, therefore the Project does not conflict with the ATP.

5. Active Transportation Plan for Caltrans District 5 (2021), Caltrans

   The District 5 Active Transportation Plan (Plan) advances the Vision Statement and Goals in Toward an Active California, the statewide bicycle and pedestrian plan, and is part of a comprehensive planning process to identify locations with walking and bicycling needs in each Caltrans district across California. The Plan includes a prioritized list of bicycle and pedestrian needs along and across the state highway system to help identify opportunities to incorporate bicycle, pedestrian, and transit improvements into projects. District 5 includes but is not limited to the Monterey County area, including Pacific Grove.

   100% of the proposed housing units are located within TAZs within a ½ mile vicinity of bicycle facilities in Pacific Grove, therefore the Project does not conflict with the ATP.

6. Monterey Bay Area Rail Network Integration Study (2021), TAMC

   This plan envisions an integrated train and bus network to support regional growth and support state and federal climate action and equity goals. The Initial Service scenario creates a regular passenger rail connection between the Monterey Bay Area and San Francisco Bay Area and lays the foundation for future expansion. The phased scenario includes increased passenger rail service and bus connections. The Vision Service scenario is a long-term vision for rail service in Monterey County.

100% of the proposed housing units are located within TAZs within a ½ mile vicinity of transit facilities in Pacific Grove, therefore the Project does not conflict with the Rail Network Integration Study..

7. Comprehensive Operational Analysis Final Network Plan (2022), MST

   Developed by MST, this plan includes a preferred scenario that increases service frequency as well as the number of people located near transit. This service scenario was based on extensive public outreach and direction from the Board of Directors to focus a little more on ridership, to prioritize the travel needs of low-income communities, and to shift more service to Salinas and regional routes.

   100% of the proposed housing units are located within TAZs within a ½ mile vicinity of transit facilities in Pacific Grove, therefore the Project does not conflict with the Comprehensive Operational Analysis Final Network Plan.

8. Transportation Agency for Monterey County Regional Transportation Plan (2022), TAMC

   The Regional Transportation Plan (RTP) for Monterey County is a 20-year plan that outlines how to address the county's transportation needs and includes transportation projects to meet those needs, including studying needs and existing conditions in the City of Pacific Grove. The following transportation policies are relevant to the proposed project.

   - Increase affordability, accessibility and safety between key origins and destinations in the region.
   - Reduce greenhouse gas emissions consistent with regional targets.

   The proposed Project supports these policies by creating opportunities for more affordable housing near transportation corridors and will not conflict with the planned improvements in the RTP.

9. Association of Monterey Bay Area Government Metropolitan Transportation Plan (2022), AMBAG

   AMBAG is the Metropolitan Planning Organization (MPO) for the Monterey Bay Area and prepares the Metropolitan Transportation Plan (MTP) which is a coordinated 20-year plan outlining transportation needs for San Benito, Santa Cruz and Monterey Counties, including the City of Pacific Grove in the Monterey Bay Peninsula.

   The proposed Project supports these policies by creating opportunities for more affordable housing near transportation corridors and will not conflict with the planned improvements in the RTP.

Table 5 – City of Pacific Grove General Plan (1994) Policies Relating to Project[3]

Policy	Analysis
Transportation, Goal 1: Create and maintain a road network that will provide for the safe and efficient movement of people and goods throughout the city consistent with the goals of the City and the protection of the environment.	Minimizing per capita VMT contributed from the Project below significance thresholds complies with environmental and efficiency goals outlined in section 4 of the General Plan. Incorporating multimodal corridors throughout the city covering 100% of Project TAZs provides alternative transportation methods in achieving efficient movement.
Transportation, Goal 2: Protect residential areas from high-volume, high-speed traffic and its impacts.	Reducing the contribution of the total volume of vehicle miles traveled from the Project to below the threshold of significant impact complies with

[3] *City of Pacific Grove General Plan, Chapter 4: Transportation*,1994

Policy	Analysis
	protecting residential areas from high-volume traffic, while densifying and improving multimodal transportation and alternative transportation options throughout the City of Pacific Grove.
Transportation, Policy 1: Adopt standards for street design and access that provide safe and efficient movement of goods and people consistent with environmental capacity.	See analysis under Goal 1.
Transportation, Policy 2: Strive to maintain a level of service no worse than C during peak periods on arterials and collector streets within the city. Accept level of service D during weekday peak-periods at intersections that in 1994 are close to or at the limits of LOS D on arterial routes outside the Downtown area.	LOS is no longer an impact under CEQA following the implementation of SB 743 and the adoption of VMT as the primary efficiency metric by which to analyze Projects.
Transportation, Goal 3: Communicate and cooperate with adjacent jurisdictions, the County, the State, and federal agencies concerning all transportation-related issues.	Compliance with State and County policies overlapping with the City of Pacific Grove outlined above fulfills Goal 3 and all related policy.
Transportation, Policy 4: Continue to participate in State, regional, and local transportation planning efforts to ensure coordination of the expansion and improvement of the region's transportation system.	The Housing Element is coordinated with state and regional partners and the City will continue to coordinate with partner agencies to meet its housing goals.
Transportation, Policy 6: Work with other cities, the County, and the State to improve safety, to ensure adequate overall traffic capacity, to reduce congestion, and to minimize the circuity and length of trips.	As the City approves specific developments and related transportation infrastructure it will continue to employ this policy. However, the proposed Project itself does not propose any new roadways or specific roadway improvements/changes.
Transportation, Goal 4 Limit the increase in auto use through Transportation System Management (TSM). Increase transit ridership, carpooling, vanpooling, walking, and bicycling.	Focusing densification and development 100% within TAZs within ½ mile of multimodal access and transit fulfills Goal 4.
Transportation, Policy 7: Limit the increase in Vehicle Miles Traveled (VMT) in accordance with Air Quality Management Plan goals.	See analysis for Goal 2.
Transportation, Policy 8: Maximize the efficiency of the street system through low-cost physical improvements.	See analysis for Goal 3 and outlined policy coordination above, aligning City infrastructure with Monterey County ATP and Caltrans District 5 ATP.
Transportation, Policy 9: Encourage visitor use of public transit, private tour buses, bicycling, or walking.	See analysis for Policy 8.
Transportation, Policy 10: Encourage design for new and expanded development that facilities access by transit, walking, bicycles, and carpools.	See analysis for Goal 4.
Transportation, Goal 6: Promote and maintain public and private rail and transit systems responsive to the needs of all Pacific Grove residents.	See analysis for Goal 3 and coordination outlined above with the Monterey Bay Area Rail Network Integration Study, MST Comprehensive Operational Analysis Final Network Plan, and TAMC RTP.
Transportation, Policy 21: Work to assure that Monterey-Salinas Transit (MST) bus service responds to local needs.	See analysis for Goal 6.
Transportation, Goal 7: Promote pedestrian and bicycle travel as alternative to automobile use.	See analysis for Goal 1.
Health and Safety, Goal 3: Promote attainment, and insofar as possible, improve air quality in Pacific Grove and the Monterey Bay area.	The Project promotes attainment and improvement of air quality in minimizing per capita VMT contributed to below significance thresholds, complying with environmental goals coincident with Goal 3. Incorporating multimodal corridors throughout the city covering 100% of Project TAZs

Policy	Analysis
	provides alternative, low impact transportation methods.
Health and Safety, Policy 12: Continue to support the efforts of the Transportation Agency for Monterey County to implement the Monterey County Congestion Management Plan.	See compliance with TAMC policies and effort outlined above.
Health and Safety, Program N: Ensure that new development, or major rehabilitation, redevelopment, or conversion, incorporates the infrastructure, facilities, and design standards necessary to encourage and accommodate public transportation, ridesharing, and non-automobile travel modes.	See compliance with Specific Plans and Policies described above.

As described, the City of Pacific Grove has plans and policies in place that encourage transit usage, the construction of safe and user-friendly active transportation facilities, and housing development within a half mile of transit stations throughout the City. These plans and policies encourage the development of a balanced transportation system that includes safe and convenient multimodal travel.

Figure 1 provides an overview map of the existing MST routes in Pacific Grove. MST is the public transportation system serving the City and the broader County of Monterey and provides fixed-route bus services and demand-responsive services throughout the County, including bus rapid transit. They provide regional routes with service to Santa Cruz County as well. Pacific Grove is serviced by MST routes 1 (Asilomar – Lovers Point Line) and 2 (Pacific Grove Line).

Other transit service available to the City includes Greyhound Bus Lines which provides inter-county service linking Pacific Grove and the broader Monterey County with adjacent counties as well as a regional vanpool service operated by the California Vanpool Authority which organizes both traditional vanpools and vanpools serving agricultural workers.

Bicycle and pedestrian facilities are integral components of the City of Pacific Grove's multimodal transportation system. The City has approximately 9 miles of existing maintained bikeways on state, county, and local roads, as well as proposed projects totaling 9.6 miles of new bikeways. The majority of bikeways in the City are Class II (bicycle lanes) and Class III (bicycle routes), however large Class I facilities exist along the City's southern coastline. Figure 3 illustrates existing and proposed bicycle facilities.

Multimodal Methodology

The impact of the proposed Project was assessed based on their proximity to transit facilities, bikeway and pedestrian facilities. This included a specific focus on changes within a half-mile radius, and bikeway and pedestrian connections to those sites. To conduct this evaluation, ½ mile buffer zones were created from transit station data obtained from Monterey Salinas Transit and bicycle facility data provided by the Monterey County Active Transportation Plan. The resulting buffer zones were then compared to the TAZs containing proposed updates in the Housing Element. The process for creating the buffers and completing the analysis is described in more detail below.

1) Setting Up the Network Dataset

To perform network analysis, a network dataset is required. The following steps outline the creation and setup:

- Create Network Dataset: Using GIS software, create a network dataset from the City's street and transit network data.
- Incorporate Data: Add the transit stop locations and routes, and bikeways into the network dataset.

- Configure Network Analyst: Set up the Network Analyst tool within the GIS software to recognize transit stops and routes.

2) Buffer Zone Creation

Buffer zones are created to represent areas within a specific distance from transit stations and bikeways. The following steps are performed:

- Define Buffer Distance: Establish a buffer distance of a half mile (0.5 miles) around each transit station.
- Generate Buffers: Create buffer zones around each transit station. This involves calculating the network distance and straight-line distance to account for actual travel paths.

3) Spatial Analysis

The proximity of the Proposed Project to transit stations is analyzed as follows:

- Overlay Analysis: Overlay the buffer zones with the proposed housing unit locations.
- Identify Impacted Units: Identify housing units that fall within the half-mile buffer zones around transit stations.
- Impact Assessment: Assess the impact of the proposed housing units based on their proximity to transit stations and bikeways. Units within the half-mile buffer zones are considered to have no impact on transit accessibility and bikeways.

Multimodal Assessment

Figure *2* provides a map of the transit overlay analysis. It was determined that 100% of the TAZs containing Project housing units would be within a half mile of the City's existing transit stops. Figure 3 provides maps of the bicycle overlay analysis. As shown, 99% of the proposed Project as identified in the Housing Element would be located within a half mile of bicycle facilities.

Developments that occur under the Housing Element are expected to comply with City design and guidelines to provide pedestrian access that ensures high connectivity. This includes the implementation of sidewalks, crosswalks, and other pedestrian-friendly infrastructure that links residential areas with activity centers, transit and other residential areas. The overlay analysis and the assessment of the proposed project demonstrate alignment with the City of Pacific Grove's goals and policies for pedestrian connectivity. The Buildout conditions align with the AMBAG MTP performance metrics by promoting development within a half mile of transit stations, thereby enhancing pedestrian access to transit.

Findings

Many new residents will have the option to take transit to work or non-work destinations as shown in Figure 3. Additionally, the proposed project is not expected to result in any adverse effects on any existing transit facilities. Furthermore, 99% of the proposed Project as part of the Housing Element would be located within a half-mile of bicycle facilities and have access to pedestrian facilities as shown in

Figure *2* and Figure 3. The proposed Project is not expected to result in any adverse effects on any existing bike or pedestrian facilities.

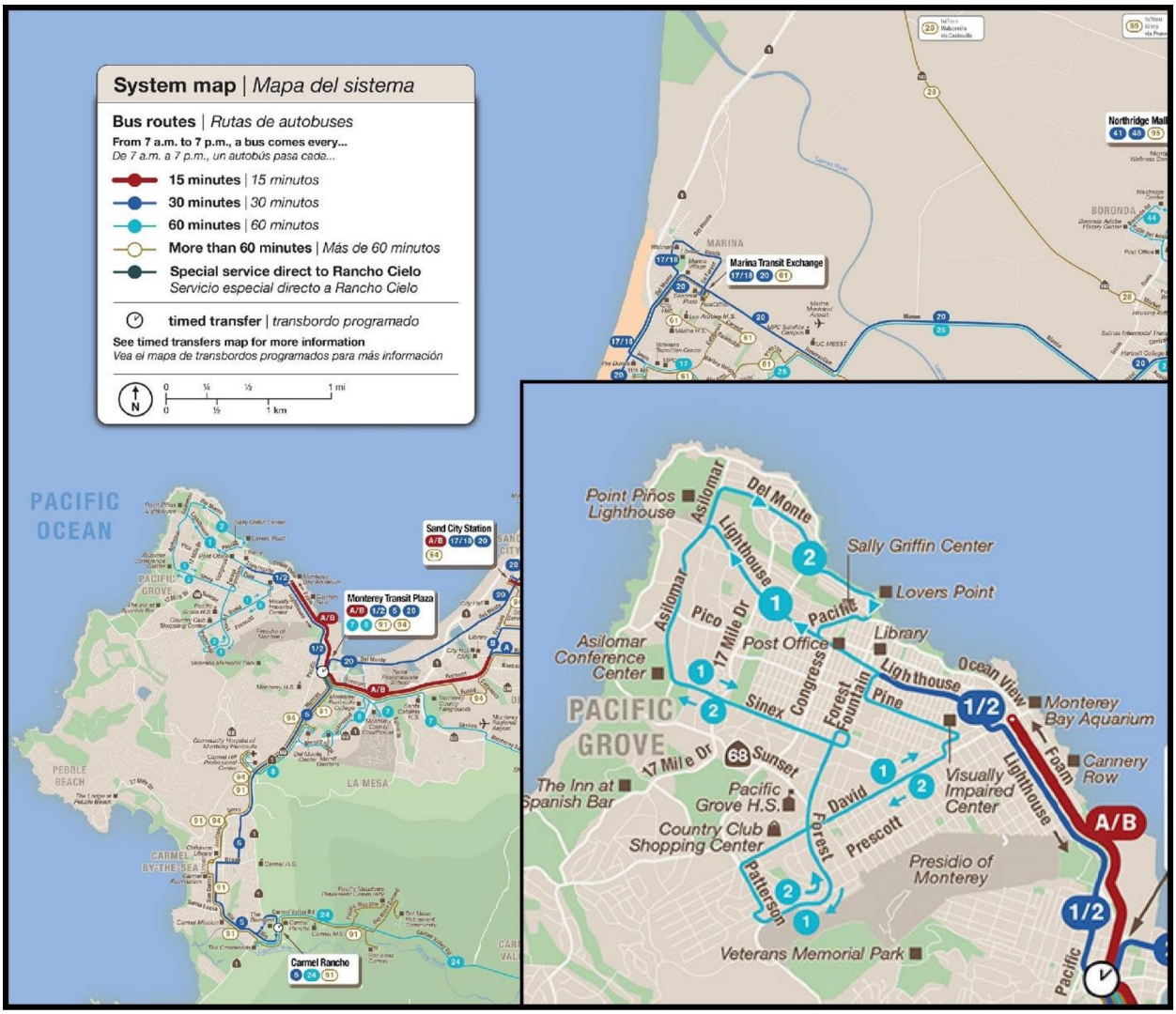
The assessment of buffer zones aligns with the City of Pacific Grove's goals and policies, ensuring high connectivity, providing access and mobility while maintaining quality of life, and promoting safe bicycle and pedestrian travel. Furthermore, it supports a balanced transportation system that encourages public transit use and meets the RTP goal for increasing affordability, accessibility, and safety.

As such, it was determined that the proposed Project would result in a less-than-significant multimodal impact and is in accordance with existing plans and policies.

Emergency Access

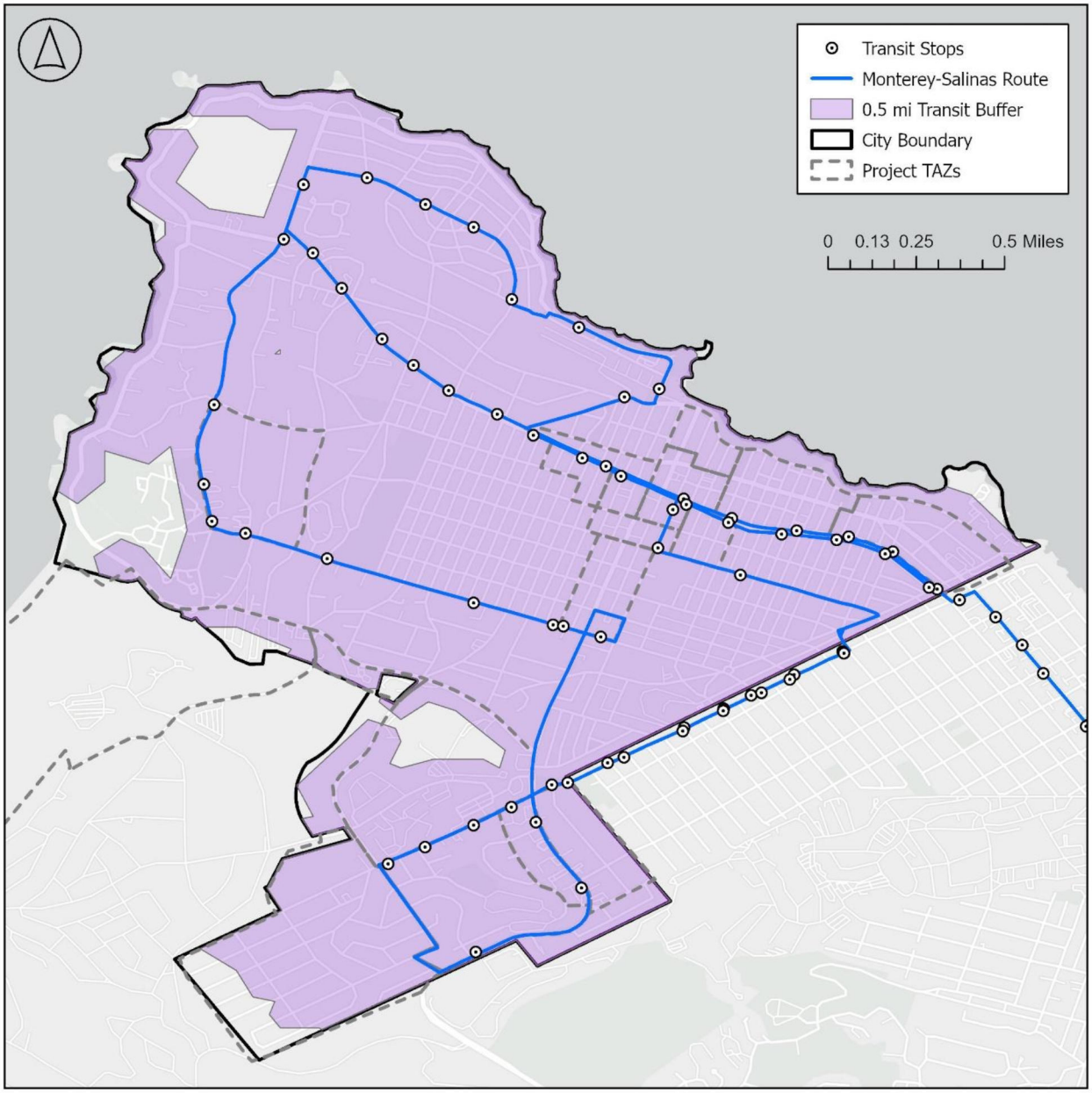
The planning and design of new development resulting from the proposed Project would include considerations for road widths, intersections, and traffic flow to ensure that emergency vehicles can navigate efficiently as required by City of Pacific Grove standards and guidelines. The City will also consider the need for increasing the availability of emergency to service new residents and housing as required. Based on this and the general distribution of proposed housing across the City of Pacific Grove, it is determined that there will be a less-than-significant impact on emergency access.

Figure 1 – Existing MST Routes in Pacific Grove[4]



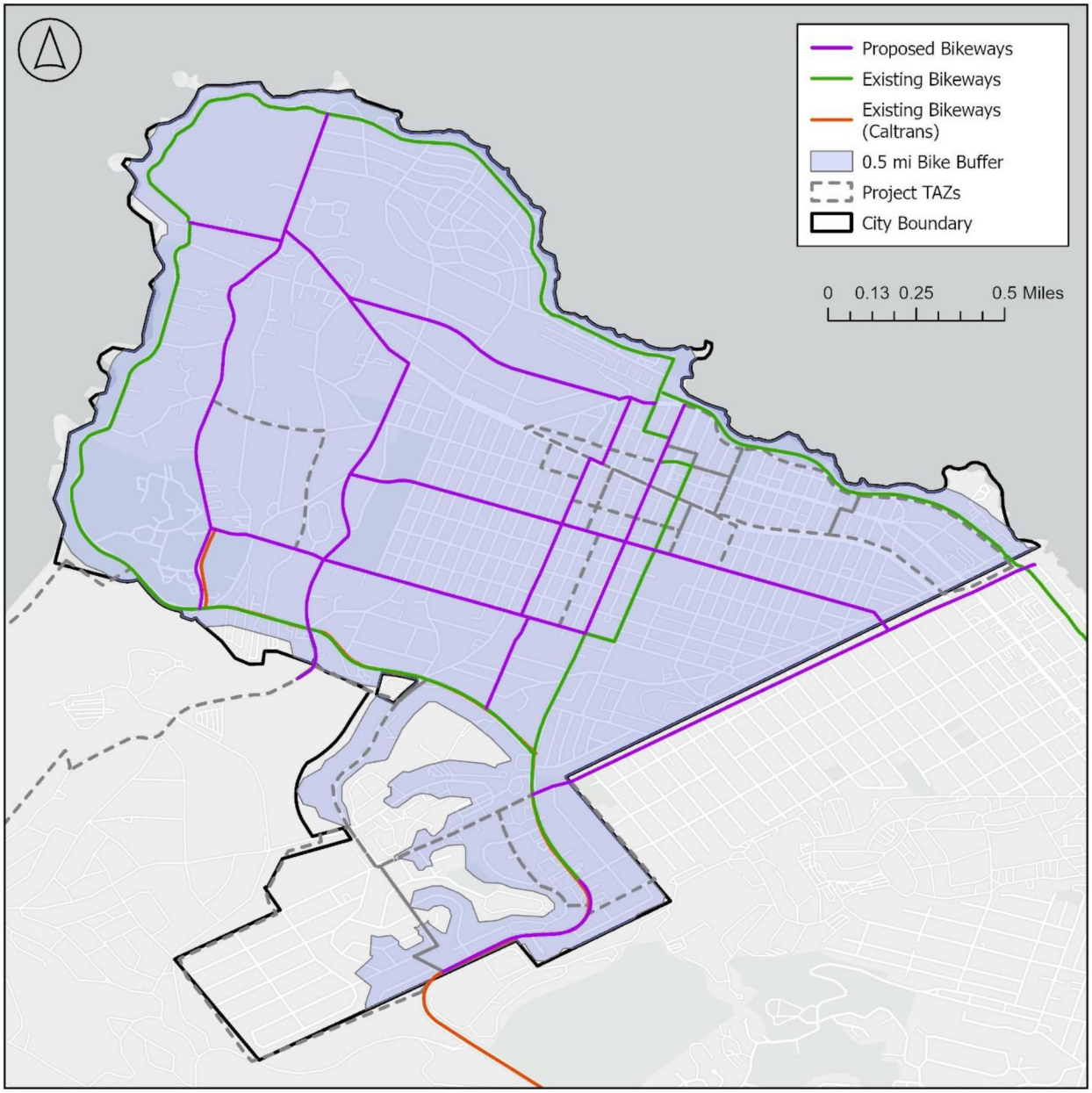
[4] Source: *Monterey Peninsula Map*, Monterey-Salinas Transit, https://mst.org/maps-schedules/system-maps/monterey-peninsula/, accessed April 23, 2025

Figure 2 – Pacific Grove Transit Access with 0.5 Mile Buffer[5]



[5] The large TAZ overlapping the western City Limit is a limitation of the AMBAG model. It is assumed that any development as a part of the proposed Project will occur within City Limits, overlapping access to transit. This is true for both **Figure 2** and **Figure 3**.

Figure 3 – Pacific Grove Bikeways with 0.5 Mile Buffer



Hazards

To determine whether the Project will substantially increase hazards or create a safety impact, this section is split into two types of review. The first review analyzes the Project's potential introduction of "a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)" that may create a safety or hazards impact.

The second review analyzes freeway off-ramp queuing at the SR 1/SR 68 interchange. This analysis was completed per Caltrans' Local Development Review (LDR) Safety Review Practitioner's Guidance. The LDR Guidance's main purpose is to provide a safety review framework for local development directly adjacent to a Caltrans roadway, but it is also intended to be used by local agencies to assess safety impacts on the Caltrans system driven by local development nearby, but not directly adjacent, to Caltrans facilities. For this report, a freeway congestion safety analysis was completed based on methodology included in "Appendix B – Freeway Exit-Ramp Queuing Analysis" of the LDR Guidance.

Geometric Design Feature Review

All new roadway, bicycle, and pedestrian infrastructure improvements constructed will be subject to, and designed in accordance with, applicable City of Pacific Grove and industry design and safety standards to avoid creating a geometric design hazard or incompatible use.

Caltrans Ramp Queueing Analysis

The queuing analysis is based on the current SR 1/SR 68 Interchange geometry, traffic counts collected in March 2025. The most recent version of the Association of Monterey Bay Area Governments Regional Travel Demand Model (AMBAG RTDM), which was released in 2022[6], served as a tool for deriving roadway segment volumes. The land uses were evaluated based on the following scenarios:

- Baseline – 2023 land use in the incorporated and unincorporated areas of the County
- 2031 No Project –2031 land uses in the incorporated and unincorporated areas based on the housing element (HE) update in the County, excluding the City of Pacific Grove
- 2031 Plus Project – 2031 land uses in the incorporated and unincorporated areas based on the housing element (HE) update in the County, including the City of Pacific Grove.

The following analysis scenarios were analyzed:

- Existing Conditions - 2025
- 2031 No Project
- 2031 Plus Project

For each scenario, VISSIM simulations were run to study the sufficiency of each ramp's storage capacity. Ramp queuing analysis was performed for weekday AM and PM peak hours. VISSIM is a microscopic simulation software that allows for analysis of all study intersections in one network, capturing any potential influences from upstream and downstream congestion, for multiple hours for AM and PM peak periods. Existing conditions were simulated in VISSIM by giving the seeding time (loading time) of 60 minutes (to account for the queues extending from the previous hours in the peak period) and recording each one-hour interval in each peak period to analyze the hourly operations. The existing counts at the

[6] The AMBAG RTDM was provided to Kimley-Horn by AMBAG staff in September 2022.

intersections do not reflect the volumes in queue; therefore, the traffic volume was adjusted to replicate the demand volume that corresponds to the queue length observed in the field during the peak periods. The volume served (flow) is then compared to the counts to validate the intersection throughput.

There is a certain amount of random variability inherent to a microscopic simulation model such as VISSIM. This is due to the random distribution of vehicle entry time, vehicle type, traffic fleet composition and driver behavior. This is very similar to the random variability of the day-to-day observations in the field. Therefore, the simulation model is run multiple times with different random number seeds. The calibration procedure then looks at a statistical comparison between the model runs and the field data. For this study, ten (10) runs using different random number seeds were conducted for the AM and PM peak periods.

Existing Conditions

Existing Conditions analysis utilized turning movement count data collected on March 19, 2025. Existing operations and queuing at the SR 1/SR 68 Interchange were field-verified on the same day as the data collection. Subsequently, the VISSIM models were calibrated to replicate the field conditions. A summary of the Existing Conditions operational results are located in the **Appendix** .The average and maximum queuing results are shown via VISSIM speed maps located in the **Table 6** and **Table 7**. The interchange off-ramp queues did not exceed capacity based on field observations or analysis results for this scenario.

2031 No Project Conditions

2031 No Project volumes were derived from interpolating the change in volumes between the Baseline and 2031 No Project travel demand model plots and furnessing the roadway segment volumes with the existing turning movement counts. The volumes were applied to the calibrated Existing Conditions VISSIM model and simulations were rerun. A summary of the 2031 No Project Conditions operational results are located in the **Appendix** .The average and maximum queuing results are shown via VISSIM speed maps located in the **Table 6** and **Table 7**. The interchange off-ramp queues did not exceed capacity based on analysis results for this scenario.

2031 Plus Project Conditions

2031 Plus Project volumes were derived from interpolating the change in volumes between the Baseline and 2031 With Project travel demand model plots and furnessing the roadway segment volumes with the existing turning movement counts. The volumes were applied to the calibrated Existing Conditions VISSIM model and simulations were rerun. A summary of the 2031 With Project Conditions operational results are located in the **Appendix** .The average and maximum queuing results are shown via VISSIM speed maps located in the **Table 6** and **Table 7**. The interchange off-ramp queues did not exceed capacity based on analysis results for this scenario.

Impact Assessment

All ramp queuing under Existing Conditions, 2031 No Project Conditions, and 2031 With Project Conditions is within each ramp's storage capacity and does not extend to the freeway mainline. Therefore, no safety mitigations are required. Therefore, the Project is anticipated to have a **less-than-significant hazard impact**.

Findings

Based on the results of this analysis, the following findings are made:

- Based on analysis, the Project is determined to **have a less-than-significant transportation impact** for VMT. It also represents a worst-case scenario given that it does not fully represent the effect of planned VMT-reducing design principles or the effect that targeted mitigation measures may ultimately have on development projects.
- Many new residents will have the option to take the transit to work or non-work destinations and the proposed Project is not expected to result in any adverse effects on any existing transit facilities. Furthermore, most of the housing units as part of the Housing Element would be located within a half mile of bicycle facilities. As the housing sites are located near existing and planned bike and pedestrian facilities they align with the City of Pacific Grove's goals and policies, ensuring connectivity, providing access and mobility while maintaining quality of life, and promoting safe bicycle and pedestrian travel. As such, it was determined that the proposed Project would result in a less-than-significant multimodal impact and is in accordance with existing plans and policies.
- The planning and design of new housing developments would include considerations for road widths, intersections, and traffic flow to ensure that emergency vehicles can navigate efficiently as required by City of Pacific Grove standards and guidelines. The City will also consider the need for increasing the availability of emergency services. Based on this and the general distribution of sites across the City of Pacific Grove, it is determined that there will be a less-than-significant impact on emergency access.
- All ramp queuing under Existing Conditions, 2031 No Project Conditions, and 2031 Plus Project Conditions is within each ramp's storage capacity and does not extend to the freeway mainline. Therefore, no safety mitigations are required. Therefore, the Project is **anticipated to have a less-than-significant hazard impact.**

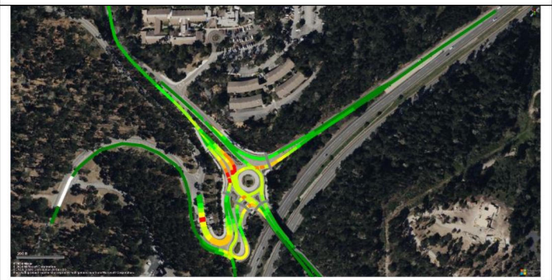
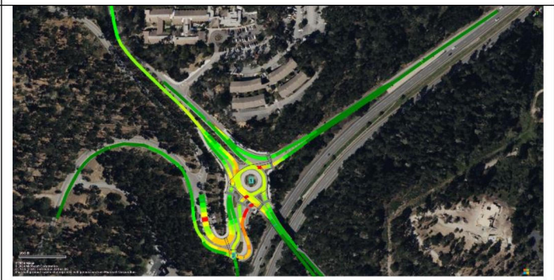
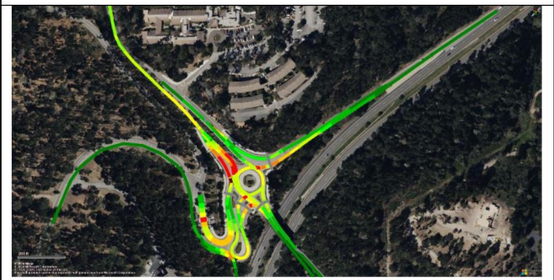
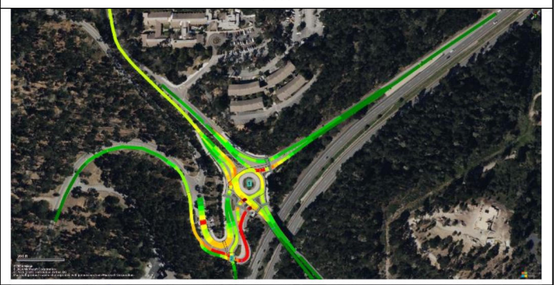
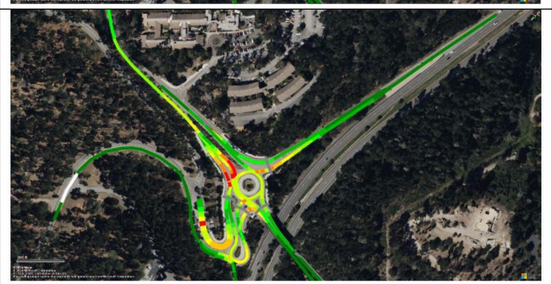
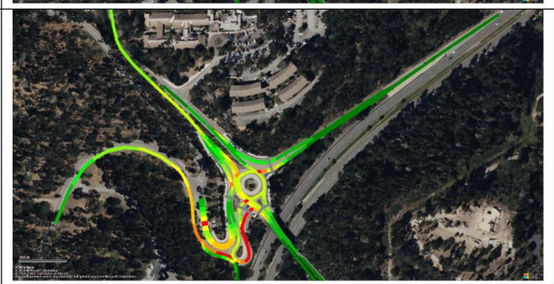
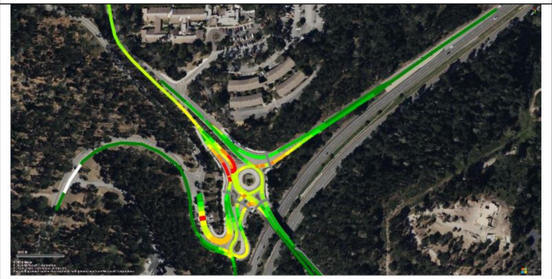
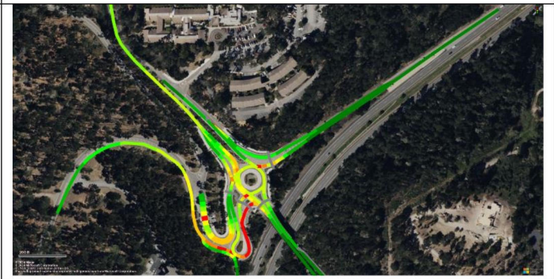
Table 6: SR 1/SR 68 NB Off-ramp Queuing Analysis

Scenario	Average Queues		Maximum Queues	
	AM	PM	AM	PM
Existing				
2031 No Project				
2031 With Project				

Speed Legend (mph)

Count: 11	LowerBound	UpperBound	Color
1	MIN	2.000	(255, 100,...
2	2.000	4.000	(255, 255,...
3	4.000	6.000	(255, 255,...
4	6.000	9.000	(255, 255,...
5	9.000	12.000	(255, 255,...
6	12.000	15.000	(255, 198,...
7	15.000	18.000	(255, 128,...
8	18.000	20.000	(255, 0, 2...
9	20.000	25.000	(255, 0, 1...
10	25.000	30.000	(255, 0, 1...
11	30.000	MAX	(255, 255,...

Table 7: SR 1/SR 68 SB Off-ramp Queuing Analysis

Scenario	Average Queues		Maximum Queues	
	AM	PM	AM	PM
Existing				
2031 No Project				
2031 With Project				

Speed Legend (mph)

Count: 11	LowerBound	UpperBound	Color
1	MIN	2.000	(255, 100,...
2	2.000	4.000	(255, 255,...
3	4.000	6.000	(255, 255,...
4	6.000	9.000	(255, 255,...
5	9.000	12.000	(255, 255,...
6	12.000	15.000	(255, 198,...
7	15.000	18.000	(255, 128,...
8	18.000	20.000	(255, 0, 2...
9	20.000	25.000	(255, 0, 1...
10	25.000	30.000	(255, 0, 1...
11	30.000	MAX	(255, 255,...

Appendix

Pacific Grove Housing Element Project

Existing 2025 VISSIM Results: Pacific Grove AM Peak Hour LOS Summary

No.	Intersection	Existing AM			
		Control Type	Worst Mvmt	Delay (sec)	LOS
1	SR 1 SB Off-Ramp / SR 68	RAB	EBU	31.0	D
2	17 Mile Dr / 17 Mile Dr W	Unsig	EBL	3.2	A
3	SR 68 / Aguajito Rd	Unsig	WBL	16.8	C

*RAB and TWSC Delay is for worst movement, AWSC Delay is overall average

Existing 2025 VISSIM Results: Pacific Grove PM Peak Hour LOS Summary

No.	Intersection	Existing PM			
		Control Type	Worst Mvmt	Delay (sec)	LOS
1	SR 1 SB Off-Ramp / SR 68	RAB	NBR	37.3	E
2	17 Mile Dr / 17 Mile Dr W	Unsig	EBL	29.9	D
3	SR 68 / Aguajito Rd	Unsig	WBL	57.2	F

*RAB and TWSC Delay is for worst movement, AWSC Delay is overall average

Appendix

Pacific Grove Housing Element Project

2031 No Build VISSIM Results: Pacific Grove AM Peak Hour LOS Summary

No.	Intersection	No Build AM			
		Control Type	Worst Mvmt	Delay (sec)	LOS
1	SR 1 SB Off-Ramp / SR 68	RAB	EBU	52.7	F
2	17 Mile Dr / 17 Mile Dr W	Unsig	EBL	3.2	A
3	SR 68 / Aguajito Rd	Unsig	WBL	12.9	B

*RAB and TWSC Delay is for worst movement, AWSC Delay is overall average

2031 No Build VISSIM Results: Pacific Grove PM Peak Hour LOS Summary

No.	Intersection	No Build PM			
		Control Type	Worst Mvmt	Delay (sec)	LOS
1	SR 1 SB Off-Ramp / SR 68	RAB	NBR	54.9	F
2	17 Mile Dr / 17 Mile Dr W	Unsig	EBL	123.5	F
3	SR 68 / Aguajito Rd	Unsig	WBL	61.8	F

*RAB and TWSC Delay is for worst movement, AWSC Delay is overall average

Appendix

Pacific Grove Housing Element Project

2031 Plus Project VISSIM Results: Pacific Grove AM Peak Hour LOS Summary

No.	Intersection	Plus Project AM			
		Control Type	Worst Mvmt	Delay (sec)	LOS
1	SR 1 SB Off-Ramp / SR 68	RAB	EBU	69.1	F
2	17 Mile Dr / 17 Mile Dr W	Unsig	EBL	3.4	A
3	SR 68 / Aguajito Rd	Unsig	WBL	16.9	C

*RAB and TWSC Delay is for worst movement, AWSC Delay is overall average

2031 Plus Project VISSIM Results: Pacific Grove PM Peak Hour LOS Summary

No.	Intersection	Plus Project PM			
		Control Type	Worst Mvmt	Delay (sec)	LOS
1	SR 1 SB Off-Ramp / SR 68	RAB	NBR	53.5	F
2	17 Mile Dr / 17 Mile Dr W	Unsig	EBL	112.1	F
3	SR 68 / Aguajito Rd	Unsig	WBL	62.6	F

*RAB and TWSC Delay is for worst movement, AWSC Delay is overall average

Appendix

Pacific Grove Housing Element Project

Existing 2025 VISSIM Results: Pacific Grove Peak Hour Queueing Summary

No.	Intersection	Movement	AM Peak Hour			PM Peak Hour		
			Existing AM			Existing PM		
			Capacity (ft)	Avg Queue *(ft)*	Max Queue *(ft)*	Capacity (ft)	Avg Queue *(ft)*	Max Queue *(ft)*
1	SR 1 SB Off-Ramp / SR 68 &	NBU	310	0	47	310	2	75
		NBL	310	0	47	310	2	75
		NBR	80	2	77	80	**123**	**344**
		SBL	1210	41	403	1210	11	175
		SBT	1210	41	403	1210	11	175
		SBR	1310	1	179	1310	1	151
		EBU	1570	54	419	1570	21	204
		EBT	1570	4	143	1570	143	376
		EBR	190	57	**768**	190	4	117
		WBU	960	1	122	960	1	137
		WBL	960	1	122	960	1	137
		WBT	960	0	0	960	0	0
2	17 Mile Dr / 17 Mile Dr W	SBU	290	0	0	290	0	32
		SBT	290	0	0	290	0	32
		SBR	260	0	0	260	0	0
		EBL	325	1	50	325	102	**524**
		EBR	120	0	30	120	0	31
3	SR 68 / Aguajito Rd	NBT	735	0	0	735	0	0
		NBR	735	0	0	735	0	0
		SBU	890	0	0	890	1	57
		SBL	890	0	33	890	1	86
		SBT	890	0	0	890	0	0
		WBL	390	0	20	390	1	39
		WBR	40	0	0	40	0	7

* Red = Queue exceeds capacity

Appendix

Pacific Grove Housing Element Project

2031 No Build VISSIM Results: Pacific Grove Peak Hour Queueing Summary

No.	Intersection	Movement	AM Peak Hour			PM Peak Hour		
			No Build AM			No Build PM		
			Capacity (ft)	Avg Queue *(ft)*	Max Queue *(ft)*	Capacity (ft)	Avg Queue *(ft)*	Max Queue *(ft)*
1	SR 1 SB Off-Ramp / SR 68 &	NBU	310	0	49	310	1	107
		NBL	310	0	49	310	1	107
		NBR	80	3	**92**	80	**199**	**350**
		SBL	1210	80	567	1210	15	189
		SBT	1210	80	567	1210	15	189
		SBR	1310	2	179	1310	0	98
		EBU	1570	89	804	1570	33	439
		EBT	1570	9	209	1570	233	617
		EBR	190	108	**838**	190	9	**287**
		WBU	960	1	120	960	1	155
		WBL	960	1	120	960	1	155
		WBT	960	0	0	960	0	0
2	17 Mile Dr / 17 Mile Dr W	SBU	290	0	0	290	0	69
		SBT	290	0	0	290	0	69
		SBR	260	0	0	260	0	0
		EBL	325	1	52	325	**541**	**1073**
		EBR	120	0	30	120	0	46
3	SR 68 / Aguajito Rd	NBT	735	0	0	735	0	0
		NBR	735	0	0	735	0	0
		SBU	890	0	0	890	0	10
		SBL	890	0	35	890	1	42
		SBT	890	0	0	890	0	0
		WBL	390	0	20	390	1	34
		WBR	40	0	0	40	0	4

* Red = Queue exceeds capacity

Appendix

Pacific Grove Housing Element Project

2031 Plus Project VISSIM Results: Pacific Grove Peak Hour Queueing Summary

No.	Intersection	Movement	AM Peak Hour			PM Peak Hour		
			Plus Project AM			Plus Project PM		
			Capacity (ft)	Avg Queue *(ft)*	Max Queue *(ft)*	Capacity (ft)	Avg Queue *(ft)*	Max Queue *(ft)*
1	SR 1 SB Off-Ramp / SR 68 &	NBU	310	1	64	310	2	81
		NBL	310	1	64	310	2	81
		NBR	80	3	**110**	80	**193**	**349**
		SBL	1210	82	568	1210	18	200
		SBT	1210	82	568	1210	18	200
		SBR	1310	2	206	1310	0	98
		EBU	1570	205	950	1570	27	291
		EBT	1570	10	280	1570	221	460
		EBR	190	169	**1177**	190	7	147
		WBU	960	1	104	960	1	134
		WBL	960	1	104	960	1	134
		WBT	960	0	0	960	0	0
2	17 Mile Dr / 17 Mile Dr W	SBU	290	0	0	290	0	82
		SBT	290	0	0	290	0	82
		SBR	260	0	0	260	0	0
		EBL	325	1	58	325	**479**	**996**
		EBR	120	0	24	120	1	56
3	SR 68 / Aguajito Rd	NBT	735	0	0	735	0	0
		NBR	735	0	0	735	0	0
		SBU	890	0	0	890	0	6
		SBL	890	0	32	890	1	48
		SBT	890	0	0	890	0	0
		WBL	390	0	20	390	1	35
		WBR	40	0	0	40	0	3

* Red = Queue exceeds capacity

Appendix

Pacific Grove Housing Element Project

Existing 2025 VISSIM Results: Pacific Grove Peak Hour Intersection Results

No.	Intersection	Control	Movement	Existing AM							Existing PM						
				Volume (vph)			Avg. Delay (sec)	LOS	Avg. Queue (ft)	Max. Queue (ft)	Volume (vph)			Avg. Delay (sec)	LOS	Avg. Queue (ft)	Max. Queue (ft)
				Count	Served						Count	Served					
1	SR 1 SB Off-Ramp / SR 68	RAB	NBU	0	0	-	0.0	A	0	47	0	0	-	0.0	A	2	75
			NBL	22	22	0%	5.6	A	0	47	18	17	-6%	31.7	D	2	75
			NBR	129	124	-4%	4.4	A	2	77	432	430	0%	37.3	E	123	344
			SBL	14	13	-7%	13.9	B	41	403	16	14	-13%	11.3	B	11	175
			SBT	483	486	1%	12.7	B	41	403	198	200	1%	9.5	A	11	175
			SBR	827	830	0%	1.1	A	1	179	747	745	0%	0.8	A	1	151
			EBU	11	11	0%	31.0	D	54	419	9	10	11%	26.2	D	21	204
			EBT	664	662	0%	25.9	D	4	143	960	972	1%	24.1	C	143	376
			EBR	355	358	1%	29.8	D	57	768	361	352	-2%	20.2	C	4	117
			WBU	1	1	0%	3.8	A	1	122	1	1	0%	2.4	A	1	137
			WBL	66	72	9%	2.0	A	1	122	58	61	5%	1.7	A	1	137
			WBT	239	290	21%	0.5	A	0	0	400	431	8%	0.6	A	0	0
			Overall	**2811**	**2869**	**2%**	**31.0**	**D**			**3200**	**3233**	**1%**	**37.3**	**E**		
2	17 Mile Dr / 17 Mile Dr W	Unsig	SBU	2	2	0%	1.5	A	0	0	2	2	0%	2.9	A	0	32
			SBT	333	338	2%	1.0	A	0	0	351	350	0%	1.2	A	0	32
			SBR	569	577	1%	1.3	A	0	0	264	262	-1%	0.9	A	0	0
			EBL	149	144	-3%	3.2	A	1	50	448	447	0%	29.9	D	102	524
			EBR	35	36	3%	1.7	A	0	30	67	64	-4%	16.9	C	0	31
			Overall	**1088**	**1097**	**1%**	**3.2**	**A**			**1132**	**1125**	**-1%**	**29.9**	**D**		
3	SR 68 / Aguajito Rd	Unsig	NBT	286	290	1%	0.5	A	0	0	435	431	-1%	0.6	A	0	0
			NBR	9	9	0%	0.4	A	0	0	26	28	8%	0.4	A	0	0
			SBU	2	0	-100%	0.0	A	0	0	2	0	-100%	0.0	A	1	57
			SBL	23	24	4%	2.0	A	0	33	61	64	5%	4.9	A	1	86
			SBT	783	776	-1%	1.2	A	0	0	1346	1355	1%	1.7	A	0	0
			WBL	3	3	0%	16.8	C	0	20	15	14	-7%	57.2	F	1	39
			WBR	18	16	-11%	0.4	A	0	0	22	23	5%	0.7	A	0	7
			Overall	**1124**	**1118**	**-1%**	**16.8**	**C**			**1907**	**1915**	**0%**	**57.2**	**F**		

Appendix

Pacific Grove Housing Element Project

2031 No Build VISSIM Results: Pacific Grove Peak Hour Intersection Results

No.	Intersection	Control	Movement	No Build AM							No Build PM						
				Volume (vph)			Avg. Delay (sec)	LOS	Avg. Queue (ft)	Max. Queue (ft)	Volume (vph)			Avg. Delay (sec)	LOS	Avg. Queue (ft)	Max. Queue (ft)
				Demand	Served						Demand	Served					
1	SR 1 SB Off-Ramp / SR 68	RAB	NBU	0	0	-	0.0	A	0	49	0	0	-	0.0	A	1	107
			NBL	25	25	0%	5.1	A	0	49	21	19	-10%	45.2	E	1	107
			NBR	138	133	-4%	5.1	A	3	92	471	450	-4%	54.9	F	199	350
			SBL	20	18	-10%	19.2	C	80	567	21	19	-10%	12.1	B	15	189
			SBT	530	533	1%	20.0	C	80	567	221	220	0%	11.2	B	15	189
			SBR	874	884	1%	1.2	A	2	179	767	770	0%	0.7	A	0	98
			EBU	11	11	0%	52.7	F	89	804	9	10	11%	34.8	D	33	439
			EBT	664	662	0%	45.2	E	9	209	972	980	1%	34.0	D	233	617
			EBR	369	371	1%	51.4	F	108	838	386	378	-2%	30.2	D	9	287
			WBU	1	1	0%	0.8	A	1	120	1	1	0%	3.4	A	1	155
			WBL	71	78	10%	2.0	A	1	120	67	71	6%	2.0	A	1	155
			WBT	245	304	24%	0.5	A	0	0	412	454	10%	0.6	A	0	0
			Overall	**2948**	**3020**	**2%**	**52.7**	**F**			**3348**	**3372**	**1%**	**54.9**	**F**		
2	17 Mile Dr / 17 Mile Dr W	Unsig	SBU	2	2	0%	2.0	A	0	0	2	2	0%	2.2	A	0	69
			SBT	344	352	2%	1.0	A	0	0	375	372	-1%	1.4	A	0	69
			SBR	624	628	1%	1.4	A	0	0	297	296	0%	1.0	A	0	0
			EBL	161	157	-2%	3.2	A	1	52	490	466	-5%	123.5	F	541	1073
			EBR	36	37	3%	2.0	A	0	30	70	64	-9%	98.8	F	0	46
			Overall	**1167**	**1176**	**1%**	**3.2**	**A**			**1234**	**1200**	**-3%**	**123.5**	**F**		
3	SR 68 / Aguajito Rd	Unsig	NBT	297	304	2%	0.5	A	0	0	456	454	0%	0.6	A	0	0
			NBR	9	9	0%	0.4	A	0	0	26	27	4%	0.5	A	0	0
			SBU	2	0	-100%	0.0	A	0	0	2	0	-100%	0.0	A	0	10
			SBL	23	25	9%	2.4	A	0	35	61	63	3%	3.8	A	1	42
			SBT	798	793	-1%	1.3	A	0	0	1402	1391	-1%	1.7	A	0	0
			WBL	3	3	0%	12.9	B	0	20	15	14	-7%	61.8	F	1	34
			WBR	18	16	-11%	0.3	A	0	0	22	23	5%	0.5	A	0	4
			Overall	**1150**	**1150**	**0%**	**12.9**	**B**			**1984**	**1972**	**-1%**	**61.8**	**F**		

Appendix

Pacific Grove Housing Element Project

2031 Plus Project VISSIM Results: Pacific Grove Peak Hour Intersection Results

No.	Intersection	Control	Movement	Plus Project AM							Plus Project PM						
				Volume (vph)			Avg. Delay (sec)	LOS	Avg. Queue (ft)	Max. Queue (ft)	Volume (vph)			Avg. Delay (sec)	LOS	Avg. Queue (ft)	Max. Queue (ft)
				Count	Served						Count	Served					
1	SR 1 SB Off-Ramp / SR 68	RAB	NBU	0	0	-	0.0	A	1	64	0	0	-	0.0	A	2	81
			NBL	25	25	0%	6.5	A	1	64	21	20	-5%	46.8	E	2	81
			NBR	137	133	-3%	5.9	A	3	110	471	451	-4%	53.5	F	193	349
			SBL	18	18	0%	19.6	C	82	568	18	20	11%	15.4	C	18	200
			SBT	530	533	1%	20.2	C	82	568	221	221	0%	12.8	B	18	200
			SBR	874	884	1%	1.2	A	2	206	769	771	0%	0.7	A	0	98
			EBU	11	11	0%	69.1	F	205	950	9	10	11%	32.0	D	27	291
			EBT	676	675	0%	58.2	F	10	280	977	983	1%	34.5	D	221	460
			EBR	391	390	0%	68.1	F	169	1177	397	390	-2%	30.6	D	7	147
			WBU	1	1	0%	1.5	A	1	104	1	1	0%	2.6	A	1	134
			WBL	73	79	8%	2.2	A	1	104	70	73	4%	1.9	A	1	134
			WBT	251	310	24%	0.5	A	0	0	442	486	10%	0.6	A	0	0
			Overall	**2987**	**3059**	**2%**	**69.1**	**F**			**3396**	**3426**	**1%**	**53.5**	**F**		
2	17 Mile Dr / 17 Mile Dr W	Unsig	SBU	2	2	0%	1.6	A	0	0	2	2	0%	4.1	A	0	82
			SBT	369	376	2%	1.0	A	0	0	389	386	-1%	1.4	A	0	82
			SBR	623	626	0%	1.3	A	0	0	297	298	0%	1.0	A	0	0
			EBL	160	156	-3%	3.4	A	1	58	490	468	-4%	112.1	F	479	996
			EBR	37	38	3%	2.0	A	0	24	71	66	-7%	87.1	F	1	56
			Overall	**1191**	**1198**	**1%**	**3.4**	**A**			**1249**	**1220**	**-2%**	**112.1**	**F**		
3	SR 68 / Aguajito Rd	Unsig	NBT	305	310	2%	0.5	A	0	0	489	486	-1%	0.6	A	0	0
			NBR	9	9	0%	0.4	A	0	0	27	27	0%	0.5	A	0	0
			SBU	2	0	-100%	0.0	A	0	0	2	0	-100%	0.0	A	0	6
			SBL	23	25	9%	2.2	A	0	32	61	63	3%	4.5	A	1	48
			SBT	807	805	0%	1.3	A	0	0	1405	1395	-1%	1.8	A	0	0
			WBL	3	3	0%	16.9	C	0	20	15	14	-7%	62.6	F	1	35
			WBR	18	16	-11%	0.4	A	0	0	22	23	5%	0.5	A	0	3
			Overall	**1167**	**1168**	**0%**	**16.9**	**C**			**2021**	**2008**	**-1%**	**62.6**	**F**		

Appendix

Pacific Grove Housing Element Project

2031 Delta (No Build Minus Existing) VISSIM Results: Pacific Grove Peak Hour Intersection Results

No.	Intersection	Control	Movement	Delta AM					Delta PM				
				Volume (vph)		Avg. Delay	Avg. Queue	Max. Queue	Volume (vph)		Avg. Delay	Avg. Queue	Max. Queue
				Count	*Served*	*(sec)*	*(ft)*	*(ft)*	*Count*	*Served*	*(sec)*	*(ft)*	*(ft)*
1	SR 1 SB Off-Ramp / SR 68	RAB	NBU	0	0	0.0	0	2	0	0	0.0	0	32
			NBL	3	3	-0.5	0	2	3	2	13.5	0	32
			NBR	9	9	0.7	1	15	39	20	17.7	76	6
			SBL	6	5	5.3	39	163	5	5	0.8	4	13
			SBT	47	47	7.3	39	163	23	20	1.7	4	13
			SBR	47	54	0.1	0	-1	20	25	-0.1	-1	-54
			EBU	0	0	21.7	35	385	0	0	8.6	13	234
			EBT	0	0	19.3	5	67	12	8	9.9	90	241
			EBR	14	13	21.6	51	70	25	26	10.1	5	170
			WBU	0	0	-3.0	0	-1	0	0	1.0	0	18
			WBL	5	6	0.1	0	-1	9	10	0.4	0	18
			WBT	6	14	0.0	0	0	12	23	0.0	0	0
			Overall	**137**	**151**	**21.7**			**148**	**139**	**17.7**		
2	17 Mile Dr / 17 Mile Dr W	Unsig	SBU	0	0	0.6	0	0	0	0	-0.7	0	36
			SBT	11	14	0.0	0	0	24	22	0.2	0	36
			SBR	55	51	0.1	0	0	33	34	0.0	0	0
			EBL	12	13	0.0	1	52	42	19	93.6	439	550
			EBR	1	1	0.3	0	30	3	0	81.9	0	15
			Overall	**79**	**79**	**0.6**			**102**	**75**	**93.6**		
3	SR 68 / Aguajito Rd	Unsig	NBT	11	14	0.0	0	0	21	23	0.0	0	0
			NBR	0	0	0.0	0	0	0	-1	0.0	0	0
			SBU	0	0	0.0	0	0	0	0	0.0	-1	-47
			SBL	0	1	0.4	0	2	0	-1	-1.1	-1	-43
			SBT	15	17	0.1	0	0	56	36	0.0	0	0
			WBL	0	0	-4.0	0	0	0	0	4.6	0	-4
			WBR	0	0	0.0	0	0	0	0	-0.2	0	-2
			Overall	**26**	**32**	**0.4**			**77**	**57**	**4.6**		

Appendix

Pacific Grove Housing Element Project

2031 Delta (Plus Project Minus No Build) VISSIM Results: Pacific Grove Peak Hour Intersection Results

No.	Intersection	Control	Movement	Delta AM					Delta PM				
				Volume (vph)		Avg. Delay	Avg. Queue	Max. Queue	Volume (vph)		Avg. Delay	Avg. Queue	Max. Queue
				Count	*Served*	*(sec)*	*(ft)*	*(ft)*	*Count*	*Served*	*(sec)*	*(ft)*	*(ft)*
1	SR 1 SB Off-Ramp / SR 68	RAB	NBU	0	0	0.0	0	15	0	0	0.0	0	-26
			NBL	0	0	1.5	0	15	0	1	1.6	0	-26
			NBR	-1	0	0.8	1	18	0	1	-1.4	-7	-1
			SBL	-2	0	0.4	2	2	-3	1	3.3	2	11
			SBT	0	0	0.1	2	2	0	1	1.6	2	11
			SBR	0	0	0.0	0	28	2	1	0.0	0	0
			EBU	0	0	16.4	116	146	0	0	-2.8	-6	-148
			EBT	12	13	13.0	1	71	5	3	0.5	-12	-157
			EBR	22	19	16.8	62	340	11	12	0.3	-2	-139
			WBU	0	0	0.6	0	-16	0	0	-0.9	0	-20
			WBL	2	1	0.2	0	-16	3	2	-0.1	0	-20
			WBT	6	6	0.0	0	0	30	32	0.0	0	0
			Overall	**39**	**39**	**16.8**			**48**	**54**	**3.3**		
2	17 Mile Dr / 17 Mile Dr W	Unsig	SBU	0	0	-0.4	0	0	0	0	1.9	0	13
			SBT	25	24	0.0	0	0	14	14	0.0	0	13
			SBR	-1	-2	0.0	0	0	0	2	0.0	0	0
			EBL	-1	-1	0.2	0	6	0	2	-11.5	-62	-77
			EBR	1	1	0.0	0	-6	1	2	-11.7	0	9
			Overall	**24**	**22**	**0.2**			**15**	**20**	**1.9**		
3	SR 68 / Aguajito Rd	Unsig	NBT	8	6	0.0	0	0	33	32	0.0	0	0
			NBR	0	0	0.0	0	0	1	0	0.0	0	0
			SBU	0	0	0.0	0	0	0	0	0.0	0	-4
			SBL	0	0	-0.2	0	-4	0	0	0.6	0	6
			SBT	9	12	0.0	0	0	3	4	0.0	0	0
			WBL	0	0	4.0	0	0	0	0	0.8	0	0
			WBR	0	0	0.1	0	0	0	0	-0.1	0	-1
			Overall	**17**	**18**	**4.0**			**37**	**36**	**0.8**		

Appendix F

CalEEMod Modeling Outputs

Pacific Grove Housing Element Update - Net Project Buildout Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Pacific Grove Housing Element Update - Net Project Buildout
Construction Start Date	2/1/2025
Operational Year	2031
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	27.6
Location	36.62270098795716, -121.92084846987805
County	Monterey
City	Pacific Grove
Air District	Monterey Bay ARD
Air Basin	North Central Coast
TAZ	3239
EDFZ	6
Electric Utility	Central Coast Community Energy
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	2,335	Dwelling Unit	61.4	2,241,600	0.00	—	4,950	—

Strip Mall	293	1000sqft	6.72	292,578	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	873	873	31.7	91.9	0.06	1.37	13,149	13,149	1.26	1,313	1,313	—	20,740	20,740	1.08	1.39	63.0	21,244
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	873	873	29.8	93.8	0.06	1.23	13,149	13,149	1.14	1,313	1,314	—	20,360	20,360	1.24	1.39	1.77	20,807
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	181	181	17.9	60.6	0.05	0.72	8,706	8,706	0.66	869	870	—	14,339	14,339	0.83	0.99	19.4	14,676
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	33.0	33.0	3.26	11.1	0.01	0.13	1,589	1,589	0.12	159	159	—	2,374	2,374	0.14	0.16	3.22	2,430

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	4.03	3.39	31.7	31.0	0.06	1.37	137	139	1.26	15.6	16.9	—	6,743	6,743	0.28	0.06	0.60	6,769
2026	10.4	9.42	23.5	91.9	0.06	0.46	13,149	13,149	0.43	1,313	1,313	—	20,740	20,740	1.08	1.39	63.0	21,244
2027	9.98	8.61	22.2	86.6	0.06	0.42	13,149	13,149	0.39	1,313	1,313	—	20,381	20,381	1.00	1.31	57.5	20,854
2028	9.32	8.37	21.0	81.9	0.06	0.38	13,149	13,149	0.36	1,313	1,313	—	20,016	20,016	1.00	1.30	52.5	20,482
2029	8.93	8.03	19.9	77.4	0.06	0.35	13,149	13,149	0.33	1,313	1,313	—	19,646	19,646	0.62	1.27	47.7	20,086
2030	873	873	6.31	12.6	0.01	0.22	2,376	2,376	0.20	237	237	—	2,475	2,475	0.06	0.10	6.91	2,513
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	10.8	9.71	29.8	93.8	0.06	1.23	13,149	13,149	1.14	1,313	1,314	—	20,360	20,360	1.24	1.39	1.77	20,807
2026	10.3	9.24	25.3	88.2	0.06	0.46	13,149	13,149	0.43	1,313	1,313	—	20,023	20,023	1.19	1.39	1.63	20,469
2027	9.51	8.44	24.1	83.1	0.06	0.42	13,149	13,149	0.39	1,313	1,313	—	19,679	19,679	1.12	1.35	1.50	20,111
2028	9.19	8.20	22.8	78.9	0.06	0.38	13,149	13,149	0.36	1,313	1,313	—	19,328	19,328	0.74	1.35	1.36	19,751
2029	8.80	7.82	21.6	74.4	0.06	0.35	13,149	13,149	0.33	1,313	1,313	—	18,973	18,973	0.70	1.31	1.24	19,382
2030	873	873	20.7	70.7	0.06	0.34	13,149	13,149	0.32	1,313	1,313	—	18,618	18,618	0.66	1.30	1.12	19,024
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.66	2.27	17.9	20.1	0.03	0.72	616	617	0.66	62.2	62.8	—	4,219	4,219	0.19	0.09	1.47	4,252
2026	7.31	6.53	17.6	60.6	0.04	0.33	8,682	8,682	0.31	867	867	—	14,339	14,339	0.83	0.99	19.4	14,676
2027	6.74	6.00	16.7	57.2	0.04	0.30	8,682	8,682	0.28	867	867	—	14,093	14,093	0.77	0.96	17.8	14,418
2028	6.47	5.80	15.9	54.3	0.05	0.27	8,706	8,706	0.25	869	870	—	13,880	13,880	0.48	0.97	16.2	14,196
2029	6.24	5.57	15.0	51.3	0.04	0.25	8,682	8,682	0.24	867	867	—	13,587	13,587	0.47	0.93	14.7	13,891
2030	181	181	4.44	13.9	0.01	0.09	2,159	2,159	0.09	216	216	—	3,407	3,407	0.11	0.20	3.23	3,472
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.49	0.41	3.26	3.68	0.01	0.13	112	113	0.12	11.3	11.5	—	698	698	0.03	0.02	0.24	704
2026	1.33	1.19	3.22	11.1	0.01	0.06	1,584	1,585	0.06	158	158	—	2,374	2,374	0.14	0.16	3.22	2,430
2027	1.23	1.10	3.05	10.4	0.01	0.05	1,584	1,585	0.05	158	158	—	2,333	2,333	0.13	0.16	2.94	2,387
2028	1.18	1.06	2.90	9.90	0.01	0.05	1,589	1,589	0.05	159	159	—	2,298	2,298	0.08	0.16	2.69	2,350
2029	1.14	1.02	2.74	9.37	0.01	0.05	1,584	1,585	0.04	158	158	—	2,249	2,249	0.08	0.15	2.44	2,300

2030	33.0	33.0	0.81	2.54	< 0.005	0.02	394	394	0.02	39.4	39.4	—	564	564	0.02	0.03	0.53	575

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	80.3	77.5	27.3	264	0.47	1.53	35.8	37.4	1.50	9.09	10.6	1,848	57,060	58,907	189	1.85	111	64,283
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	65.9	64.0	27.8	102	0.45	1.45	35.8	37.3	1.43	9.09	10.5	1,848	54,938	56,786	189	1.95	20.3	62,100
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	75.8	73.3	28.1	202	0.45	1.50	35.2	36.7	1.48	8.93	10.4	1,848	55,362	57,209	189	1.91	58.2	62,551
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.8	13.4	5.12	36.8	0.08	0.27	6.42	6.70	0.27	1.63	1.90	306	9,166	9,472	31.2	0.32	9.63	10,356

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.68	3.61	10.8	111	0.37	0.22	35.8	36.0	0.21	9.09	9.29	—	37,200	37,200	0.72	1.20	93.3	37,668
Area	73.9	73.0	1.34	146	0.01	0.08	—	0.08	0.06	—	0.06	0.00	407	407	0.02	< 0.005	—	408
Energy	1.78	0.89	15.2	6.67	0.10	1.23	—	1.23	1.23	—	1.23	—	19,443	19,443	2.55	0.14	—	19,548
Water	—	—	—	—	—	—	—	—	—	—	—	206	10.6	216	21.2	0.51	—	896

Waste	—	—	—	—	—	—	—	—	—	—	—	1,642	0.00	1,642	164	0.00	—	5,744
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.9	17.9
Total	80.3	77.5	27.3	264	0.47	1.53	35.8	37.4	1.50	9.09	10.6	1,848	57,060	58,907	189	1.85	111	64,283
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.67	3.63	12.6	95.2	0.35	0.22	35.8	36.0	0.21	9.09	9.29	—	35,485	35,485	0.70	1.30	2.42	35,893
Area	59.5	59.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	1.78	0.89	15.2	6.67	0.10	1.23	—	1.23	1.23	—	1.23	—	19,443	19,443	2.55	0.14	—	19,548
Water	—	—	—	—	—	—	—	—	—	—	—	206	10.6	216	21.2	0.51	—	896
Waste	—	—	—	—	—	—	—	—	—	—	—	1,642	0.00	1,642	164	0.00	—	5,744
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.9	17.9
Total	65.9	64.0	27.8	102	0.45	1.45	35.8	37.3	1.43	9.09	10.5	1,848	54,938	56,786	189	1.95	20.3	62,100
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.65	3.60	11.9	95.3	0.35	0.22	35.2	35.4	0.21	8.93	9.13	—	35,630	35,630	0.71	1.26	40.3	36,064
Area	69.3	68.8	0.92	99.8	< 0.005	0.06	—	0.06	0.04	—	0.04	0.00	278	278	0.01	< 0.005	—	279
Energy	1.78	0.89	15.2	6.67	0.10	1.23	—	1.23	1.23	—	1.23	—	19,443	19,443	2.55	0.14	—	19,548
Water	—	—	—	—	—	—	—	—	—	—	—	206	10.6	216	21.2	0.51	—	896
Waste	—	—	—	—	—	—	—	—	—	—	—	1,642	0.00	1,642	164	0.00	—	5,744
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.9	17.9
Total	75.8	73.3	28.1	202	0.45	1.50	35.2	36.7	1.48	8.93	10.4	1,848	55,362	57,209	189	1.91	58.2	62,551
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.85	0.66	2.18	17.4	0.06	0.04	6.42	6.46	0.04	1.63	1.67	—	5,899	5,899	0.12	0.21	6.67	5,971
Area	12.7	12.6	0.17	18.2	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	46.1	46.1	< 0.005	< 0.005	—	46.3
Energy	0.32	0.16	2.78	1.22	0.02	0.22	—	0.22	0.22	—	0.22	—	3,219	3,219	0.42	0.02	—	3,236
Water	—	—	—	—	—	—	—	—	—	—	—	34.1	1.75	35.8	3.50	0.08	—	148
Waste	—	—	—	—	—	—	—	—	—	—	—	272	0.00	272	27.2	0.00	—	951
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.96	2.96

Total	13.8	13.4	5.12	36.8	0.08	0.27	6.42	6.70	0.27	1.63	1.90	306	9,166	9,472	31.2	0.32	9.63	10,356

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.55	0.46	4.26	3.82	0.01	0.18	—	0.18	0.16	—	0.16	—	657	657	0.03	0.01	—	659
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.78	0.70	< 0.005	0.03	—	0.03	0.03	—	0.03	—	109	109	< 0.005	< 0.005	—	109
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.68	0.00	0.00	100	100	0.00	10.0	10.0	—	108	108	0.01	< 0.005	0.45	110
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	100	100	0.00	10.0	10.0	—	102	102	0.01	< 0.005	0.01	104
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	17.8	17.8	0.00	1.78	1.78	—	19.7	19.7	< 0.005	< 0.005	0.04	20.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	3.25	3.25	0.00	0.32	0.32	—	3.26	3.26	< 0.005	< 0.005	0.01	3.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.47	3.31	0.01	0.15	—	0.15	0.14	—	0.14	—	580	580	0.02	< 0.005	—	582
Dust From Material Movement	—	—	—	—	—	—	0.84	0.84	—	0.43	0.43	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.63	0.60	< 0.005	0.03	—	0.03	0.03	—	0.03	—	96.1	96.1	< 0.005	< 0.005	—	96.4
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.79	0.00	0.00	117	117	0.00	11.7	11.7	—	127	127	0.01	0.01	0.52	129
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	11.9	11.9	0.00	1.19	1.19	—	13.1	13.1	< 0.005	< 0.005	0.02	13.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	2.17	2.17	0.00	0.22	0.22	—	2.17	2.17	< 0.005	< 0.005	< 0.005	2.21
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.96	8.94	8.53	0.02	0.37	—	0.37	0.34	—	0.34	—	1,989	1,989	0.08	0.02	—	1,996

Dust From Material Movement	—	—	—	—	—	—	1.08	1.08	—	0.43	0.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.63	1.56	< 0.005	0.07	—	0.07	0.06	—	0.06	—	329	329	0.01	< 0.005	—	330
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	0.91	0.00	0.00	134	134	0.00	13.4	13.4	—	145	145	0.01	0.01	0.60	147
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	0.86	0.00	0.00	134	134	0.00	13.4	13.4	—	136	136	0.01	0.01	0.02	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.25	0.00	0.00	37.3	37.3	0.00	3.72	3.72	—	41.3	41.3	< 0.005	< 0.005	0.08	41.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.04	0.00	0.00	6.81	6.81	0.00	0.68	0.68	—	6.83	6.83	< 0.005	< 0.005	0.01	6.94
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.47	0.59	< 0.005	0.02	—	0.02	0.02	—	0.02	—	108	108	< 0.005	< 0.005	—	108
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.09	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.9	17.9	< 0.005	< 0.005	—	17.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.92	8.31	7.69	76.4	0.00	0.00	11,880	11,880	0.00	1,186	1,186	—	12,093	12,093	0.88	0.53	1.38	12,273
Vendor	0.54	0.27	9.04	4.35	0.04	0.08	1,269	1,269	0.08	127	127	—	5,869	5,869	0.26	0.84	0.40	6,128
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.37	0.31	3.27	0.00	0.00	494	494	0.00	49.4	49.4	—	547	547	0.04	0.02	1.03	556
Vendor	0.02	0.01	0.40	0.19	< 0.005	< 0.005	52.8	52.8	< 0.005	5.27	5.28	—	264	264	0.01	0.04	0.30	276
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.06	0.60	0.00	0.00	90.2	90.2	0.00	9.01	9.01	—	90.5	90.5	0.01	< 0.005	0.17	92.0
Vendor	< 0.005	< 0.005	0.07	0.04	< 0.005	< 0.005	9.63	9.63	< 0.005	0.96	0.96	—	43.7	43.7	< 0.005	0.01	0.05	45.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	8.60	8.08	5.41	75.0	0.00	0.00	11,880	11,880	0.00	1,186	1,186	—	12,588	12,588	0.72	0.53	49.1	12,812
Vendor	0.54	0.27	8.20	3.96	0.04	0.08	1,269	1,269	0.08	127	127	—	5,755	5,755	0.26	0.84	13.9	6,026
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.53	7.92	6.83	71.1	0.00	0.00	11,880	11,880	0.00	1,186	1,186	—	11,866	11,866	0.84	0.53	1.27	12,045
Vendor	0.53	0.25	8.65	4.06	0.04	0.08	1,269	1,269	0.08	127	127	—	5,760	5,760	0.26	0.84	0.36	6,018
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.01	5.57	4.53	48.5	0.00	0.00	7,845	7,845	0.00	783	783	—	8,515	8,515	0.57	0.38	15.1	8,657
Vendor	0.39	0.19	6.07	2.87	0.03	0.06	838	838	0.06	83.7	83.8	—	4,112	4,112	0.19	0.60	4.28	4,301
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.10	1.02	0.83	8.85	0.00	0.00	1,432	1,432	0.00	143	143	—	1,410	1,410	0.09	0.06	2.51	1,433
Vendor	0.07	0.03	1.11	0.52	0.01	0.01	153	153	0.01	15.3	15.3	—	681	681	0.03	0.10	0.71	712
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	8.25	7.35	5.00	69.9	0.00	0.00	11,880	11,880	0.00	1,186	1,186	—	12,352	12,352	0.68	0.49	45.3	12,560
Vendor	0.50	0.23	7.84	3.77	0.04	0.08	1,269	1,269	0.08	127	127	—	5,632	5,632	0.22	0.80	12.3	5,889
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	7.80	7.20	6.38	66.3	0.00	0.00	11,880	11,880	0.00	1,186	1,186	—	11,645	11,645	0.80	0.53	1.18	11,823
Vendor	0.47	0.21	8.30	3.87	0.04	0.08	1,269	1,269	0.08	127	127	—	5,638	5,638	0.22	0.80	0.32	5,883
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.52	5.11	4.21	45.2	0.00	0.00	7,845	7,845	0.00	783	783	—	8,357	8,357	0.54	0.38	14.0	8,496
Vendor	0.35	0.15	5.81	2.71	0.03	0.06	838	838	0.06	83.7	83.8	—	4,024	4,024	0.16	0.57	3.79	4,203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.01	0.93	0.77	8.26	0.00	0.00	1,432	1,432	0.00	143	143	—	1,384	1,384	0.09	0.06	2.31	1,407
Vendor	0.06	0.03	1.06	0.49	0.01	0.01	153	153	0.01	15.3	15.3	—	666	666	0.03	0.10	0.63	696
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.69	7.16	4.55	65.4	0.00	0.00	11,880	11,880	0.00	1,186	1,186	—	12,127	12,127	0.68	0.49	41.6	12,332
Vendor	0.45	0.22	7.52	3.54	0.04	0.08	1,269	1,269	0.08	127	127	—	5,491	5,491	0.22	0.80	10.9	5,745
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.57	7.00	5.93	62.3	0.00	0.00	11,880	11,880	0.00	1,186	1,186	—	11,434	11,434	0.43	0.53	1.08	11,603
Vendor	0.43	0.21	7.94	3.67	0.04	0.08	1,269	1,269	0.08	127	127	—	5,497	5,497	0.22	0.80	0.28	5,742
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.31	4.93	3.90	42.4	0.00	0.00	7,866	7,866	0.00	785	785	—	8,228	8,228	0.25	0.38	12.9	8,360
Vendor	0.32	0.16	5.57	2.58	0.03	0.06	840	840	0.06	83.9	84.0	—	3,935	3,935	0.16	0.58	3.38	4,113
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.97	0.90	0.71	7.74	0.00	0.00	1,436	1,436	0.00	143	143	—	1,362	1,362	0.04	0.06	2.13	1,384
Vendor	0.06	0.03	1.02	0.47	0.01	0.01	153	153	0.01	15.3	15.3	—	651	651	0.03	0.10	0.56	681
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.13	9.22	0.02	0.20	—	0.20	0.18	—	0.18	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.12	1.68	< 0.005	0.04	—	0.04	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.33	6.85	4.10	61.2	0.00	0.00	11,880	11,880	0.00	1,186	1,186	—	11,913	11,913	0.31	0.49	38.0	12,104
Vendor	0.45	0.22	7.18	3.36	0.04	0.08	1,269	1,269	0.08	127	127	—	5,337	5,337	0.21	0.76	9.67	5,577
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	7.22	6.65	5.48	58.0	0.00	0.00	11,880	11,880	0.00	1,186	1,186	—	11,233	11,233	0.39	0.53	0.99	11,401
Vendor	0.43	0.20	7.58	3.48	0.04	0.08	1,269	1,269	0.08	127	127	—	5,343	5,343	0.21	0.76	0.25	5,576
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	5.10	4.72	3.57	39.7	0.00	0.00	7,845	7,845	0.00	783	783	—	8,061	8,061	0.25	0.38	11.7	8,191
Vendor	0.31	0.15	5.29	2.44	0.03	0.06	838	838	0.06	83.7	83.8	—	3,814	3,814	0.15	0.54	2.98	3,982
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.93	0.86	0.65	7.24	0.00	0.00	1,432	1,432	0.00	143	143	—	1,335	1,335	0.04	0.06	1.94	1,356
Vendor	0.06	0.03	0.97	0.45	0.01	0.01	153	153	0.01	15.3	15.3	—	631	631	0.02	0.09	0.49	659
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Building Construction (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.17	1.79	< 0.005	0.04	—	0.04	0.03	—	0.03	—	333	333	0.01	< 0.005	—	334
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	55.1	55.1	< 0.005	< 0.005	—	55.3

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	6.61	6.45	5.04	54.5	0.00	0.00	11,880	11,880	0.00	1,186	1,186	—	11,041	11,041	0.39	0.53	0.90	11,209
Vendor	0.39	0.20	7.30	3.33	0.04	0.08	1,269	1,269	0.08	127	127	—	5,180	5,180	0.17	0.76	0.22	5,410
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.95	0.88	0.63	7.20	0.00	0.00	1,526	1,526	0.00	152	152	—	1,541	1,541	0.04	0.07	2.08	1,565
Vendor	0.05	0.03	0.99	0.45	0.01	0.01	163	163	0.01	16.3	16.3	—	719	719	0.02	0.11	0.51	752
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.16	0.12	1.31	0.00	0.00	278	278	0.00	27.8	27.8	—	255	255	0.01	0.01	0.34	259
Vendor	0.01	0.01	0.18	0.08	< 0.005	< 0.005	29.7	29.7	< 0.005	2.97	2.97	—	119	119	< 0.005	0.02	0.08	124
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Paving (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.77	0.64	6.28	9.90	0.01	0.22	—	0.22	0.20	—	0.20	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	6.28	9.90	0.01	0.22	—	0.22	0.20	—	0.20	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.29	2.03	< 0.005	0.05	—	0.05	0.04	—	0.04	—	310	310	0.01	< 0.005	—	311
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.24	0.37	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.4	51.4	< 0.005	< 0.005	—	51.6
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.03	0.49	0.00	0.00	100	100	0.00	10.0	10.0	—	99.0	99.0	< 0.005	< 0.005	0.29	101
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.46	0.00	0.00	100	100	0.00	10.0	10.0	—	93.3	93.3	< 0.005	< 0.005	0.01	94.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	19.1	19.1	0.00	1.90	1.90	—	19.3	19.3	< 0.005	< 0.005	0.03	19.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	3.48	3.48	0.00	0.35	0.35	—	3.19	3.19	< 0.005	< 0.005	< 0.005	3.24
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Architectural Coating (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.12	0.10	0.78	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	872	872	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.78	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	872	872	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.4	27.4	< 0.005	< 0.005	—	27.5
Architectural Coatings	179	179	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.54	4.54	< 0.005	< 0.005	—	4.56
Architectural Coatings	32.7	32.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.40	1.30	0.74	11.5	0.00	0.00	2,376	2,376	0.00	237	237	—	2,342	2,342	0.05	0.10	6.91	2,379
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.32	1.29	1.01	10.9	0.00	0.00	2,376	2,376	0.00	237	237	—	2,208	2,208	0.08	0.11	0.18	2,242
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.28	0.26	0.19	2.13	0.00	0.00	451	451	0.00	45.1	45.1	—	456	456	0.01	0.02	0.61	463
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.39	0.00	0.00	82.4	82.4	0.00	8.23	8.23	—	75.5	75.5	< 0.005	< 0.005	0.10	76.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	126	126	0.63	0.08	—	164
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	44.0	44.0	0.22	0.03	—	57.4
Total	—	—	—	—	—	—	—	—	—	—	—	—	170	170	0.85	0.10	—	222
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	126	126	0.63	0.08	—	164
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	44.0	44.0	0.22	0.03	—	57.4
Total	—	—	—	—	—	—	—	—	—	—	—	—	170	170	0.85	0.10	—	222
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	20.8	20.8	0.10	0.01	—	27.2
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	7.28	7.28	0.04	< 0.005	—	9.50
Total	—	—	—	—	—	—	—	—	—	—	—	—	28.1	28.1	0.14	0.02	—	36.7

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.73	0.86	14.7	6.27	0.09	1.19	—	1.19	1.19	—	1.19	—	18,713	18,713	1.66	0.04	—	18,765
Strip Mall	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	560	560	0.05	< 0.005	—	562
Total	1.78	0.89	15.2	6.67	0.10	1.23	—	1.23	1.23	—	1.23	—	19,273	19,273	1.71	0.04	—	19,327
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.73	0.86	14.7	6.27	0.09	1.19	—	1.19	1.19	—	1.19	—	18,713	18,713	1.66	0.04	—	18,765
Strip Mall	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	560	560	0.05	< 0.005	—	562
Total	1.78	0.89	15.2	6.67	0.10	1.23	—	1.23	1.23	—	1.23	—	19,273	19,273	1.71	0.04	—	19,327
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.31	0.16	2.69	1.14	0.02	0.22	—	0.22	0.22	—	0.22	—	3,098	3,098	0.27	0.01	—	3,107

Strip Mall	0.01	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	92.7	92.7	0.01	< 0.005	—	93.0
Total	0.32	0.16	2.78	1.22	0.02	0.22	—	0.22	0.22	—	0.22	—	3,191	3,191	0.28	0.01	—	3,200

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	54.2	54.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	5.27	5.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	14.4	13.5	1.34	146	0.01	0.08	—	0.08	0.06	—	0.06	—	407	407	0.02	< 0.005	—	408
Total	73.9	73.0	1.34	146	0.01	0.08	—	0.08	0.06	—	0.06	0.00	407	407	0.02	< 0.005	—	408
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	54.2	54.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	5.27	5.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	59.5	59.5	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	9.90	9.90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.96	0.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.79	1.69	0.17	18.2	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.1	46.1	< 0.005	< 0.005	—	46.3
Total	12.7	12.6	0.17	18.2	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	46.1	46.1	< 0.005	< 0.005	—	46.3

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	196	10.1	206	20.1	0.48	—	854
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	9.79	0.50	10.3	1.01	0.02	—	42.7
Total	—	—	—	—	—	—	—	—	—	—	—	206	10.6	216	21.2	0.51	—	896

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	196	10.1	206	20.1	0.48	—	854
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	9.79	0.50	10.3	1.01	0.02	—	42.7
Total	—	—	—	—	—	—	—	—	—	—	—	206	10.6	216	21.2	0.51	—	896
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	32.4	1.66	34.1	3.34	0.08	—	141
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.62	0.08	1.70	0.17	< 0.005	—	7.06
Total	—	—	—	—	—	—	—	—	—	—	—	34.1	1.75	35.8	3.50	0.08	—	148

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,227	0.00	1,227	123	0.00	—	4,293
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	415	0.00	415	41.4	0.00	—	1,451
Total	—	—	—	—	—	—	—	—	—	—	—	1,642	0.00	1,642	164	0.00	—	5,744

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1,227	0.00	1,227	123	0.00	—	4,293
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	415	0.00	415	41.4	0.00	—	1,451
Total	—	—	—	—	—	—	—	—	—	—	—	1,642	0.00	1,642	164	0.00	—	5,744
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	711
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	68.7	0.00	68.7	6.86	0.00	—	240
Total	—	—	—	—	—	—	—	—	—	—	—	272	0.00	272	27.2	0.00	—	951

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.1	16.1
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.82	1.82
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.9	17.9

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.1	16.1
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.82	1.82
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.9	17.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.66	2.66
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.30	0.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.96	2.96

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	2/1/2025	5/10/2025	5.00	70.0	—
Site Preparation	Site Preparation	5/11/2025	7/6/2025	5.00	40.0	—
Grading	Grading	7/7/2025	12/8/2025	5.00	110	—
Building Construction	Building Construction	12/9/2025	3/12/2030	5.00	1,110	—
Paving	Paving	3/13/2030	6/26/2030	5.00	75.0	—
Architectural Coating	Architectural Coating	6/27/2030	10/10/2030	5.00	75.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73

Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	9.47	LDA,LDT1,LDT2
Demolition	Vendor	—	6.03	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	9.47	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.03	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	9.47	LDA,LDT1,LDT2
Grading	Vendor	—	6.03	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1,775	9.47	LDA,LDT1,LDT2
Building Construction	Vendor	298	6.03	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	9.47	LDA,LDT1,LDT2
Paving	Vendor	—	6.03	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	355	9.47	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.03	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	4,539,240	1,513,080	438,867	146,289	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	—	—
Site Preparation	—	—	60.0	0.00	—
Grading	—	—	330	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Strip Mall	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	9.99	0.03	< 0.005
2026	0.00	9.99	0.03	< 0.005
2027	0.00	9.99	0.03	< 0.005
2028	0.00	9.99	0.03	< 0.005
2029	0.00	9.99	0.03	< 0.005
2030	0.00	9.99	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	0.00	0.00	0.00	0.00	50,758	50,758	50,758	18,526,670

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	2335
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0

Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
4539240	1,513,080	438,867	146,289	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	6,930,037	6.63	0.0330	0.0040	58,389,678
Strip Mall	2,421,724	6.63	0.0330	0.0040	1,747,532

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	102,273,000	0.00
Strip Mall	5,110,000	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	2,277	—
Strip Mall	769	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	6.75	annual days of extreme heat
Extreme Precipitation	4.10	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	31.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	13.6

AQ-PM	3.01
AQ-DPM	14.5
Drinking Water	38.7
Lead Risk Housing	52.8
Pesticides	0.00
Toxic Releases	0.63
Traffic	5.50
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	87.3
Haz Waste Facilities/Generators	35.6
Impaired Water Bodies	0.00
Solid Waste	35.7
Sensitive Population	—
Asthma	34.1
Cardio-vascular	23.1
Low Birth Weights	5.34
Socioeconomic Factor Indicators	—
Education	6.95
Housing	44.5
Linguistic	30.7
Poverty	22.9
Unemployment	21.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—

Above Poverty	72.11600154
Employed	31.23315796
Median HI	49.30065443
Education	—
Bachelor's or higher	82.43295265
High school enrollment	100
Preschool enrollment	78.10855896
Transportation	—
Auto Access	28.94905685
Active commuting	75.64480944
Social	—
2-parent households	40.67753112
Voting	91.65918132
Neighborhood	—
Alcohol availability	27.62735789
Park access	81.35506224
Retail density	78.67316823
Supermarket access	78.37803157
Tree canopy	77.60810984
Housing	—
Homeownership	29.462338
Housing habitability	74.7337354
Low-inc homeowner severe housing cost burden	78.23687925
Low-inc renter severe housing cost burden	78.21121519
Uncrowded housing	82.07365584
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.0

Asthma ER Admissions	70.6
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	85.9
Cognitively Disabled	60.3
Physically Disabled	6.8
Heart Attack ER Admissions	88.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	71.0
Children	39.2
Elderly	4.6
English Speaking	80.0
Foreign-born	5.1

Outdoor Workers	83.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	29.7
Traffic Density	3.7
Traffic Access	0.0
Other Indices	—
Hardship	26.5
Other Decision Support	—
2016 Voting	86.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	5.00
Healthy Places Index Score for Project Location (b)	72.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Utility Information	Automatically enrolled into 3CE
Land Use	Based on average household size of 2.12 people in Pacific Grove
Operations: Water and Waste Water	Based on the wastewater consumption data in Section 4.16, Utilities, of this EIR, the project is expected to generate 280,200 gallons of wastewater per day from residential uses and 14,000 gallons per day from commercial uses.
Operations: Solid Waste	Based on the soild consumption data in Section 4.16, Utilities, of this EIR, the project is expected to generate 5.31 pounds per day of soild waste per dwelling unit and 10.53 pounds per day of soild waste per employee.
Operations: Road Dust	Operation of the project would be on paved roads
Construction: On-Road Fugitive Dust	Roads would be paved during project construction

Pacific Grove Housing Element Update - Sample Individual Project Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Pacific Grove Housing Element Update - Sample Individual Project
Construction Start Date	2/1/2025
Operational Year	2031
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	27.6
Location	36.62270098795716, -121.92084846987805
County	Monterey
City	Pacific Grove
Air District	Monterey Bay ARD
Air Basin	North Central Coast
TAZ	3239
EDFZ	6
Electric Utility	Central Coast Community Energy
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	589	Dwelling Unit	15.5	565,440	0.00	—	1,238	—

Strip Mall	73.1	1000sqft	1.68	73,145	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.75	3.32	14.1	34.4	0.03	0.45	3.37	3.82	0.42	0.81	1.22	—	7,110	7,110	0.35	0.36	17.2	7,244
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	843	839	142	142	0.36	4.83	54.3	59.2	4.49	13.1	17.6	—	51,224	51,224	2.75	4.70	1.97	52,696
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	48.4	47.9	16.3	27.1	0.04	0.53	4.84	5.37	0.49	1.12	1.61	—	6,999	6,999	0.37	0.48	6.26	7,156
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.83	8.74	2.98	4.94	0.01	0.10	0.88	0.98	0.09	0.20	0.29	—	1,159	1,159	0.06	0.08	1.04	1,185

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	3.75	3.32	14.1	34.4	0.03	0.45	3.37	3.82	0.42	0.81	1.22	—	7,110	7,110	0.35	0.36	17.2	7,244
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	843	839	142	142	0.36	4.83	54.3	59.2	4.49	13.1	17.6	—	51,224	51,224	2.75	4.70	1.97	52,696
2026	3.56	3.13	13.8	31.9	0.03	0.40	3.37	3.77	0.37	0.81	1.17	—	6,840	6,840	0.37	0.36	0.41	6,958
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	48.4	47.9	16.3	27.1	0.04	0.53	4.84	5.37	0.49	1.12	1.61	—	6,999	6,999	0.37	0.48	6.26	7,156
2026	0.60	0.52	2.29	5.23	0.01	0.07	0.56	0.62	0.06	0.13	0.20	—	1,153	1,153	0.06	0.06	1.15	1,174
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	8.83	8.74	2.98	4.94	0.01	0.10	0.88	0.98	0.09	0.20	0.29	—	1,159	1,159	0.06	0.08	1.04	1,185
2026	0.11	0.10	0.42	0.96	< 0.005	0.01	0.10	0.11	0.01	0.02	0.04	—	191	191	0.01	0.01	0.19	194

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	20.2	19.5	6.87	66.2	0.12	0.39	8.96	9.34	0.38	2.27	2.65	418	14,306	14,724	42.6	0.35	27.8	15,922
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.6	16.1	6.99	25.5	0.11	0.36	8.96	9.32	0.36	2.27	2.63	418	13,775	14,192	42.6	0.38	5.11	15,376
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	19.1	18.5	7.05	50.7	0.11	0.38	8.80	9.18	0.37	2.23	2.60	418	13,881	14,299	42.6	0.37	14.6	15,489
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.48	3.37	1.29	9.25	0.02	0.07	1.61	1.67	0.07	0.41	0.48	69.2	2,298	2,367	7.06	0.06	2.41	2,564

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.17	0.90	2.69	27.8	0.09	0.05	8.96	9.01	0.05	2.27	2.32	—	9,300	9,300	0.18	0.30	23.3	9,417
Area	18.6	18.4	0.34	36.7	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	102	102	< 0.005	< 0.005	—	103
Energy	0.45	0.22	3.84	1.68	0.02	0.31	—	0.31	0.31	—	0.31	—	4,903	4,903	0.64	0.03	—	4,930
Water	—	—	—	—	—	—	—	—	—	—	—	7.37	0.38	7.75	0.76	0.02	—	32.1
Waste	—	—	—	—	—	—	—	—	—	—	—	411	0.00	411	41.0	0.00	—	1,437
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.51	4.51
Total	20.2	19.5	6.87	66.2	0.12	0.39	8.96	9.34	0.38	2.27	2.65	418	14,306	14,724	42.6	0.35	27.8	15,922
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.17	0.91	3.16	23.8	0.09	0.05	8.96	9.01	0.05	2.27	2.32	—	8,871	8,871	0.17	0.33	0.60	8,973
Area	15.0	15.0	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.45	0.22	3.84	1.68	0.02	0.31	—	0.31	0.31	—	0.31	—	4,903	4,903	0.64	0.03	—	4,930
Water	—	—	—	—	—	—	—	—	—	—	—	7.37	0.38	7.75	0.76	0.02	—	32.1
Waste	—	—	—	—	—	—	—	—	—	—	—	411	0.00	411	41.0	0.00	—	1,437
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.51	4.51
Total	16.6	16.1	6.99	25.5	0.11	0.36	8.96	9.32	0.36	2.27	2.63	418	13,775	14,192	42.6	0.38	5.11	15,376
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.16	0.90	2.98	23.8	0.09	0.05	8.80	8.85	0.05	2.23	2.28	—	8,907	8,907	0.18	0.32	10.1	9,016
Area	17.5	17.3	0.23	25.2	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	70.2	70.2	< 0.005	< 0.005	—	70.4
Energy	0.45	0.22	3.84	1.68	0.02	0.31	—	0.31	0.31	—	0.31	—	4,903	4,903	0.64	0.03	—	4,930
Water	—	—	—	—	—	—	—	—	—	—	—	7.37	0.38	7.75	0.76	0.02	—	32.1
Waste	—	—	—	—	—	—	—	—	—	—	—	411	0.00	411	41.0	0.00	—	1,437

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.51	4.51
Total	19.1	18.5	7.05	50.7	0.11	0.38	8.80	9.18	0.37	2.23	2.60	418	13,881	14,299	42.6	0.37	14.6	15,489
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.21	0.16	0.54	4.35	0.02	0.01	1.61	1.62	0.01	0.41	0.42	—	1,475	1,475	0.03	0.05	1.67	1,493
Area	3.19	3.16	0.04	4.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	11.6	11.6	< 0.005	< 0.005	—	11.7
Energy	0.08	0.04	0.70	0.31	< 0.005	0.06	—	0.06	0.06	—	0.06	—	812	812	0.11	0.01	—	816
Water	—	—	—	—	—	—	—	—	—	—	—	1.22	0.06	1.28	0.13	< 0.005	—	5.32
Waste	—	—	—	—	—	—	—	—	—	—	—	68.0	0.00	68.0	6.79	0.00	—	238
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	0.75
Total	3.48	3.37	1.29	9.25	0.02	0.07	1.61	1.67	0.07	0.41	0.48	69.2	2,298	2,367	7.06	0.06	2.41	2,564

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	32.0	32.0	—	4.85	4.85	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.09	< 0.005	0.05	—	0.05	0.05	—	0.05	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	1.75	1.75	—	0.27	0.27	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.32	0.32	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	0.01	< 0.005	0.01	104
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	2.19	0.56	35.2	12.7	0.17	0.49	6.65	7.13	0.49	1.86	2.35	—	26,265	26,265	1.60	4.15	1.40	27,544
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.63	5.63	< 0.005	< 0.005	0.01	5.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.12	0.03	1.90	0.69	0.01	0.03	0.36	0.39	0.03	0.10	0.13	—	1,439	1,439	0.09	0.23	1.28	1,510

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.93	0.93	< 0.005	< 0.005	< 0.005	0.95
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.35	0.13	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	238	238	0.01	0.04	0.21	250

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.87	0.83	< 0.005	0.04	—	0.04	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.75	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	119	119	0.01	0.01	0.01	121
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.28	3.28	< 0.005	< 0.005	0.01	3.34
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.54	0.54	< 0.005	< 0.005	< 0.005	0.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.26	2.44	2.33	0.01	0.10	—	0.10	0.09	—	0.09	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	—	0.30	0.30	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.06	0.05	0.45	0.42	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	0.86	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	136	136	0.01	0.01	0.02	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	0.02	11.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.86	1.86	< 0.005	< 0.005	< 0.005	1.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.83	8.52	0.02	0.28	—	0.28	0.26	—	0.26	—	1,567	1,567	0.06	0.01	—	1,573
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.25	1.56	< 0.005	0.05	—	0.05	0.05	—	0.05	—	259	259	0.01	< 0.005	—	260
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.27	2.13	1.48	20.3	0.00	0.00	2.99	2.99	0.00	0.70	0.70	—	3,235	3,235	0.18	0.13	13.4	3,293
Vendor	0.14	0.07	2.16	1.07	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,477	1,477	0.07	0.21	3.85	1,546
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.25	2.10	1.94	19.3	0.00	0.00	2.99	2.99	0.00	0.70	0.70	—	3,049	3,049	0.22	0.13	0.35	3,095
Vendor	0.14	0.07	2.28	1.09	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,478	1,478	0.07	0.21	0.10	1,543
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.44	1.34	1.12	12.0	0.00	0.00	1.92	1.92	0.00	0.45	0.45	—	2,002	2,002	0.13	0.09	3.78	2,035
Vendor	0.09	0.05	1.46	0.71	0.01	0.01	0.24	0.26	0.01	0.07	0.08	—	966	966	0.04	0.14	1.09	1,009
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.26	0.25	0.20	2.18	0.00	0.00	0.35	0.35	0.00	0.08	0.08	—	331	331	0.02	0.01	0.63	337
Vendor	0.02	0.01	0.27	0.13	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	160	160	0.01	0.02	0.18	167
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.66	2.18	< 0.005	0.06	—	0.06	0.06	—	0.06	—	403	403	0.02	< 0.005	—	405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	66.8	66.8	< 0.005	< 0.005	—	67.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.15	2.00	1.72	17.9	0.00	0.00	2.99	2.99	0.00	0.70	0.70	—	2,992	2,992	0.21	0.13	0.32	3,037
Vendor	0.13	0.06	2.18	1.02	0.01	0.02	0.38	0.40	0.02	0.10	0.12	—	1,451	1,451	0.06	0.21	0.09	1,516
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.36	0.33	0.27	2.88	0.00	0.00	0.49	0.49	0.00	0.12	0.12	—	506	506	0.03	0.02	0.90	514
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	244	244	0.01	0.04	0.25	255
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.53	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	83.7	83.7	0.01	< 0.005	0.15	85.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.4	40.4	< 0.005	0.01	0.04	42.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.65	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	102	102	0.01	< 0.005	0.01	104
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.63	5.63	< 0.005	< 0.005	0.01	5.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.93	0.93	< 0.005	< 0.005	< 0.005	0.95
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	824	824	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	45.2	45.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22

Architectural Coating	8.24	8.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.42	0.39	3.85	0.00	0.00	0.60	0.60	0.00	0.14	0.14	—	610	610	0.04	0.03	0.07	619
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.6	33.6	< 0.005	< 0.005	0.06	34.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.56	5.56	< 0.005	< 0.005	0.01	5.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	31.8	31.8	0.16	0.02	—	41.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	11.0	11.0	0.05	0.01	—	14.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	42.8	42.8	0.21	0.03	—	55.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	31.8	31.8	0.16	0.02	—	41.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	11.0	11.0	0.05	0.01	—	14.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	42.8	42.8	0.21	0.03	—	55.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	5.26	5.26	0.03	< 0.005	—	6.86
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	1.82	1.82	0.01	< 0.005	—	2.37
Total	—	—	—	—	—	—	—	—	—	—	—	—	7.08	7.08	0.04	< 0.005	—	9.23

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.44	0.22	3.72	1.58	0.02	0.30	—	0.30	0.30	—	0.30	—	4,720	4,720	0.42	0.01	—	4,733
Strip Mall	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	140	140	0.01	< 0.005	—	140
Total	0.45	0.22	3.84	1.68	0.02	0.31	—	0.31	0.31	—	0.31	—	4,860	4,860	0.43	0.01	—	4,874
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.44	0.22	3.72	1.58	0.02	0.30	—	0.30	0.30	—	0.30	—	4,720	4,720	0.42	0.01	—	4,733
Strip Mall	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	140	140	0.01	< 0.005	—	140
Total	0.45	0.22	3.84	1.68	0.02	0.31	—	0.31	0.31	—	0.31	—	4,860	4,860	0.43	0.01	—	4,874
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.08	0.04	0.68	0.29	< 0.005	0.05	—	0.05	0.05	—	0.05	—	782	782	0.07	< 0.005	—	784
Strip Mall	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.2	23.2	< 0.005	< 0.005	—	23.2
Total	0.08	0.04	0.70	0.31	< 0.005	0.06	—	0.06	0.06	—	0.06	—	805	805	0.07	< 0.005	—	807

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	13.7	13.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.33	1.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.62	3.41	0.34	36.7	< 0.005	0.02	—	0.02	0.02	—	0.02	—	102	102	< 0.005	< 0.005	—	103
Total	18.6	18.4	0.34	36.7	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	102	102	< 0.005	< 0.005	—	103
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	13.7	13.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.33	1.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	15.0	15.0	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	2.49	2.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	0.24	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.45	0.43	0.04	4.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.6	11.6	< 0.005	< 0.005	—	11.7
Total	3.19	3.16	0.04	4.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	11.6	11.6	< 0.005	< 0.005	—	11.7

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.92	0.25	5.17	0.51	0.01	—	21.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2.45	0.13	2.57	0.25	0.01	—	10.7
Total	—	—	—	—	—	—	—	—	—	—	—	7.37	0.38	7.75	0.76	0.02	—	32.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	4.92	0.25	5.17	0.51	0.01	—	21.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2.45	0.13	2.57	0.25	0.01	—	10.7
Total	—	—	—	—	—	—	—	—	—	—	—	7.37	0.38	7.75	0.76	0.02	—	32.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	—	0.81	0.04	0.86	0.08	< 0.005	—	3.55
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.41	0.02	0.43	0.04	< 0.005	—	1.77
Total	—	—	—	—	—	—	—	—	—	—	—	1.22	0.06	1.28	0.13	< 0.005	—	5.32

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	307	0.00	307	30.7	0.00	—	1,074
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	104	0.00	104	10.4	0.00	—	363
Total	—	—	—	—	—	—	—	—	—	—	—	411	0.00	411	41.0	0.00	—	1,437
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	307	0.00	307	30.7	0.00	—	1,074
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	104	0.00	104	10.4	0.00	—	363
Total	—	—	—	—	—	—	—	—	—	—	—	411	0.00	411	41.0	0.00	—	1,437
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	50.8	0.00	50.8	5.08	0.00	—	178

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	17.2	0.00	17.2	1.72	0.00	—	60.1
Total	—	—	—	—	—	—	—	—	—	—	—	68.0	0.00	68.0	6.79	0.00	—	238

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.05	4.05
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.46	0.46
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.51	4.51
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.05	4.05
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.46	0.46
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.51	4.51
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.67	0.67
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.75	0.75

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	2/1/2025	3/1/2025	5.00	20.0	—
Site Preparation	Site Preparation	2/1/2025	2/14/2025	5.00	10.0	—
Grading	Grading	2/1/2025	3/14/2025	5.00	30.0	—
Building Construction	Building Construction	2/1/2025	3/27/2026	5.00	300	—
Paving	Paving	2/1/2025	2/28/2025	5.00	20.0	—
Architectural Coating	Architectural Coating	2/1/2025	2/28/2025	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20

Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	9.47	LDA,LDT1,LDT2
Demolition	Vendor	—	6.03	HHDT,MHDT
Demolition	Hauling	367	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	9.47	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.03	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	9.47	LDA,LDT1,LDT2
Grading	Vendor	—	6.03	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT

Building Construction	—	—	—	—
Building Construction	Worker	447	9.47	LDA,LDT1,LDT2
Building Construction	Vendor	75.0	6.03	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	9.47	LDA,LDT1,LDT2
Paving	Vendor	—	6.03	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	89.5	9.47	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.03	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,145,016	381,672	109,718	36,573	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	638,585	—
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	90.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Strip Mall	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	9.99	0.03	< 0.005
2026	0.00	9.99	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	0.00	0.00	0.00	0.00	12,689	12,689	12,689	4,631,631

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	589
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1145016	381,672	109,718	36,573	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	1,748,091	6.63	0.0330	0.0040	14,728,702
Strip Mall	605,435	6.63	0.0330	0.0040	436,886

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	2,568,250	0.00
Strip Mall	1,277,500	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	569	—
Strip Mall	192	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	6.75	annual days of extreme heat
Extreme Precipitation	4.10	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	31.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2

Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	13.6
AQ-PM	3.01
AQ-DPM	14.5
Drinking Water	38.7
Lead Risk Housing	52.8
Pesticides	0.00
Toxic Releases	0.63
Traffic	5.50
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	87.3

Haz Waste Facilities/Generators	35.6
Impaired Water Bodies	0.00
Solid Waste	35.7
Sensitive Population	—
Asthma	34.1
Cardio-vascular	23.1
Low Birth Weights	5.34
Socioeconomic Factor Indicators	—
Education	6.95
Housing	44.5
Linguistic	30.7
Poverty	22.9
Unemployment	21.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	72.11600154
Employed	31.23315796
Median HI	49.30065443
Education	—
Bachelor's or higher	82.43295265
High school enrollment	100
Preschool enrollment	78.10855896
Transportation	—
Auto Access	28.94905685
Active commuting	75.64480944

Social	—
2-parent households	40.67753112
Voting	91.65918132
Neighborhood	—
Alcohol availability	27.62735789
Park access	81.35506224
Retail density	78.67316823
Supermarket access	78.37803157
Tree canopy	77.60810984
Housing	—
Homeownership	29.462338
Housing habitability	74.7337354
Low-inc homeowner severe housing cost burden	78.23687925
Low-inc renter severe housing cost burden	78.21121519
Uncrowded housing	82.07365584
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.0
Asthma ER Admissions	70.6
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	85.9
Cognitively Disabled	60.3
Physically Disabled	6.8

Heart Attack ER Admissions	88.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	71.0
Children	39.2
Elderly	4.6
English Speaking	80.0
Foreign-born	5.1
Outdoor Workers	83.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	29.7
Traffic Density	3.7
Traffic Access	0.0
Other Indices	—
Hardship	26.5
Other Decision Support	—
2016 Voting	86.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	5.00
Healthy Places Index Score for Project Location (b)	72.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Utility Information	Individual projects would be enrolled into 3CE
Land Use	Sample individual project. Assuming one residential project and one commercial project would occur each year and buidout would be completed on average in 4 years, rather than 8 years.
Construction: Construction Phases	Overlap all construction phases to conservatively estimate emissions
Construction: On-Road Fugitive Dust	All access roads would be paved for each housing sites
Operations: Road Dust	Access roads would be paved during project operations
Operations: Water and Waste Water	Based on the wastewater consumption data in Section 4.16, Utilities, of this EIR, the project is expected to generate 280,200 gallons of wastewater per day from residential uses and 14,000 gallons per day from commercial uses.

Operations: Solid Waste	Based on the soild consumption data in Section 4.16, Utilities, of this EIR, the project is expected to generate 5.31 pounds per day of soild waste per dwelling unit and 10.53 pounds per day of soild waste per employee.

Appendix G

Biological Resources Database Query Results

Special-Status Plant and Lichen Species in the Regional Vicinity of the Project Site

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Agrostis lacuna-vernalis vernal pool bent grass	None/None G1/S1 1B.1	Annual herb. Vernal pools. In mima mound areas or on the margins of vernal pools. Elevations: 375-475ft. (115-145m.) Blooms Apr-May.	Not Expected	Vernal Pool habitats are not present and there are no known occurrences within five miles.
Allium hickmanii Hickman's onion	None/None G2/S2 1B.2	Perennial bulbiferous herb. Chaparral, closed-cone coniferous forest, coastal prairie, coastal scrub, valley and foothill grassland. Sandy loam, damp ground and vernal swales; mostly in grassland though can be associated with chaparral or woodland. Elevations: 15-655ft. (5-200m.) Blooms Mar-May.	High Potential	There are 14 known occurrences within five miles, however the City is largely developed, with few undeveloped areas with natural vegetation communities.
Aphyllon robbinsii Robbins' broomrape	None/None G1/S1 1B.1	Coastal bluff scrub, coastal dunes (possibly). Rocky or sandy soil on bluffs, cliffs, landslides, or shell mounds; possibly on sand dunes. Only confirmed host is Eriophyllum staechadifolium. 0-100m. Blooms Apr-Jul.	Not Expected	There is one known occurrence within five miles and coastal dunes with natural vegetation communities are present, however this is a historical occurrence from 1935 and the exact location is unknown. Additionally, this species is only known from six locations.
Arctostaphylos edmundsii Little Sur manzanita	None/None G2/S2 1B.2	Perennial evergreen shrub. Chaparral, coastal bluff scrub. Sandy. Elevations: 35-345ft. (10-105m.) Blooms (May)Nov-Apr.	Not Expected	Coastal dunes with natural vegetation communities are present, however there are no known occurrences within five miles.
Arctostaphylos hookeri ssp. *hookeri* Hooker's manzanita	None/None G3T2/S2 1B.2	Perennial evergreen shrub. Chaparral, cismontane woodland, closed-cone coniferous forest, coastal scrub. Sandy. Elevations: 195-1760ft. (60-536m.) Blooms Jan-Jun.	Presumed Present	There is one known occurrence within the City at Rip Van Winkle Open Space, and eight within five miles. Coniferous forest and coastal dunes with natural vegetation communities are present.
Arctostaphylos montereyensis Toro manzanita	None/None G2?/S2? 1B.2	Perennial evergreen shrub. Chaparral, cismontane woodland, coastal scrub. Sandy. Elevations: 100-2395ft. (30-730m.) Blooms Feb-Mar.	Not Expected	Coastal dunes with natural vegetation communities are present, however there are no known occurrences within five miles.
Arctostaphylos pajaroensis Pajaro manzanita	None/None G1/S1 1B.1	Perennial evergreen shrub. Chaparral. Sandy soils. Elevations: 100-2495ft. (30-760m.) Blooms Dec-Mar.	Presumed Present	There is one known occurrence within the City adjacent to the Del Monte Forest, and four within five miles. Coniferous forest and coastal dunes with natural vegetation communities are present.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Arctostaphylos pumila sandmat manzanita	None/None G1/S1 1B.2	Perennial evergreen shrub. Chaparral, cismontane woodland, closed-cone coniferous forest, coastal dunes, coastal scrub. Openings, sandy. Elevations: 10-675ft. (3-205m.) Blooms Feb-May.	Presumed Present	There are three known occurrences within the City at Rip Van Winkle Open Space, Asilomar State Beach, and Asilomar Dunes. Coniferous forest and coastal dunes with natural vegetation communities are present.
Astragalus tener var. *titi* coastal dunes milk-vetch	FE/SE G2T1/S1 1B.1	Annual herb. Coastal bluff scrub, coastal dunes, coastal prairie. Moist, sandy depressions of bluffs or dunes along and near the Pacific Ocean; one site on a clay terrace. Elevations: 5-165ft. (1-50m.) Blooms Mar-May.	Low Potential	There is one known occurrence within five miles and coastal dunes with natural vegetation communities are present.
Castilleja ambigua var. *insalutata* pink Johnny-nip	None/None G4T2/S2 1B.1	Annual herb (hemiparasitic). Coastal prairie, coastal scrub. Wet or moist coastal strand or scrub habitats. Elevations: 0-330ft. (0-100m.) Blooms May-Aug.	Not Expected	Coastal dunes with natural vegetation communities are present, however there are no known occurrences within five miles.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	None/None G3T2/S2 1B.1	Annual herb. Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. Elevations: 0-755ft. (0-230m.) Blooms May-Oct(Nov).	Not Expected	There are no known occurrences within five miles, and valley and foothill grasslands with alkaline soils are not present.
Chorizanthe minutiflora Fort Ord spineflower	None/None G1/S1 1B.2	Annual herb. Chaparral, coastal scrub. Openings, sandy. Elevations: 180-490ft. (55-150m.) Blooms Apr-Jul.	Not Expected	Coastal dunes with natural vegetation communities are present, however there are no known occurrences within five miles.
Chorizanthe pungens var. *pungens* Monterey spineflower	FT/None G2T2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland. Sandy. Elevations: 10-1475ft. (3-450m.) Blooms Apr-Jun(Jul-Aug).	Presumed Present	There is one known occurrence within the City at Asilomar State Beach, and Asilomar Dunes, and nine within five miles. Coastal dunes with natural vegetation communities are present.
Clarkia jolonensis Jolon clarkia	None/None G2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, coastal scrub, riparian woodland. Elevations: 65-2165ft. (20-660m.) Blooms Apr-Jun.	Not Expected	There is one known occurrence within the City at Asilomar State Beach, and Asilomar Dunes, and two within five miles, however all three of these occurrences are historical (1903, 1912) and extirpated. Coastal dunes with natural vegetation communities are present.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Collinsia multicolor San Francisco collinsia	None/None G2/S2 1B.2	Annual herb. Closed-cone coniferous forest, coastal scrub. Serpentinite (sometimes). Elevations: 100-900ft. (30-275m.) Blooms (Feb)Mar-May.	Not Expected	There is one known occurrence within the City from an unspecified location, and one within five miles, however the occurrence within the City is historical (1903) and the other is extirpated. Coastal dunes with natural vegetation communities are present.
Cordylanthus rigidus ssp. *littoralis* seaside bird's-beak	None/SE G5T2/S2 1B.1	Annual herb (hemiparasitic). Chaparral, cismontane woodland, closed-cone coniferous forest, coastal dunes, coastal scrub. Disturbed areas (often), sandy. Elevations: 0-1690ft. (0-515m.) Blooms Apr-Oct.	Low Potential	There are five known occurrences within five miles and coastal dunes with natural vegetation communities are present.
Delphinium californicum ssp. *interius* Hospital Canyon larkspur	None/None G3T3/S3 1B.2	Perennial herb. Chaparral, cismontane woodland, coastal scrub. In wet, boggy meadows, openings in chaparral and in canyons. Elevations: 640-3595ft. (195-1095m.) Blooms Apr-Jun.	Not Expected	Coastal dunes with natural vegetation communities are present, however there are no known occurrences within five miles.
Delphinium hutchinsoniae Hutchinson's larkspur	None/None G2/S2 1B.2	Perennial herb. Broadleafed upland forest, chaparral, coastal prairie, coastal scrub. On semi-shaded, slightly moist slopes, usually west-facing. Elevations: 0-1400ft. (0-427m.) Blooms Mar-Jun.	Not Expected	There is one known occurrence within the City from an unspecified location, and one within five miles, however both occurrences are historical (1907, 1949). Coastal dunes with natural vegetation communities are present.
Eriastrum tracyi Tracy's eriastrum	None/SR G3Q/S3 3.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Gravelly shale or clay; often in open areas. Elevations: 1035-5840ft. (315-1780m.) Blooms May-Jul.	Not Expected	Chaparral, cismontane woodland, valley and foothill grasslands with gravelly shale are not present, and there are no known occurrences within five miles.
Ericameria fasciculata Eastwood's goldenbush	None/None G2/S2 1B.1	Perennial evergreen shrub. Chaparral, closed-cone coniferous forest, coastal dunes, coastal scrub. In sandy openings. Elevations: 100-900ft. (30-275m.) Blooms Jul-Oct.	Presumed Present	There is one known occurrence within the City at a reservoir south of Pacific Grove Middle School, and six within five miles. Coastal dunes with natural vegetation communities are present.
Eriogonum nortonii Pinnacles buckwheat	None/None G2/S2 1B.3	Annual herb. Chaparral, valley and foothill grassland. Sandy soils; often on recent burns; western Santa Lucias. Elevations: 985-3200ft. (300-975m.) Blooms (Apr)Aug(Sep)May-Jun.	Not Expected	Chaparral, valley and foothill grasslands are not present, and there are no known occurrences within five miles.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Eryngium montereyense Fort Ord button-celery	None/None G1/S1 1B.1	Vernal pools. Occurs in vernally moist swales and vernal pools in valley and foothill grassland surrounded by chaparral (maritime) and coast live oak woodland, on marine sedimentary substrate. 120-180m. Blooms Mar-May.	Not Expected	Vernal pools and foothill grasslands are not present, and there are no known occurrences within five miles.
Erysimum ammophilum sand-loving wallflower	None/None G2/S2 1B.2	Perennial herb. Chaparral, coastal dunes, coastal scrub. Sandy openings. Elevations: 0-195ft. (0-60m.) Blooms Feb-Jun(Jul-Aug).	Low Potential	There are seven known occurrences within five miles and coastal dunes with natural vegetation communities are present.
Erysimum menziesii Menzies' wallflower	FE/SE G1/S1 1B.1	Perennial herb. Coastal dunes. Localized on dunes and coastal strand. Elevations: 0-115ft. (0-35m.) Blooms Mar-Sep.	Presumed Present	There are three known occurrences within the City at Asilomar State Beach, Asilomar Dunes, and Point Pinos, and two within five miles. Coastal dunes with natural vegetation communities are present.
Fritillaria liliacea fragrant fritillary	None/None G2/S2 1B.2	Perennial bulbiferous herb. Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. Often on serpentine; various soils reported though usually on clay, in grassland. Elevations: 10-1345ft. (3-410m.) Blooms Feb-Apr.	Not Expected	There is one known occurrence within five from an unspecified location, however this occurrence is historical (1940). Grassland habitats with serpentine soils are not present.
Gilia tenuiflora ssp. *arenaria* Monterey gilia	FE/ST G3G4T2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, coastal dunes, coastal scrub. Sandy openings in bare, wind-sheltered areas. Often near dune summit or in the hind dunes; two records from Pleistocene inland dunes. Elevations: 0-150ft. (0-45m.) Blooms Apr-Jun.	Presumed Present	There is one known occurrence within the City at Asilomar State Beach and Asilomar Dunes, and eight within five miles. Coastal dunes with natural vegetation communities are present.
Hesperocyparis goveniana Gowen cypress	FT/None G1/S1 1B.2	Perennial evergreen tree. Chaparral, closed-cone coniferous forest. Coastal terraces; usually in sandy soils; sometimes with Monterey pine, bishop pine. Elevations: 100-985ft. (30-300m.)	Low Potential	There are three known occurrences within five miles and coniferous forest with natural vegetation communities are present
Hesperocyparis macrocarpa Monterey cypress	None/None G1/S1 1B.2	Perennial evergreen tree. Closed-cone coniferous forest. Granitic soils. Elevations: 35-100ft. (10-30m.)	Presumed Present	There is one known occurrence within five miles, however this species has been widely cultivated and naturalized throughout the Monterey Peninsula.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Horkelia cuneata var. *sericea* Kellogg's horkelia	None/None G4T1?/S1? 1B.1	Perennial herb. Chaparral, closed-cone coniferous forest, coastal dunes, coastal scrub. Old dunes, coastal sandhills; openings. Sandy or gravelly soils. Elevations: 35-655ft. (10-200m.) Blooms Apr-Sep.	Low Potential	There is one known occurrence within the City from an unspecified location, and four within five miles, however the occurrence within the City is historical (last seen in 1993). Coastal dunes and coniferous forest with natural vegetation communities are present.
Horkelia marinensis Point Reyes horkelia	None/None G2/S2 1B.2	Perennial herb. Coastal dunes, coastal prairie, coastal scrub. Sandy flats and dunes near coast; in grassland or scrub plant communities. Elevations: 15-2475ft. (5-755m.) Blooms May-Sep.	Not Expected	Coastal dunes with natural vegetation communities are present, however there are no known occurrences within five miles.
Lasthenia conjugens Contra Costa goldfields	FE/None G1/S1 1B.1	Annual herb. Cismontane woodland, playas, valley and foothill grassland, vernal pools. Vernal pools, swales, low depressions, in open grassy areas. Elevations: 0-1540ft. (0-470m.) Blooms Mar-Jun.	Not Expected	Vernal pools and foothill grasslands are not present, and there are no known occurrences within five miles.
Layia carnosa beach layia	FT/SE G2/S2 1B.1	Annual herb. Coastal dunes, coastal scrub. On sparsely vegetated, semi-stabilized dunes, usually behind foredunes. Elevations: 0-195ft. (0-60m.) Blooms Mar-Jul.	Presumed Present	There are two known occurrences within the City at Asilomar State Beach and Asilomar Dunes, and two within five miles. Coastal dunes with natural vegetation communities are present.
Lupinus tidestromii Tidestrom's lupine	FE/SE G1/S1 1B.1	Perennial rhizomatous herb. Coastal dunes. Partially stabilized dunes, immediately near the ocean. Elevations: 0-330ft. (0-100m.) Blooms Apr-Jun.	Presumed Present	There are two known occurrences within the City at Asilomar State Beach, Asilomar Dunes, and Point Pinos, and five within five miles. Coastal dunes with natural vegetation communities are present.
Malacothamnus palmeri var. *involucratus* Carmel Valley bush-mallow	None/None G3T2Q/S2 1B.2	Perennial deciduous shrub. Chaparral, cismontane woodland, coastal scrub. Talus hilltops and slopes, sometimes on serpentine. Fire dependent. Elevations: 100-3610ft. (30-1100m.) Blooms Apr-Oct.	Not Expected	There is one known occurrence within the City from an unspecified location and unknown time. Grassland habitats with serpentine soils are not present.
Malacothrix saxatilis var. *arachnoidea* Carmel Valley malacothrix	None/None G5T2/S2 1B.2	Perennial rhizomatous herb. Chaparral, coastal scrub. Rock outcrops or steep rocky roadcuts. Elevations: 80-3400ft. (25-1036m.) Blooms (Mar)Jun-Dec.	Not Expected	Coastal dunes with natural vegetation communities are present, however there are no known occurrences within five miles.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Microseris paludosa marsh microseris	None/None G2/S2 1B.2	Perennial herb. Cismontane woodland, closed-cone coniferous forest, coastal scrub, valley and foothill grassland. Elevations: 15-1165ft. (5-355m.) Blooms Apr-Jun(Jul).	Not Expected	There is one known occurrence within the City from an unspecified location and five within five miles, however the occurrence within the City (1977) and surrounding occurrences are historical (1930s to 1970s). Coastal dunes with natural vegetation communities are present.
Monardella sinuata ssp. *nigrescens* northern curly-leaved monardella	None/None G3T2/S2 1B.2	Annual herb. Chaparral, coastal dunes, coastal scrub, lower montane coniferous forest. Sandy soils. Elevations: 0-985ft. (0-300m.) Blooms (Apr)May-Jul(Aug-Sep).	Not Expected	There is one known occurrence within the City from an unspecified location and five within five miles, however the occurrence within the City (1932) and surrounding occurrences are historical (1920s to 1990s). Coastal dunes with natural vegetation communities are present.
Monolopia gracilens woodland woollythreads	None/None G3/S3 1B.2	Annual herb. Broadleafed upland forest, chaparral, cismontane woodland, north coast coniferous forest, valley and foothill grassland. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns, but may have only weak affinity to serpentine. Elevations: 330-3935ft. (100-1200m.) Blooms (Feb)Mar-Jul.	Not Expected	There is one known occurrence within five miles from an unspecified location, however this occurrence is historical (1897). Grassland habitats with serpentine soils are not present.
Pinus radiata Monterey pine	None/None G1/S1 1B.1	Perennial evergreen tree. Cismontane woodland, closed-cone coniferous forest. Dry bluffs and slopes. Elevations: 80-605ft. (25-185m.)	Presumed Present	There is one known occurrence within five miles, however this species has been widely cultivated and naturalized throughout the Monterey Peninsula.
Piperia yadonii Yadon's rein orchid	FE/None G1/S1 1B.1	Perennial herb. Chaparral, closed-cone coniferous forest, coastal bluff scrub. On sandstone and sandy soil, but poorly drained and often dry. Elevations: 35-1675ft. (10-510m.) Blooms (Feb)May-Aug.	Presumed Present	There is one known occurrence within the City at George Washington Park and the intersection of 17 Mile Drive and Sunset Drive, and 10 within five miles. Coniferous forest with natural vegetation communities are present.
Plagiobothrys uncinatus hooked popcornflower	None/None G2/S2 1B.2	Annual herb. Chaparral, cismontane woodland, valley and foothill grassland. Sandstone outcrops and canyon sides; often in burned or disturbed areas. Elevations: 985-2495ft. (300-760m.) Blooms Apr-May.	Not Expected	Valley and foothill grasslands with sandstone outcrops and canyon sides are not present, and there are no known occurrences within five miles.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Potentilla hickmanii Hickman's cinquefoil	FE/SE G1/S1 1B.1	Perennial herb. Closed-cone coniferous forest, coastal bluff scrub, marshes and swamps, meadows and seeps. Freshwater marshes, seeps, and small streams in open or forested areas along the coast. Elevations: 35-490ft. (10-149m.) Blooms Apr-Aug.	Low Potential	There is one known occurrence within the City at a reservoir south of Pacific Grove Middle School, and one within five miles, however this occurrence is possibly extirpated. Coniferous forest with natural vegetation communities are present.
Ramalina thrausta angel's hair lichen	None/None G5?/S2S3 2B.1	Fruticose lichen (epiphytic). North coast coniferous forest. On dead twigs and other lichens. Elevations: 245-1410ft. (75-430m.)	Moderate Potential	There is one known occurrence within the City at the far southern border adjacent to the Del Monte Forest. Coniferous forest with natural vegetation communities are present in the coastal fog zone.
Rosa pinetorum pine rose	None/None G2/S2 1B.2	Perennial shrub. Cismontane woodland, closed-cone coniferous forest. Elevations: 5-3100ft. (2-945m.) Blooms May-Jul.	Low Potential	There are three known occurrences within the City from an unspecified locations, and three within five miles, however two of the occurrences within the City are historical (1906 and 1941). The third occurrence is located at the far southern border adjacent to the Del Monte Forest. Coastal dunes with natural vegetation communities are present.
Stebbinsoseris decipiens Santa Cruz microseris	None/None G2/S2 1B.2	Annual herb. Broadleafed upland forest, chaparral, closed-cone coniferous forest, coastal prairie, coastal scrub, valley and foothill grassland. Open areas in loose or disturbed soil, usually derived from sandstone, shale or serpentine, on seaward slopes. Elevations: 35-1640ft. (10-500m.) Blooms Apr-May.	Not Expected	There is one known occurrence within five miles, however this occurrence is historical (1897). Broadleafed upland forest, chaparral, coastal prairie, valley and foothill grasslands with serpentine soils are not present.
Sulcaria spiralifera twisted horsehair lichen	None/None G3G4/S2 1B.2	Fruticose lichen (epiphytic). Coastal dunes, north coast coniferous forest. Usually on conifers. Elevations: 0-295ft. (0-90m.)	Low Potential	There is one known occurrence within five miles. Coniferous forest with natural vegetation communities are present in the coastal fog zone.
Tortula californica California screw moss	None/None G2G3/S2? 1B.2	Moss. Chenopod scrub, valley and foothill grassland. Moss growing on sandy soil. Elevations: 35-4790ft. (10-1460m.)	Not Expected	Chenopod scrub, valley and foothill grasslands are not present, and there are no known occurrences within five miles.

Scientific Name Common Name	Status Fed/State ESA CRPR	Habitat Requirements	Potential to Occur	Rationale
Trifolium buckwestiorum Santa Cruz clover	None/None G2/S2 1B.1	Annual herb. Broadleafed upland forest, cismontane woodland, coastal prairie. Moist grassland. Gravelly margins. Elevations: 345-2000ft. (105-610m.) Blooms Apr-Oct.	Not Expected	There is one known occurrence within five miles, however broadleafed upland forest, cismontane woodland, and coastal prairies are not present.
Trifolium hydrophilum saline clover	None/None G2/S2 1B.2	Annual herb. Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. Elevations: 0-985ft. (0-300m.) Blooms Apr-Jun.	Not Expected	There is one known occurrence within the City from an unspecified location, however this occurrence is historical (1907) and vernal pools, freshwater marshes, and alkaline soils are not present.
Trifolium polyodon Pacific Grove clover	None/SR G1/S1 1B.1	Annual herb. Closed-cone coniferous forest, coastal prairie, meadows and seeps, valley and foothill grassland. Along small springs and seeps in grassy openings. Elevations: 15-1395ft. (5-425m.) Blooms Apr-Jun(Jul).	Presumed Present	There is one known occurrence within the City at Asilomar State Beach, and four within five miles. Coastal dunes with natural vegetation communities are present.
Trifolium trichocalyx Monterey clover	FE/SE G1/S1 1B.1	Annual herb. Closed-cone coniferous forest. Openings, burned areas, and roadsides. Sandy soils. Elevations: 100-1000ft. (30-305m.) Blooms Apr-Jun.	Low Potential	There are two known occurrences within five miles. Coniferous forest with natural vegetation communities are present.

Regional Vicinity refers to within a 5-quad search radius of the site.

Status (Federal/State)

FE = Federal Endangered
FT = Federal Threatened
SE = State Endangered
ST = State Threatened
SR = State Rare

CRPR (CNPS California Rare Plant Rank)

1B = Rare, Threatened, or Endangered in California and elsewhere
2B= Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension

.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat)
.3 = Not very endangered in California (<20% of occurrences threatened/low degree and immediacy of threat)

Other Statuses

G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant

Additional notations may be provided as follows

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
? – Inexact numeric rank

Special-Status Wildlife Species in the Regional Vicinity of the Project Site

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Invertebrates				
Bombus occidentalis western bumble bee	None/SCE G3/S1	Once common and widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	Not Expected	There is one known occurrence within the City at Point Pinos, and two within five miles, however the occurrence within the City (1955) and other two are historical (1938 and 1972). Additionally, no current sightings have been reported west of the Sierra Navada range in Bumble Bee Watch (Xerces Society, et. al. 2024).
Danaus plexippus plexippus pop. 1 monarch - California overwintering population	FC/None G4T1T2Q/S2	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Presumed Present	There are three known occurrences of overwintering sites within the City at the Pacific Grove Monarch Butterfly Sanctuary, George Washington Park, and Pacific Grove Golf Links (possibly extirpated), and three within five miles.
Euphilotes enoptes smithi Smith's blue butterfly	FE/None G5T2/S2	Most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz counties. Hostplant: Eriogonum latifolium and Eriogonum parvifolium are utilized as both larval and adult foodplants.	Low Potential	There are three known occurrences within five miles, and host plant species are known to occur in coastal dune habitat at Asilomar State Beach.
Fish				
Eucyclogobius newberryi tidewater goby	FE/None G3/S3	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Not Expected	Brackish water habitats are not present, and there are no known occurrences within five miles.
Lavinia exilicauda harengus Monterey hitch	None/None G4T3/S3 SSC	Aquatic, Klamath/North coast flowing waters, Klamath/North coast standing waters, Riparian forest.	Not Expected	Suitable river habitats are not present, and there are no known occurrences within five miles.
Oncorhynchus mykiss irideus pop. 9 steelhead - south-central California coast DPS	FT/None G5T2Q/S2	Federal listing refers to runs in coastal basins from the Pajaro River south to, but not including, the Santa Maria River.	Not Expected	There is one known occurrence within five miles, however suitable river habitats are not present.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Amphibians				
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	FT/ST G2G3T3/S3 WL	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Not Expected	Suitable vernal aquatic habitats are not present, and there are no known occurrences within five miles.
Rana boylii pop. 6 foothill yellow-legged frog - south coast DPS	FE/SE G3T1/S1	Southern Coast Ranges from Monterey Bay south through San Gabriel Mountains; west of the Salinas River in Monterey Co, south through Transverse Ranges, and east through San Gabriel Mountains. Historically may have ranged to Baja California. Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.	Not Expected	There is one known occurrence within the City from an unspecified location, however this occurrence is historical (1899) and suitable creek or river habitats are not present.
Rana draytonii California red-legged frog	FT/None G2G3/S2S3 SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Not Expected	There are six known occurrences within five miles, however the closest is approximately 1.2 miles south, from a golf course pond at Spyglass Hill. Marginally suitable habitat is present at Crespi Pond and the detention basin, however these sites are isolated by development within the City.
Taricha torosa Coast Range newt	None/None G4/S4 SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats and will migrate over 1 km (0.6 miles) to breed in ponds, reservoirs and slow moving streams.	Not Expected	Crespi Pond and the detention basin are isolated by development within the City, and there are no known occurrences within five miles.
Reptiles				
Anniella pulchra Northern California legless lizard	None/None G3/S2S3 SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	Presumed Present	There are six known occurrences within the City from Asilomar State Beach, Asilomar Dunes, and Point Pinos, and 18 within five miles. Coastal dunes with natural vegetation communities and sandy soils are present.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Actinemys pallida southwestern pond turtle	FPT/None G3G4/S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Presumed Present	There is one known occurrence within the City from the detention basin, and suitable habitat is present at Crespi Pond.
Phrynosoma blainvillii coast horned lizard	None/None G4/S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Not Expected	Sandy washes with scattered low bushes are not present, and there are no known occurrences within five miles.
Birds				
Agelaius tricolor tricolored blackbird	None/ST G1G2/S2 SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Low Potential	There are no known occurrences in the CNDDB within five miles, however sightings have been reported from Crespi Pond in ebird, and marginally suitable habitat is present (due to golf course use).
Athene cunicularia burrowing owl	None/SCE G4/S2 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Presumed Present (Wintering)	There is one known occurrences in the CNDDB within five miles, and numerous sightings have been reported from Point Pinos and Asilomar State Beach in ebird (wintering).
Buteo regalis ferruginous hawk	None/None G4/S3S4 WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Not Expected	There are no known occurrences in the CNDDB within five miles, only rare sightings have been reported in ebird, and suitable wintering habitat is not present.
Charadrius nivosus nivosus western snowy plover	FT/None G3T3/S3 SSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Not Expected	There is one known occurrence within the City from an unspecified location, and two within five miles. However the occurrence within the City is historical (1913), only rare sightings have been reported in ebird, and suitable breeding habitat is not present due to development and recreational use.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Coturnicops noveboracensis yellow rail	None/None G4/S2 SSC	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	Not Expected	There is one known occurrence within the City at Crespi Pond, and one within five miles, however the occurrence within the City (1970), and other, are historical (1896). Additionally, no current sightings have been reported in ebird.
Cypseloides niger black swift	None/None G4/S3 SSC	Coastal belt of Santa Cruz and Monterey counties; central and southern Sierra Nevada; San Bernardino and San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	Not Expected	There is one known occurrence within five miles from Point Lobos, there are no current sightings reported in ebird, and suitable cliffs and canyons may not be present.
Eremophila alpestris actia California horned lark	None/None G5T4Q/S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Not Expected	There are no known occurrences in the CNDDB within five miles, only rare sightings have been reported in ebird, and suitable grassland habitat is not present.
Hydrobates homochroa ashy storm-petrel	None/None G2/S2 SSC	Colonial nester on off-shore islands. Usually nests on driest part of islands. Forages over open ocean. Nest sites on islands are in crevices beneath loosely piled rocks or driftwood, or in caves.	Not Expected	There are no known occurrences in the CNDDB within five miles, only rare sightings have been reported in ebird, and off-shore island habitat is not present.
Laterallus jamaicensis coturniculus California black rail	None/ST G3T1/S2 FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Not Expected	There is one known occurrence within the City from an unspecified location, and one within five miles, however the occurrence within the City is historical (1967) and the other is an occurrence of a single individual. Additionally, no current sightings have been reported in ebird. Marginally suitable habitat is present at Crespi Pond (due to golf course use).
Pelecanus occidentalis californicus California brown pelican	FD/SD G4T3T4/S3	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	Not Expected	There is one known nest colony occurrence within five miles from Point Lobos (1925), only foraging sightings have been reported in ebird, and suitable off-shore island habitat is not present.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Riparia riparia bank swallow	None/ST G5/S3	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Not Expected	There is one known occurrence within five miles from the vicinity of Fort Ord Dunes State Park, there are no current sightings reported in ebird, and suitable cliffs and banks may not be present.
Mammals				
Corynorhinus townsendii Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls & ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.	Moderate Potential	There are no known occurrences within five miles, however suitable coniferous habitat is present, and bat species are known to occur on the Monterey Peninsula.
Enhydra lutris nereis southern sea otter	FT/None G4T2/S3 FP	Occurs in nearshore marine environments from Ano Nuevo in San Mateo County to Point Sal in Santa Barbara County. Requires canopies of giant kelp or bull kelp for rafting and feeding. Prefers rocky substrates with abundant invertebrates to prey on.	Not Expected	This species is known to occur off-shore on the Monterey Peninsula, however there are no known occurrence within five miles, and this species rarely hauls-out on unoccupied beaches away from human presence.
Eumetopias jubatus Steller sea lion	FD/None G3/S2	Breeds on Ano Nuevo, San Miguel and Farallon islands, Point St. George, and Sugarloaf. Hauls-out on islands and rocks. Needs haul-out and breeding sites with unrestricted access to water, near aquatic food supply and with no human disturbance.	Not Expected	There is one known occurrence within five miles, however this occurrence is historical (1937) and may be extirpated.
Sorex ornatus salarius Monterey shrew	None/None G5T1T2/S1S2 SSC	Riparian, wetland and upland areas in the vicinity of the Salinas River delta. Prefers moist microhabitats. feeds on insects and other invertebrates found under logs, rocks and litter.	Not Expected	There are four known occurrences within five miles, however these occurrences are historical (1910s to 1930s), and river riparian habitats are not present.

Scientific Name Common Name	Status Fed/State ESA CDFW	Habitat Requirements	Potential to Occur	Rationale
Taxidea taxus American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not Expected	There is one known occurrence within five miles, however suitable open grassland habitats are not present, and the City is largely isolated by development.

Regional Vicinity refers to within a 5-quad search radius of the site.

Status (Federal/State)

FE = Federal Endangered
FT = Federal Threatened
FPT = Federal Proposed Threatened
FD = Federal Delisted
FC = Federal Candidate
SE = State Endangered
ST = State Threatened
SCE = State Candidate Endangered
SD = State Delisted
SSC = CDFW Species of Special Concern
FP = CDFW Fully Protected
WL = CDFW Watch List

Other Statuses

G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant

Additional notations may be provided as follows

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
? – Inexact numeric rank

Appendix H

Energy Construction Estimates

Pacific Grove Housing Element Project

3/27/2025

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Rubber Tired Dozers	2	8	367	0.4	Demolition Phase	2,483
Excavators	3	8	36	0.38	Demolition Phase	386
Concrete/Industrial Saws	1	8	33	0.73	Demolition Phase	227
Rubber Tired Dozers	3	8	367	0.4	Site Preparation Phase	1,862
Tractors/Loaders/Backhoes	4	8	84	0.37	Site Preparation Phase	584
Graders	1	8	148	0.41	Grading Phase	770
Excavators	2	8	36	0.38	Grading Phase	386
Tractors/Loaders/Backhoes	2	8	84	0.37	Grading Phase	877
Scrapers	2	8	423	0.48	Grading Phase	5,152
Rubber Tired Dozers	1	8	367	0.4	Grading Phase	1,862
Forklifts	3	8	82	0.2	Building Construction Phase	6,939
Generator Sets	1	8	14	0.74	Building Construction Phase	1,461
Cranes	1	7	367	0.29	Building Construction Phase	11,814
Welders	1	8	46	0.45	Building Construction Phase	2,919
Tractors/Loaders/Backhoes	3	7	84	0.37	Building Construction Phase	11,506
Pavers	2	8	81	0.42	Paving Phase	640
Paving Equipment	2	8	89	0.36	Paving Phase	602
Rollers	2	8	36	0.38	Paving Phase	257
Air Compressors	1	6	37	0.48	Architectural Coating Phase	125
					Total Fuel Used	**50,853**
						(Gallons)

Construction Phase	Days of Operation
Demolition	20
Site Preparation	10
Grading	30
Building Construction	300
Paving	20
Architectural Coating	20
Total Days	400

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Demolition	24.1	**15**	**9.47**	118
Site Preparation	24.1	**17.5**	**9.47**	69
Grading	24.1	**20**	**9.47**	236
Building Construction	24.1	**447**	**9.47**	52,694
Paving	24.1	**15**	**9.47**	118
Architectural Coating	24.1	**89.5**	**9.47**	703
			Total Fuel Used	53,938

HAULING AND VENDOR TRIPS

HAULING TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Demolition	7.5	367	20.0	19573.33
			Total Fuel Used	**19,573.33**

VENDOR TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Site Preparation	7.5	75	6.0	18090.00
			Total Fuel Used	**18,090.00**

Total Gasoline Consumption (gallons)	**53,938**
Total Diesel Consumption (gallons)	**88,516**

Sources:

[1] United States Environmental Protection Agency. 2021. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2* . September. Available at: https://www.epa.gov/system/files/documents/2021-08/420r21021.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2021. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

Appendix I

Coastal Hazards Modeling Technical Methods and Results

City of Pacific Grove

Coastal Hazards Modeling Technical Methods and Results



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August 19, 2024

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- Joseph Sidor, Contract Senior Planner
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Table 7. Cumulative acres of parcel exposed to coastal wave hazards by sea level rise horizon in feet (ranges of year projected).

ACRONYMS, ABBREVIATIONS, AND DEFINITIONS

backshore	Extreme inland limit of the beach
BFE	Base flood elevation
bluff	Soft unconsolidated materials found in the marine terrace deposits
cliff	Hard consolidated rock made primarily of granodiorite in Pacific Grove
DEM	Topographic digital elevation model
dunes	Areas where wave action and onshore winds have led to sand deposition, located landward of the beach
FEMA	Federal Emergency Management Agency
NAVD 88	North American Vertical Datum of 1988; the vertical control datum used for surveying.
NOAA	National Oceanic and Atmospheric Administration
total water level	The combined effect of wave run-up height, storm surge, tides, and sea level elevations
TRI	Terrain Ruggedness Index
USGS	U.S. Geological Survey

EXECUTIVE SUMMARY

Integral Consulting Inc. (Integral), with funding from the California Coastal Commission (Grant Agreement LCP-22-02), has conducted a detailed city-wide, parcel-scale coastal hazard modeling assessment to support the City of Pacific Grove (City) in updating their LCP and coastal hazard overlay and updating their parcel vulnerability assessment. The impetus for this project came from several sea level rise reports submitted as part of Coastal Development Permit (CDP) applications under the 2020 revised Local Coastal Program for the City. Each of these site-specific technical reports identified substantially less risk from coastal hazards than previously identified, placed an extra reporting burden on local landowners, and required additional City planning resources which ultimately slowed down the local planning decision making process.

This assessment relied on the 2024 California sea level rise guidance for the intermediate-high sea level rise scenario and analyzed up to 4.4 feet of sea level rise by 2100. The following technical memorandum provides a synopsis of the methods and major findings for Task 1, Conceptual Model; Task 2, Coastal Hazard Modeling; and Task 3, Revised Vulnerability Assessment.

The conceptual site model development evaluated previous shoreline research, and relevant publicly available data sets, and collected new topographic data to provide a site model of detailed shoreline characteristics, nearshore conditions, and history of coastal hazards along the City's coastline. The coastal hazard modeling task applied the conceptual shoreline site model information coupled with an ensemble of cliff erosion models to project future coastal cliff erosion hazard extents and to document uncertainties in those estimates over a range of sea level rise scenarios. In addition, coastal storm wave runup extents and future high tide inundation based on future sea level rise scenarios were mapped. Results of the coastal hazard exposure modeling was then applied in a revised vulnerability assessment, which identified the at risk land use parcels and structures exposed to coastal hazards. The timing of impacts to parcels and structures are reported by future sea level rise elevations and a corresponding time period in the future.

This mapping and vulnerability assessment is intended to update the prior coastal hazard overlay conducted by EMC Planning in 2015 for the Pacific Grove Local Coastal Program Update. The 2015 coastal hazard overlay mapped a total of 87 parcels and 70 structures exposed to coastal storm wave flood hazards by 2100 with 4.6 feet of sea level rise. This new coastal storm wave flood hazard modeling effort identified 69 parcels and 28 structures exposed to coastal wave hazards by 2100 with 4.0 feet of sea level rise. While the sea level rise horizons between both studies are slightly different, this is a reduction of 18 parcels and 42 structures. The 2015 coastal erosion hazard overlay only extended from Hopkins Marine Station to Point Pinos and mapped a total of 319 parcels and 290 structures exposed by 2100 with 4.6 feet of sea level rise. This revised coastal erosion hazard modeling effort took a more

site-specific approach, taking into account more detailed wave modeling, wave dissipation from the offshore rocks, and the hard rock geology of the City's shoreline, and projected a significant reduction in erosion from the previous study. This study mapped the entirety of the City's shoreline and identified 23 parcels, and only one structure exposed to coastal erosion hazards by 2100 with 4.4 feet of sea level rise.

The projected coastal storm wave flood hazards in both studies show many similarities and identify elevated exposure in a few distinct areas including at Hopkins Marine Station, the Beach Tract / Fairway Homes neighborhood west of Shell Ave, the Asilomar Dunes Neighborhood north of Arena Ave, and Point Pinos and the Pacific Grove Golf Links. Parcels of particularly high risk in these areas may benefit from additional site-specific technical studies.

The assessment has been conducted on a City-wide scale and should serve as a parcel-level screening tool for both the City and its landowners to identify properties that may require more detailed parcel-specific analysis and possibly include additional project elements to address these future hazards. The benefit would be a more streamlined planning process and transparency in decision-making for local landowners.

DISCLAIMER

This information is part of an ongoing process to understand and prepare for coastal hazards and sea level rise for the City of Pacific Grove. The coastal hazard layers are intended as planning tools to illustrate projected hazard exposure under a variety of future sea level rise scenarios. This information is advisory in nature and not binding with respect to any actions that the City of Pacific Grove, the California Coastal Commission, California State Lands Commission, Monterey Bay National Marine Sanctuary, US Army Corps of Engineers, or any other regulatory agencies may take.

There are inherent uncertainties associated with modeling and projecting future coastal hazards and their potential impacts. The spatial data layers are based on model outputs and cannot account for all complex and dynamic ocean, terrestrial, and anthropogenic processes or for future adaptation approaches such as shoreline protection upgrades. In addition, these data layers do not include projected flooding from rainfall-induced runoff events, erosion or flooding precipitated by land use change, or tsunamis. Flooding due to sea level rise and the various coastal hazards is possible in areas outside of those projected in this study, and even the best projections cannot guarantee the safety of an individual parcel or structure.

Although every effort was made to review all parcel and structure data received from other sources, neither the City of Pacific Grove nor its consultant, Integral Consulting Inc., can verify the completeness or accuracy of all spatial data. For this reason, we do not accept responsibility for any errors, omissions, or positional inaccuracies. The City of Pacific Grove and Integral Consulting Inc. assumes no liability for any damages alleged to have occurred due to

reliance upon the information contained herein. Users of this data are strongly cautioned to verify all information.

1 INTRODUCTION

1.1 PURPOSE OF THIS STUDY

This study is part of the City of Pacific Grove's (City) Coastal Hazards Overlay, and this technical memorandum serves to complete the deliverables for Task 1, Conceptual Site Model; Task 2, Coastal Hazard Modeling; and Task 3, Revised Vulnerability Assessment. This technical memorandum projects long-term cliff erosion, storm wave flooding, and tidal inundation with sea level rise, as well as summarizes the risk to land use parcels and structures. The coastal hazard modeling was completed using a suite of state-of-the-science models and incorporated data and input from three previous technical and research studies, as well as incorporating the latest sea level rise guidance from the State of California.

1.2 STUDY AREA

For the purposes of this study, the coastline is organized into three coastal sections as described in the City neighborhood planning areas. Study area sections are as follows and can be seen in Figure 1:

- The western section of the City is characterized by a rocky shoreline with pocket beaches and backed by aeolian dunes perched on top of hard granodiorite bedrock and wide expanses of offshore rock (average surf zone width of 245 ft). This area experiences higher wave energy than other areas of the city. The mean cliff height in this region is 19 feet. This area extends from the southern City boundary at Asilomar Dunes to Crespi Pond in the north. This area is henceforth referred to as **Section 1, or Asilomar Dunes**.
- The northern section of the City is characterized by a mix of seawalls and riprap, natural rocky promontories and pocket beaches, backed by low terrace cliffs, and less offshore rock than Section 1 (average surf zone width of 117 ft). The mean cliff height in this region is 22 feet. This area extends from Crespi Pond to Lovers Point Park. This area is henceforth referred to as **Section 2, or Beach Tract / Fairway Homes**.
- The eastern section of the City is characterized by a mostly rocky and armored coastline, and backed by low terrace cliffs and less offshore rock than Section 1 (average surf zone width of 107 ft). The mean cliff height in this region is 23 feet. This area extends from Lovers Point Park to Hopkins Marine Station. This area is henceforth referred to as **Section 3, or Pacific Grove Retreat**.

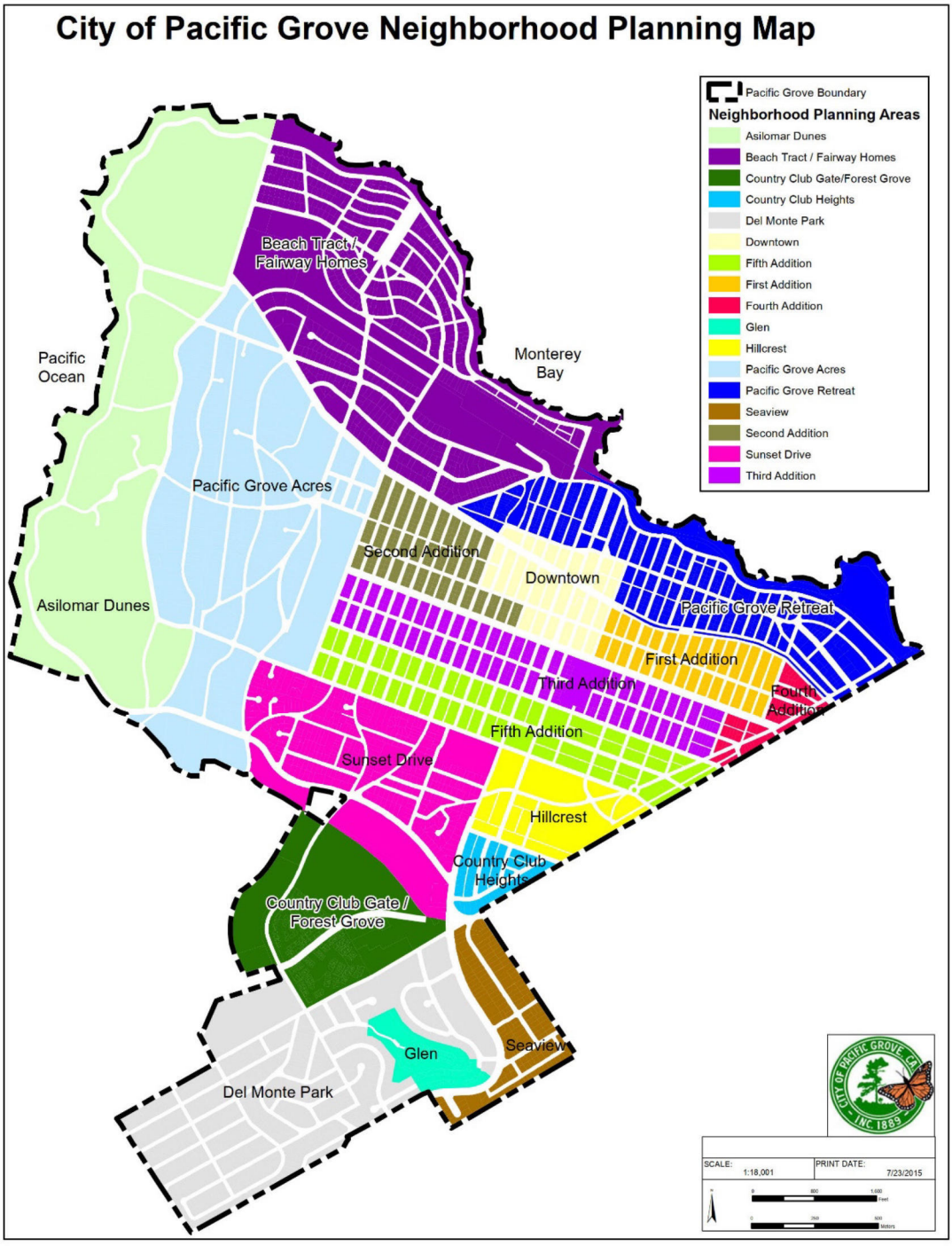


Figure 1. Neighborhood delineations within the City of Pacific Grove.

1.3 COASTAL HAZARDS

This study evaluated the following coastal hazards:

- **Coastal cliff erosion**—includes erosion of the cliff and is projected every 20 years into the future (2040, 2060, 2080, and 2100) with up to 4.4 ft of sea level rise. Also includes a projection of a 30-year erosion setback line, which can be interpreted as the area exposed to erosion in the near term and can be used as a factor of safety.
- **Coastal wave flooding**—includes coastal wave flooding inundation and is representative of wave runup during a 100-year coastal storm event.[1] Coastal wave flooding was modeled using X Beach 1D with 1, 2, 3, and 4 ft of sea level rise. The volume of water filling the low-lying area of Crespi Pond and the Pacific Grove Golf Links was not modeled explicitly but mapped as a low-lying flood-prone area based on the interpretation of maximum wave runup elevations, contour elevations, and expected future flooding.
- **Tidal inundation**—evaluated using the highest astronomical tide (7.21 ft NAVD88) with 4 ft of sea level rise for a total of 11.21 ft NAVD88.

1.3.1 Coastal Cliff Erosion

Coastal erosion is a complex process shaped by various factors resulting in the ongoing retreat of cliffs. The factors that contribute to erosion encompass marine forces (such as wave energy), terrestrial forces (including rainfall, groundwater flow, and burrowing animals), and terrestrial conditions (like geologic rock type, grain size, joint density, or the presence of coastal armoring). Together, these elements are the primary factors that contribute to coastal cliff erosion. Two erosion processes occur simultaneously along the cliff-backed shoreline: the first is the erosion of the softer marine terrace deposits (or bluffs) and aeolian dunes that overlay the hard slowly erodible granodiorite bedrock within the City, and the second involves the long-term weathering and dislodging of rocks in the granodiorite bedrock, which occurs at a very slow rate. In conjunction, these processes will lead to the inland retreat of the cliff along the City's shoreline.

1.3.2 Wave Environment

The waves that approach Pacific Grove are characterized by three dominant types depending on their wave source and direction (Figure 2). Most wave energy approaches the study site from the northwest and west (Storlazzi and Wingfield 2005) by waves generated by cyclones in the North Pacific and tends to peak in wave height during the winter months (up to 26 ft). During the summer, southern hemisphere waves produce smaller waves with longer wave periods (greater than 20 seconds). Between April and October, mid-sized and slightly shorter

[1] Wave run up extents were mapped at the 2% runup elevation, or R2%.

periods of wind waves also approach Pacific Grove from the northwest (Storlazzi and Wingfield 2005).

The wave climate fluctuates over interannual and longer time periods with ocean-atmosphere oscillations like the El Niño Southern Oscillation (ENSO). These storms tend to follow a more southerly track when El Niño conditions are strongest, resulting in more erosion potential for the study area. El Niño conditions generally occur every three to seven years, with particularly intense events every 10 to 20 years (Storlazzi and Griggs 1998). There are also longer-term climatic oscillations such as the Pacific Decadal Oscillation, warm phases of which have been associated with periods of increased storm frequency and intensity, resulting in accelerated erosion rates (Russell and Griggs 2013).

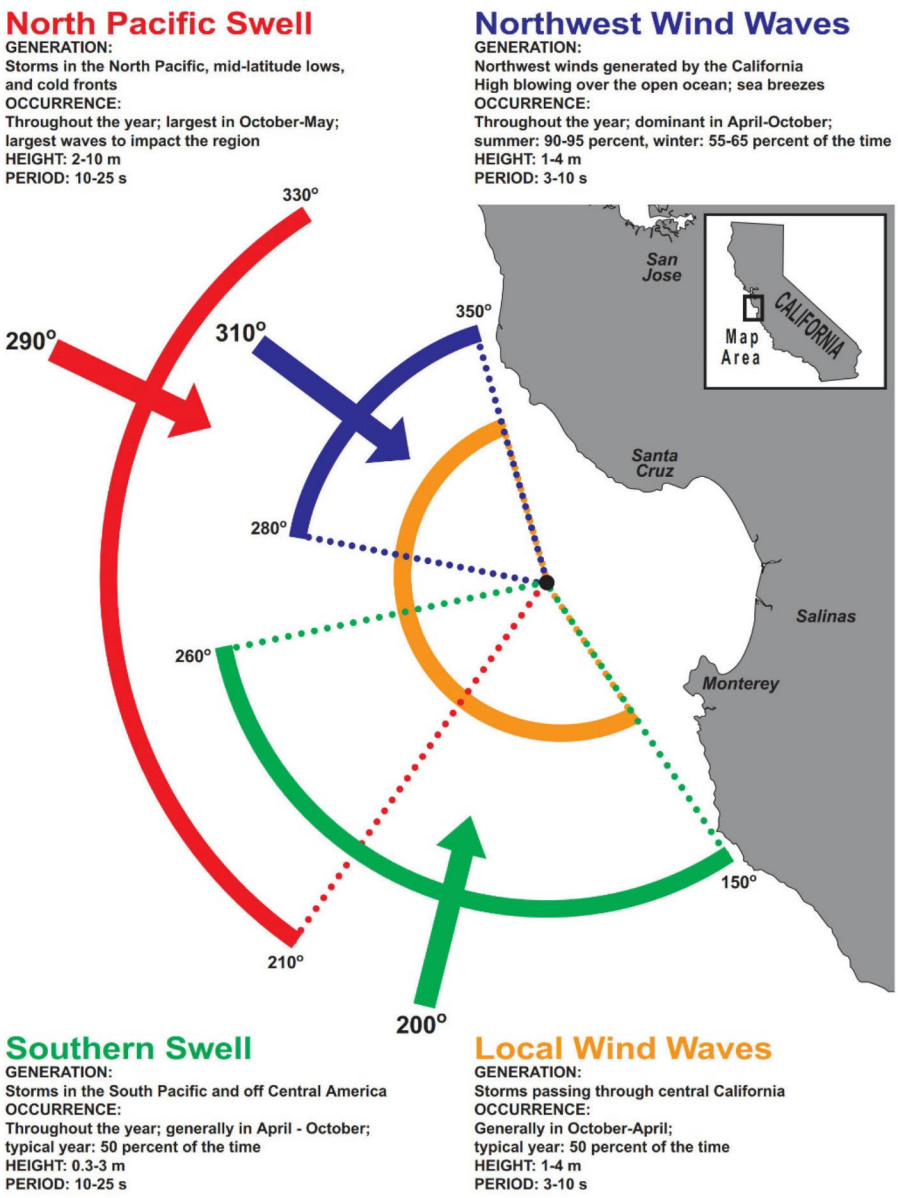


Figure 2. Diagram depicting dominant wave types, directions, and seasons for Pacific Grove and Monterey Bay. Source: Storlazzi and Wingfield (2005).

The National Flood Insurance Program, administered by the Federal Emergency Management Agency (FEMA), is intended to reduce future flood damage by encouraging local governments to adopt floodplain management regulatory programs. The regulatory Flood Insurance Rate Maps identify base flood elevations according to a 1%-annual-chance total water level elevation (formerly known as 100-year storm wave elevation) at the coast. The base flood elevations in the City vary from 16 to 27 ft based on the varying wave exposure, with the

highest base flood elevations (BFEs) at the rocky headlands off of Point Pinos and Point Cabrillo.

1.3.3 Sea Level Rise Projections

The projected acceleration of sea level rise in the near term is a result of human-induced climate change and is driven by the thermal expansion of ocean water and the melting of terrestrial ice as the Earth warms. Global climate models indicate that California will see significant sea level rise during this century, with the exact magnitude depending on factors such as global greenhouse gas emissions and the Earth's energy imbalance, the rate at which oceans absorb heat, land ice melting rates, movement of land-based ice sheets, and local land subsidence or uplift.

According to California's Office of Environmental Health Hazard Assessment, the central coast of California experienced about 8 in. of sea level rise from 1900 to 2020, and the rate is projected to increase over this century (OEHHA 2022). In January 2024, the California Ocean Protection Council (OPC) issued the Draft State of California Sea Level Rise Guidance: 2024 Science and Policy Update meant to assist local jurisdictions with sea level rise planning. Based on this most recent State guidance, this study evaluated an intermediate-high scenario, described as a scenario in which rapid ice sheet loss processes contribute to sea level rise, with a probability of up to 20% that 2100 sea level rise will reach 4.4 ft by 2100 (see Table 1 and Figure 3).

Table 1. Probabilistic projections for future sea level rise by year for Monterey.

From Draft OPC 2024 Guidance	
Year	**Intermediate-High Scenario**
2020	0 (baseline)
2040	0.4
2060	1.2
2080	2.7
2100	4.4

Source: OPC and OST (2024). Projected sea levels using the Monterey tide gauge. Values have been adjusted by shifting the baseline year from 2000 to 2020. Sea level rise rates are referenced to high emissions scenarios.

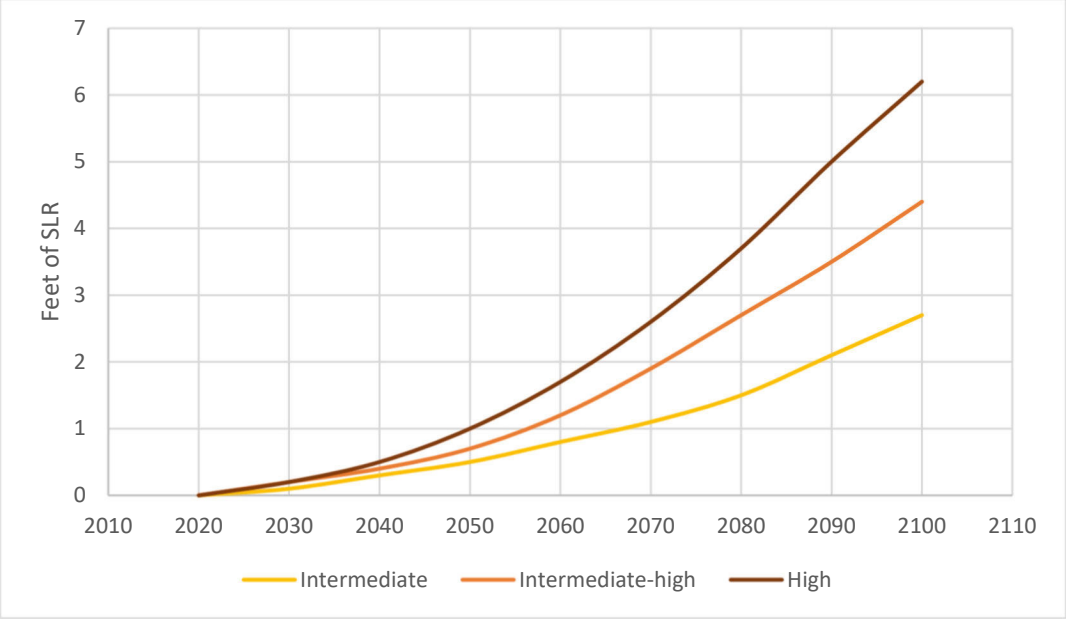


Figure 3. Intermediate, intermediate-high, and high predictions of future sea level rise, based on draft OPC guidance (OPC and OST 2024). These three scenarios are recommended by the State of California to inform appropriate sea level rise planning and project decisions. The erosion models in this analysis are based on the intermediate-high scenario.

The coastal hazard models applied in this study utilize different approaches in associating sea level rise and time. For the erosion study, a time component is integrated into the model, which necessitates selecting a specific sea level rise curve for the analysis. For this study, the intermediate-high sea level rise curve was incorporated into the coastal erosion model. For the wave runup in this study, only specific water levels are required for the model, and these associated sea level rise elevations can occur over a range of future years. For the sake of simplicity and consistency with current State guidance sea level rise scenarios of existing conditions (0), and 1, 2, 3, and 4 ft of sea level rise were used. The sea level rise elevation values and associated estimated ranges of future years of occurrence used in these models are shown in Table 2.

Table 2 Time horizons and associated sea level rise (SLR) scenarios used in the coastal wave runup and erosion hazard analysis in this study. Wave runup uses a linear sea level rise horizon, while coastal erosion uses a linear timeline.

Wave Runup Hazards		Coastal Erosion Hazards	
Year(s)	Sea Level Rise	Year	Sea Level Rise
2020	0	2020	0
2050–2065	1	2040	0.4
2065–2090	2	2060	1.2
2075–2100+	3	2080	2.7
2085–2100+	4	2100	4.4

2 TASK 1 CONCEPTUAL SITE MODEL AND COASTAL HAZARD MODELING METHODS

This section provides an overview of the City's coastal setting and describes the prior research that informed this study as well as the data sources that were utilized in the characterization of the City's shoreline to best apply the detailed coastal hazard modeling and vulnerability assessment.

2.1 PRIOR STUDIES

Three site-specific shoreline and coastal hazard assessments were conducted recently: a comprehensive shoreline assessment as part of the City's Shoreline Management Plan (SMP), a coastal trail study and plan around Point Pinos, and a site-specific coastal hazards assessment of Stanford's Hopkins Marine Station. Together, these prior studies provided input into the conceptual site model and helped to create a detailed characterization of the shoreline, with estimates of historical erosion rates, determination of 30-year erosion setback distances, and projected wave runup extents with sea level rise. The estimates of historical erosion rates from these previous studies were incorporated into this study, and the estimates of wave runup were used as a secondary data reference point to check model results. Details on these prior assessments can be found below:

- **The Point Pinos Coastal Trail Project (2017)** included a coastal hazard assessment conducted by Haro, Kasunich & Associates, Geologists and Geotechnical Engineers (HKA), and Timothy C. Best, Engineering Geologist, CEG. As part of the long-term trail planning effort, HKA and Timothy Best produced a geologic and technical assessment that determined historical erosion rates and a 30-year erosion setback line for the area from the Great Tide Pool to Coral Street.
- **The Pacific Grove Shoreline Master Plan (2020)** was led by City staff along with a multi-disciplinary team of consultants including Eisen|Letunic, Moffatt & Nichol, and Dudek. This effort produced estimates of short-term and long-term coastal erosion and a 30-year erosion setback line for the area from Asilomar Avenue to Hopkins Marine Station. It also determined runup extents and overtopping volumes along the coast from Jewell Avenue to Hopkins Marine Station.
- **Stanford's Hopkins Marine Station Sea Level Rise Vulnerability and Adaptation Report (2021)** was led by Stanford's Land, Buildings & Real Estate with a team of Integral Consulting and HKA. The study projected maximum wave runup extents and flood depths, coastal erosion extents with sea level rise, and site-specific vulnerabilities.

2.2 COASTAL MODELING PARAMETERS

Coastal cliff erosion modeling relies on simplifications of reality that relate cliff retreat to multiple geomorphic, geologic and coastal process (waves and tides) related factors. These factors include:

- **Geomorphic:** cross-shore profiles, cliff-top and -toe elevations, foreshore slopes, surf zone widths, surf zone roughness, backshore types, and historical shoreline positions
- **Coastal processes**: tides, wave heights, wave direction and wave periods contributing to wave runup and a sum total water level elevation As sea level rises the frequency, duration and elevation of total water levels is expected to increase and accelerate coastal cliff erosion.

Detailed below are the methods used to determine these model parameters.

2.2.1 Backshore Conditions (Soils and Geology) and Erosion Processes

The City has a highly crenulated coastline with rocky headlands, offshore rocks, nearshore reefs and small pocket beaches backed by dune fields and low marine terraces that are approximately 3 to 10 ft in depth (Pacific Grove 2017). The coastline stretches for approximately 5 miles from Asilomar State Beach in the west to the Hopkins Marine Station in the east. The crest of the coastal dunes and cliffs varies from approximately 16.8 to 24.3 ft NAVD88, with an average crest height of 21.3 ft NAVD88. The contact between the bedrock and dune / marine terrace typically has a seaward gradient; however, in some local areas, portions of the bedrock platform slope gently landward, such as around Crespi Pond

Along the coast, pocket beaches composed of sand, cobble, and boulders appear among rocky headlands with offshore rocks that are relatively resistant to coastal erosion. The overlying, terrace and dune sediments are much more erosion-prone. The bedrock along the contact between bedrock and terrace sediments is highly weathered due to the relatively high exposure to wave attack (Pacific Grove 2017). For erosion modeling and mapping purposes, projected erosion distances represent the crest of the cliff or dune.

Historically, the City has experienced episodic erosion from large storm wave events. As a result, the City's coastline has a variety of shoreline protective devices and also many locations where erosion repairs placed artificial fill (often fronted by coastal armoring) that lies above the bedrock material. These locations often correspond with the oceanfront parking areas which provide important coastal access amenities. The areas where these repairs have occurred or coastal armoring has been placed often show cliff accretion, which is impossible by natural means, and this posed some difficulty in discerning natural historical erosion rates and storm erosion distances. Where data was available, historical erosion rates that preceded the shoreline fill and armoring were used for these sections.

2.2.2 Historical Shoreline Positions and Erosion Rates

Historical erosion rates underpin the cliff erosion modeling and so much care was taken to document baseline erosion conditions, which are then accelerated for future cliff erosion modeling. To determine historical erosion rates for the shoreline, this study relied on three sources of information:

1. For the section of the coast that corresponds with the Point Pinos Trail (from the Great Tide Pool to Coral Street), HKA and Best (2017) determined historical erosion rates based on shoreline changes measured from aerial photographs from 1945, 1976, and 2016.
2. For the section of coast that corresponds with the Pacific Grove Recreation Trail (from Asilomar Avenue near Crespi Pond to Hopkins Marine Station), Dudek and Moffat & Nichol (2020) determined historical erosion rates based on shoreline changes measured from aerial photographs from 1945, 1976, and 2003.
3. For the entire City's coastline, Integral Consulting Inc. (Integral) determined historical erosion rates based on an endpoint erosion rate method relying on aerial photographs from 1945 and the project-derived topographic lidar and associated air photos collected in December 2022 and January 2023.

To determine historical erosion rates, the reference historical aerial photographs were georeferenced, and cliff-top positions were digitized manually. For the more recent data years, such as 2022/2023, the cliff-top position was digitized manually using a range of imagery products including a high-resolution multidimensional hillshade derived from a project-specific LiDAR survey, a change in slope surface, and a high-resolution orthoimage. For the section of the coastline from the Great Tide Pool to Coral Street, this study relied on the cliff-top position determined from the Point Pinos Trail project.

To generate statistics on historical erosion rates, the Integral team utilized the Digital Shoreline Assessment System (DSAS), an ArcGIS-based tool developed by the U.S. Geological Survey (USGS). Within DSAS, digital shorelines are used as inputs, and the tool calculates erosion rates using a variety of statistical methods based on how the shoreline position has changed measured across 10-foot spaced cross-shore transects[2].

Erosion rates were aggregated for each of these smaller backshore sections from each of the three studies above. Each of these subsections was organized by similarities in orientation, backshore type (armor or unarmored), geology, exposure to wave attack, and presence/absence of offshore rocks to dissipate wave energy. In total, 105 separate backshore areas were used to parcel location-specific erosion hazard distances, and the historical erosion rates for these areas are shown in Figure 4.

[2] A total of 2,473 transects were used to calculate rates for the DSAS analysis

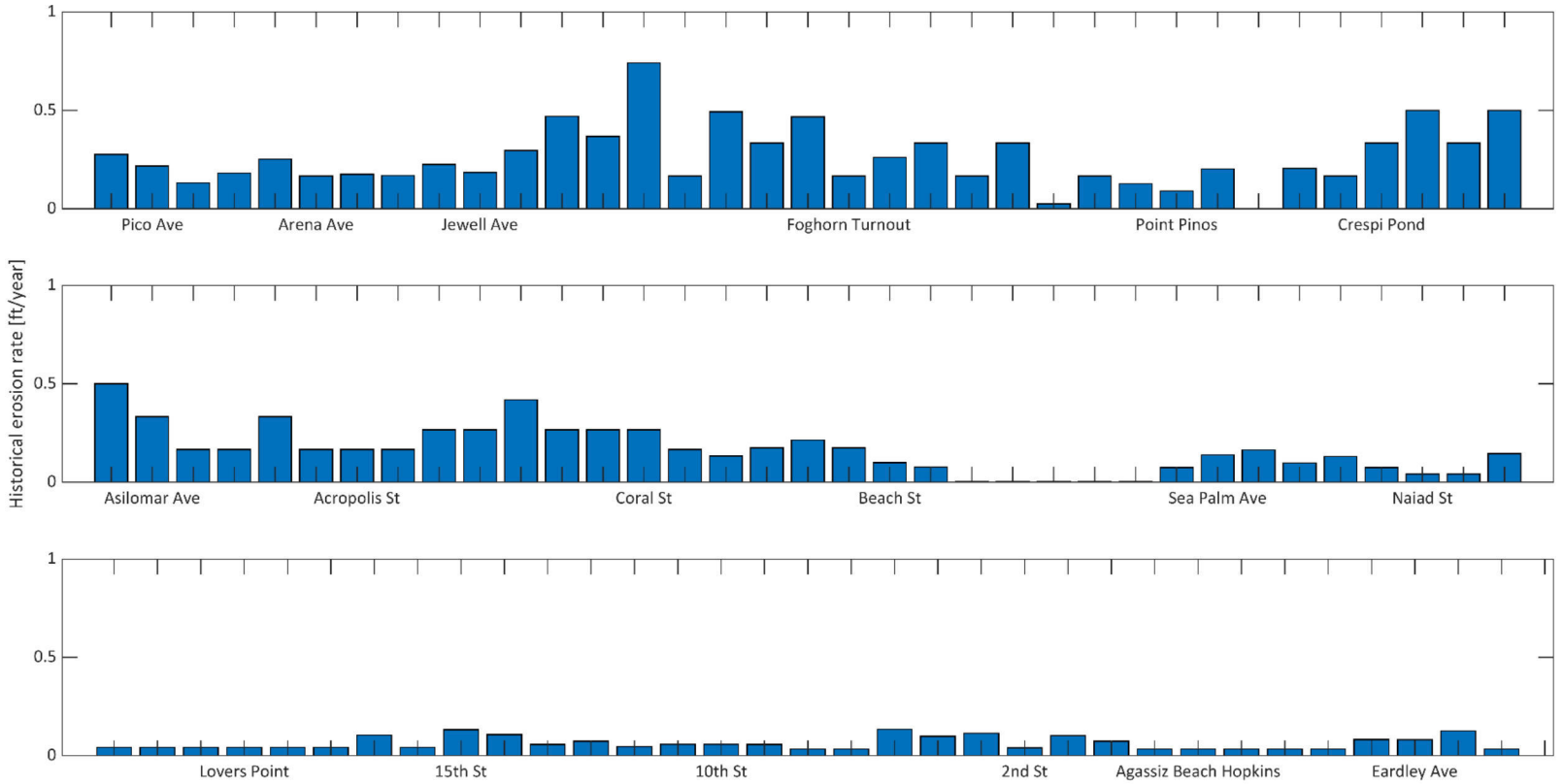


Figure 4. Average annual erosion rates in feet per year across each of the 105 coastal sections of the City (1945-2023).

For this study, the Integral team attempted to locate and georeferenced the best available historical aerial photograph series. However, because there is still significant horizontal and vertical uncertainty in any historical aerial data set, as well as differences in how erosion rates are measured, this study incorporated the erosion rate calculations by the HKA and Dudek teams as well. Dudek estimated erosion rates from Asilomar Avenue eastward, and HKA estimated erosion rates from Lighthouse Avenue to Coral Street. Thus, for all segments of the coast except for the open coast south of Lighthouse Avenue, there were at least two calculations of historical erosion rates from distinct studies. The Integral team utilized these calculations to develop an estimate of uncertainty in historical erosion rates. For areas with two or three historical erosion rates, we used the range of historical erosion rate estimates to determine a minimum, a mean, and a maximum historical erosion rate. For the Asilomar Dunes area, where Integral's historical erosion rate calculations were the only ones available, our team calculated the minimum and maximum values by adding and subtracting the standard deviation between all of the studies. For some segments of the coast, erosion rates were zero or positive due to armoring and filling, and for these areas, the team filtered the historical rate to 1 mm/year, or 0.04 in./year, so as not to project future accretion.

2.2.3 Elevations, Slopes, and Cliff Top /Toe Locations

Digital elevation models (DEMs) were used to develop cross-shore profiles, which informed the elevations of important cliff and dune features. These data were sourced from the National Oceanic and Atmospheric Administration (NOAA) Digital Coast website and from the Association of Monterey Bay Area Governments as well as the project specific collected topographic survey described above.

This effort was also informed by the collection of elevation data and orthographic imagery from an unmanned aerial vehicle (UAV drone) equipped with a camera to collect imagery, and a LiDAR sensor[3] to collect topographic elevations. The UAV was flown in December 2022 and January 2023 during king low tides and resulted in a DEM of 1-ft resolution. This DEM was utilized to develop inputs for the wave runup and erosion modeling tasks, including cliff and dune crest and toe locations, foreshore slopes, and surf zone roughness.

The elevation models considered in this study are presented in Table 3.

[3] The LiDAR sensor uses light from a laser to measure the distance to the earth's surface, enabling measurements of topographic elevation.

Table 3 Elevation models considered in this study.

Source	Year	Season
Integral and Walls Land+Water UAV LiDAR Flight	2022/2023	Winter
Federal Emergency Management Agency	2018	Spring
U.S. Geological Survey	2016	Spring
U.S. Army Corps of Engineers NCMP	2014	Winter
U.S. Army Corps of Engineers NCMP	2010/2011	Winter
Association of Monterey Area Governments	2010	Summer
U.S. Army Corps of Engineers NCMP	2009	Fall
U.S. Geological Survey	1998	Spring
U.S. Geological Survey	1997	Fall
USGS CoNED Topobathy	Multiple	Variable

Locations of the toe and top of the cliff or armoring structure were manually digitized from high-resolution aerial imagery collected by a UAV flight done by Integral in 2022-2023 and verified using a multidimensional hillshade derived from the LiDAR survey, a change in slope surface, and a high-resolution orthoimage. For the section of the coast that corresponds with the Point Pinos Trail (from the Great Tide Pool to Coral Street), this study relied on the previously surveyed top of the cliff or armor location from HKA and Best (2017).

2.2.4 Roughness

Surf zone roughness is a key model input, especially in a location like Pacific Grove, where the surf zone is often composed of numerous offshore rocks, boulder beaches, rocky reefs, and promontories. A determination of roughness is important because rougher surf zones can dissipate wave energy more effectively, reducing their wave energy and erosive potential on the backshore. To determine surf zone roughness, the team utilized a spatial analysis approach developed by Riley et al. (1999), known as Riley's Terrain Ruggedness Index (TRI). This approach calculates TRI from a DEM by determining the elevation change between adjacent grid cells. In landscapes where there are large elevation differences between grid cells, the TRI will have a higher value. The Integral team calculated a rolling mean of the TRI along each of the 105 coastal segments and then used this as a basis to determine Manning's friction coefficient, which is used in the coastal erosion and wave runup modeling efforts.

This translation from the TRI to Manning's friction coefficient took into consideration other local factors that are not encapsulated in Riley's TRI, such as the average width of the surf zone, the presence of offshore rocks seaward of the surf zone, and the presence of vertical coastal armoring. In addition, we also incorporated findings from HKA (2017) and Dudek (2018), who published field observation characterizations on the wave dissipation potential of each backshore segment. Integral used the inputs to adjust the TRI values at specific locations to better match local conditions. The resulting TRI values were then remapped to Manning's

friction coefficient to values that are appropriate for very rough and rocky shorelines. This range was determined from a study by Gon et al. (2020) on the wave dissipation by bottom friction along the Pacific Grove shoreline. The resulting bottom friction dissipation coefficient across the shoreline varied from approximately 0.05 to 0.1, with a median value of 0.068. These roughness adjustments resulted in more realistic estimates of local wave energy impacting the shoreline and causing erosion. Over time as sea level rises this wave energy dissipation is anticipated to decrease as depths increase.

2.2.5 Nearshore Waves and Total Water Levels

An important measure of coastal wave hazards and an important forcing for the erosion models is the total water level elevation and nearshore wave values. Nearshore waves including wave direction, height, and period were derived from two sources:

1. Unpublished data from the USGS CoSMoS model (Hegermiller et al. 2017) included wave parameters at 12 locations across the City's shoreline. This timeseries of nearshore waves, including hindcast data for 1980–2010 and projected data for 2010–2100, was developed using downscaled regional models.
2. SWAN is a wave model developed at Delft University of Technology that computes random, short-crested, wind-generated waves in coastal regions. This model was used by Integral to determine nearshore wave characteristics that were needed for the wave runup and erosion projections. The SWAN model relied on NOAA's National Data Buoy Center Buoy 46240 records from 1987 to 2019 and bathymetry data from NOAA. The wave period and directional spreading were held constant across the 15 simulations, set as 16 seconds and 25°, respectively. Wind speed and direction were held constant as well, set as 9.9 m/s and 269°, based on the same data buoy used for the extreme value analysis (EVA). These 15 simulations were used to create a wave height, wave period, and mean wave direction lookup table for locations at the 10 m isobath along the shoreline.

For the coastal erosion model, total water levels, which are the combined effect of wave runup height, storm surge, tides, and sea level, were determined for all 105 transects by combining the mean astronomical tide (7.21 ft NAVD88), wave timeseries (2000-2020), and a wave runup values using the Dodet et al. (2018) wave runup equation. This runup formulation was chosen because it was created using observations taken on a complex and rocky shoreline, like the shoreline of Pacific Grove. These total water level calculations were then calibrated with FEMA's BFEs using a calibration coefficient to closely fit the FEMA data[4].

[4] K value with the closest fit was found to be 0.73

For the coastal wave hazard modeling, total water levels were determined at 14 separate transects used in the XBeach model. Total water levels for this model used the highest astronomical tide from the Monterey tide station (7.21 ft NAVD88).

2.3 EROSION PROJECTION METHODS

Coastal erosion projections assume that sea level rise will elevate wave energy, intensifying its impact on cliffs, cliffs, and dunes, and ultimately leading to accelerated cliff-top retreat rates. Peer-reviewed models, described in more detail below, rely on assumptions linking cliff retreat to sea level rise, wave energy, historical cliff behavior, and cross-shore profile geometry. The CoSMoS cliff forecasting tool relies on five different models from Limber et al. (2018). However, not all models within the CoSMoS cliff forecasting tool were appropriate for this hard rock geology shoreline. This study used three models to match the hard rock geologic conditions of Pacific Grove. Results from all three are presented as an ensemble. The erosion model projects erosion distances at 1-year time steps. Erosion distances are mapped in approximately 20-year periods from 2020–2040, 2040–2060, and 2060–2080, and 2080–2100. The following models were included in the erosion project ensemble.

2.3.1 Trenhaile Model

This model presumes that the distance between the wave breaking and the cliff toe (surf zone length over which wave energy dissipation will occur) will drive cliff retreat and is described in Trenhaile (2000) and Limber et al. (2018). A shorter surf zone will increase the wave energy available to reach the backshore, and sea level rise will reduce surf zone length and lead to an acceleration of erosion into the future. Cliff erosion will in turn lengthen the surf zone. Thus, erosion and sea level rise attempt to balance each other, and as sea level rise accelerates, erosion does as well. Three erosion hazard zones representing a range of estimates of future erosion hazards were developed.

This model includes the following parameters:

- Breaking wave height
- Surf zone roughness
- Surf zone width (a function of slope, total water level, and wave height).

2.3.2 Energy Flux Model

This model presumes that the distance between wave breaking and the cliff toe (surf zone length) will drive cliff retreat and is described in Limber et al. (2018). It is very similar to the Trenhaile model but assumes that erosion depends on wave energy flux, which includes wave height squared, making this model more sensitive to changes in wave height. Like the model

above, three hazard zones representing a range of estimates of future erosion were developed. This model includes the following parameters:

- Breaking wave height squared
- Wave group velocity
- Surf zone roughness
- Surf zone width (a function of slope, total water level, and wave height).

2.3.3 Hackney Model

This model presumes that all wave energy that reaches the coast contributes to coastal erosion and is described in Hackney (2013, 2015) and Limber et al. (2018). Unlike the Trenhaile and Energy flux models, it does not include surf zone roughness, and in a rocky and complex shoreline like Pacific Grove, it results in higher erosion rates, especially in the near-term horizon. Like the models above, hazard zones representing a range of estimates of future erosion were developed. This model includes the following parameters:

- Significant wave height
- Sea level.

2.4 WAVE RUNUP METHODS

A process-based numerical model, XBeach, was used to quantify the elevation and inland extents of large storm wave runup. XBeach simulates wave transformation as storm waves approach coastlines, and in this application, XBeach was used on a 1-dimensional basis such that waves propagate towards the shore along transects (as opposed to a grid). Fourteen transects along the coast of Pacific Grove were selected for use in the wave runup analysis. The non-hydrostatic mode of XBeach was utilized, allowing for the computation of runup caused by wind-driven waves regardless of varying tide elevations. Offshore water levels were determined using the highest astronomical tide. Offshore wave conditions that correspond to a 100-year storm wave event were taken from a separate wave (SWAN) model that Integral developed as part of the Hopkins Marine Science Center analysis. Sea level elevations representing current conditions (0), 1, 2, 3, and 4 ft of sea level rise were run, resulting in a total of 70 simulations. Simulations were run over 60 minutes around a high tide window, and results were analyzed to determine R2%, which is the height above which only 2% of waves reach on a coastline and is a commonly used metric in coastal engineering. Maximum wave runup elevations were also calculated and informed the potential flooding of low-lying areas within the Pacific Grove Golf Links. These results were calibrated with FEMA BFEs and verified with wave runup values using the Dodet et al. (2018) method. Agreement between XBeach results and FEMA BFEs is shown in Figure 5. XBeach generally overpredicted FEMA BFE by several (<3) feet, though on some transects, such as near Point Cabrillo and Point Pinos, FEMA

overpredicted XBeach. Given the physics-based detailed modeling using XBeach, it is anticipated that more accurate storm wave run up would differ from the empirical calculations of total water level elevations calculated by FEMA.

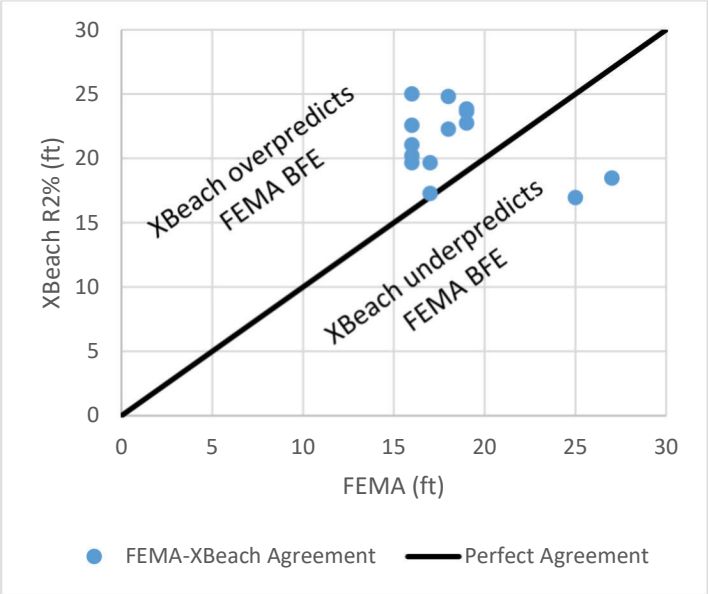


Figure 5. Agreement between R2% determined from the XBeach simulations and FEMA BFE levels.

The elevation of the R2% wave was transposed onto the topography of each transect to determine the horizontal extent of the wave hazard. Contour elevations representative of these elevations were then derived from the 2022/2023 LiDAR survey and seamed together between transects. Results were then verified with the wave runup and overtopping study conducted by Moffatt & Nichol as part of the Shoreline Master Plan, the site-specific work at Hopkins Marine Station by Integral and HKA, and with FEMA's mapped velocity (VE) hazard zone.

2.5 TIDAL INUNDATION METHODS

To quantify the impact of tidal inundation on flood risk, a bathtub approach was utilized. Sea level was mapped at the highest annual king tide (or HAT) at the Monterey Tide Gage. With 4 ft of sea level rise, the current HAT of 7.21 ft was mapped at 11.21 ft NAVD88. This analysis assumed that the future wave climate is comparable to the historical wave climate and that total water level changes are based primarily on influences from sea level rise. Modeling of total water levels assumes that the current backshore location and height of armoring remain consistent throughout the future and that no additional adaptation strategies are implemented.

2.6 COASTAL HAZARD MODEL CAVEATS

These results represent the state of the science and practice in coastal cliff erosion projections at a local scale However, the coastal erosion model projections are applied using a range of measured historic erosion rates and show a zone of potential erosion. It is highly unlikely that erosion of this entire area would occur simultaneously, but rather that multiple failures would occur along the coast in different locations over time. The cliff erosion models used in this study do not account for the evolution of nearshore slopes over time, including the beach and shore platform, or the contact depth between the dunes or marine terrace deposits and the bedrock. The efficacy of coastal armoring over time, which reduces erosion could substantially change when or if failure or removal of these coastal armoring structures will occur, is also not considered.

Furthermore, the ensemble of cliff erosion models used in this study are not process-based models, but rather 1-dimensional numerical models that relate offshore wave and water level conditions to accelerate historical erosion to project future erosion extents. These cliff erosion models do not consider terrestrial factors such as rainfall, stormwater runoff, or bioturbation from burrowing animals. While using an ensemble approach helps produce more defensible and probabilistic erosion estimates, the amount of future erosion predicted is highly dependent on variations in initial parameter values, particularly historical erosion rates. This study attempted to increase the certainty of historical rates by incorporating calculations from numerous studies; however, uncertainty still exists because of the varying nature of the input data set and calculation methods.

Similarly, the wave runup model used in this study also has associated uncertainty. In contrast to the erosion model, XBeach is a process-based model, meaning it captured the physics involved in coastal waves. However, it still has several limitations. Primarily, wave runup simulations with future sea level rise do not account for changes in elevation driven by coastal erosion. The erosion and wave models are not coupled to each other in this analysis, because there are no models available for use that can capture long-term erosion and wave runup in a computationally efficient way. As such, the wave hazards are calculated separately from the erosion hazards. Additionally, limited data were available to calibrate model output. FEMA BFE elevations were utilized for calibration but those elevations also have their own inherent uncertainty.

In summation, both the modeling processes, as well changes that may arise in the future ranging from potential changes in precipitation, temperature, wave climate, groundwater, frequency and magnitude of precipitating storm events, and anthropogenic contributions and responses to erosion contribute to uncertainty. For this reason, caution should be used with all projections. Given these caveats, however, all efforts have been made to utilize the best available science and methods and carefully document uncertainties.

This study has applied multiple historic erosion data sets and three different models to identify a range of possible erosion extents. All of the output data has been provided to the City for

future use. The projected erosion distances using the minimum historic erosion rates can be considered erosion hazard projections with a higher level of confidence to occur. The projected erosion distances using the maximum historic erosion rates show a lower confidence and more extreme projection that is more likely appropriate for the coastal hazard overlay. All of the model projections though would be useful for evaluating site specific projects as part of the CDP process.

2.7 VULNERABILITY ASSESSMENT METHODS

The vulnerability assessment analyzed the spatial intersection (or overlay) of the coastal erosion and wave runup hazard zones with the land use parcels and structures data sets. The study team overlaid all available parcels and structures to quantitatively assess both the number of structures and the area of parcels exposed. Data sets were queried, and summary statistics of assets were developed by sea level rise elevation. Results were collated into tables and are interpreted in the section below. The parcels data set was sourced from the County of Monterey in 2024, and the structures data set was sourced from Open Street Map (OSM) in 2023 and verified with a building footprint layer sourced from the City.

3 TASK 2 COASTAL HAZARD MODELING RESULTS

3.1 TASK 2.1 COASTAL EROSION HAZARDS RESULTS

This section provides an overview and map of the erosion hazard zones extents. A time series of maximum, mean, and minimum erosion distances for the three erosion models used in this study is shown for all 105 transects, spanning from 2020 to 2100 (Figure 6), given a projection of erosion hazards throughout the city over the rest of the century. Estimated maximum, mean, and minimum erosion distances are shown separately for each transect for the years 2040, 2060, 2080, and 2100 (Figure 7 through Figure 10). These figures highlight the areas of the City's coastline that are particularly vulnerable to erosion and give a range of likely erosion distances for each segment of the City's shoreline. Finally, a map is presented, spatially depicting the maximum erosion hazard zones to 2100 as well as the mapped factor of safety line representing areas that may be exposed to erosion in the near term (next 30 years) for the entire coastline of the City (Figure 11). To clarify, the extent of the hazard zone represents the projected time-averaged position of the cliff-top edge in the future.

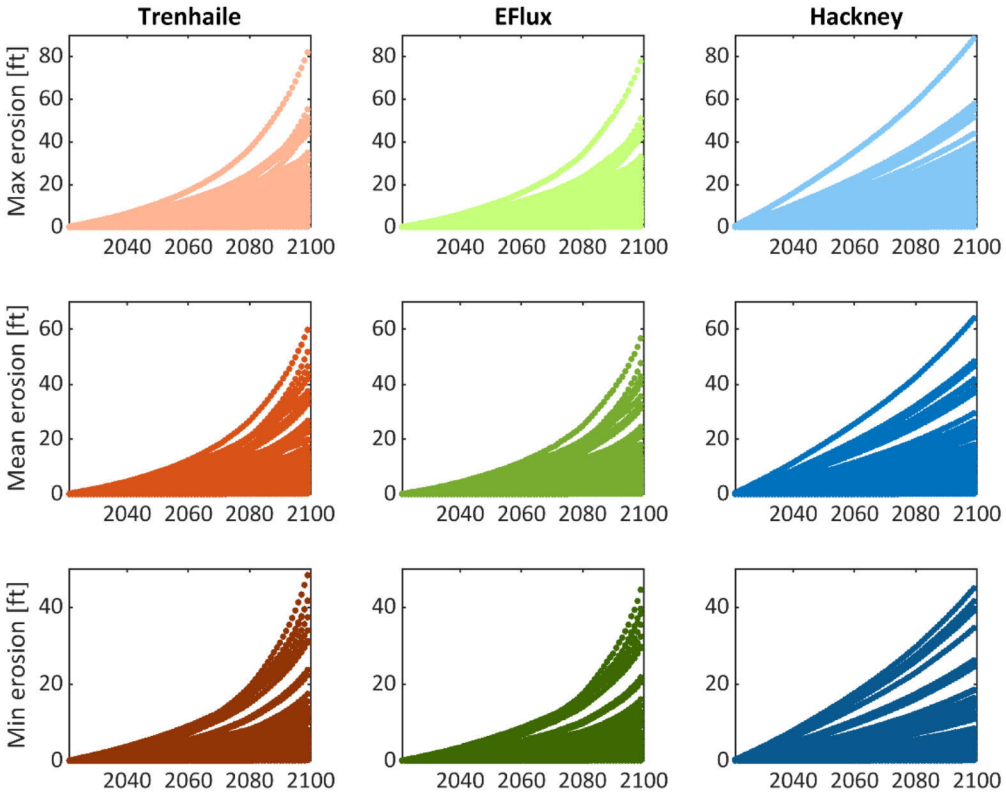


Figure 6. City-wide erosion, modeled to 2100. The three columns represent results from the three different erosion models that were utilized, and the three rows represent maximum, mean, and minimum modeled erosion.

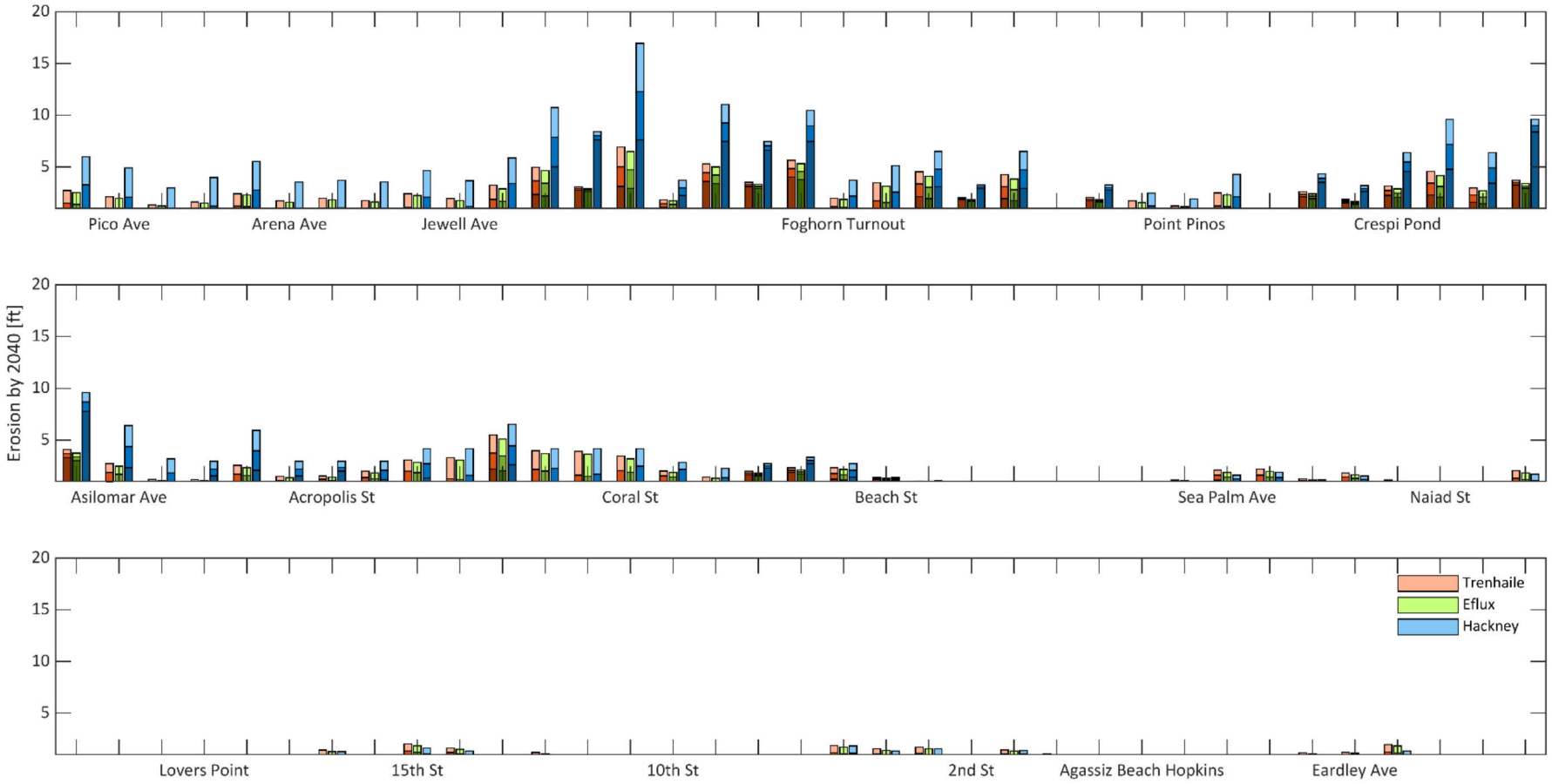


Figure 7. Modeled cliff erosion along the Pacific Grove coastline with 0.4 ft of sea level rise, estimated to occur by 2040. Red bars represent results from the Trenhaile erosion model, green bars represent results from the Energy Flux erosion model, and blue bars represent results from the Hackney model. The three color shares represent minimum or best-case erosion, mean erosion, and maximum or worst-case erosion.

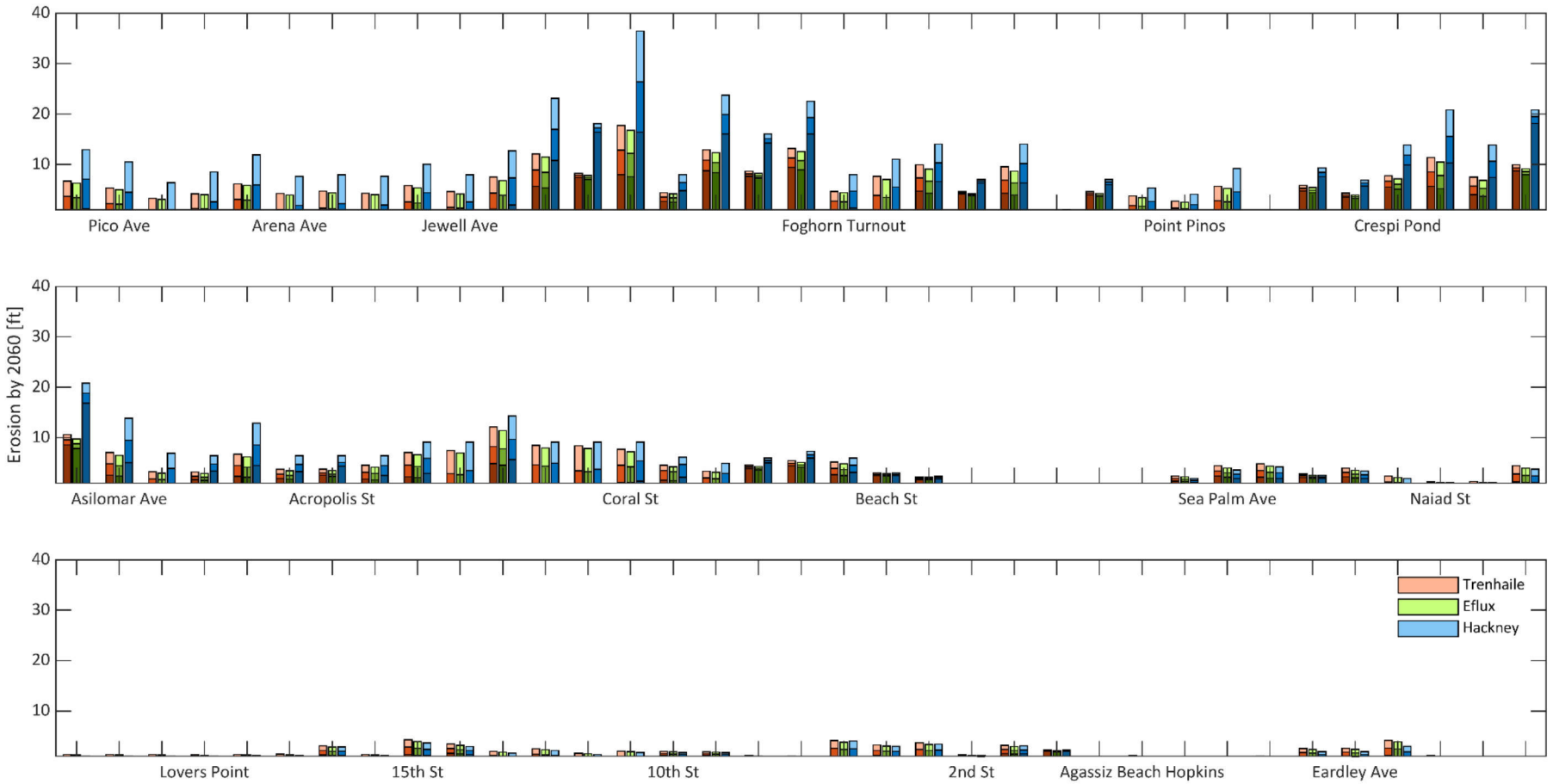


Figure 8. Modeled cliff erosion along the Pacific Grove coastline with 1.2 ft of sea level rise, estimated to occur by 2060. Red bars represent results from the Trenhaile erosion model, green bars represent results from the Energy Flux erosion model, and blue bars represent results from the Hackney model. The three color shares represent minimum or best-case erosion, mean erosion, and maximum or worst-case erosion.

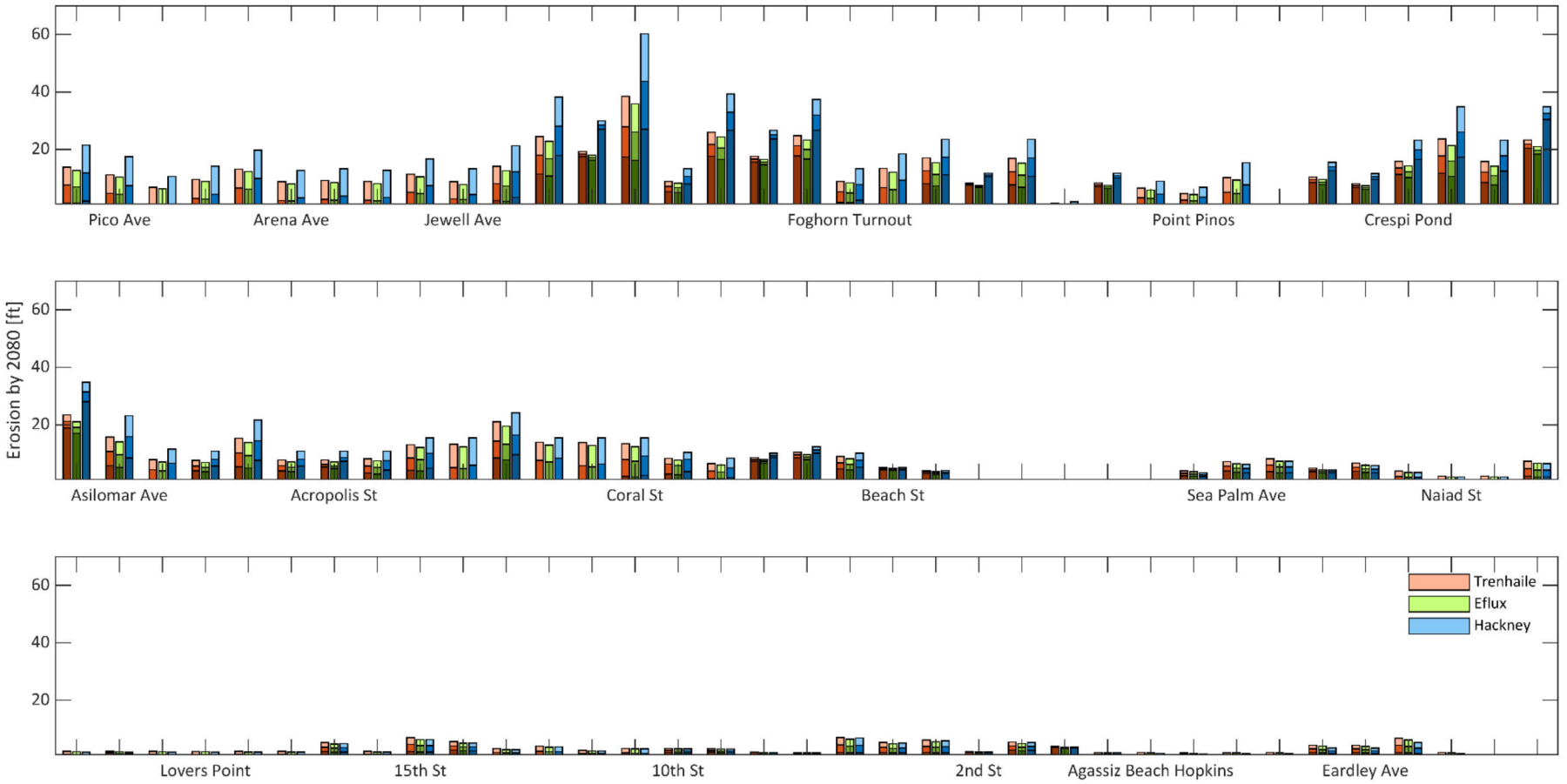


Figure 9. Modeled cliff erosion along the Pacific Grove coastline with 2.7 ft of sea level rise, estimated to occur by 2080. Red bars represent results from the Trenhaile erosion model, green bars represent results from the Energy Flux erosion model, and blue bars represent results from the Hackney model. The three color shares represent minimum or best-case erosion, mean erosion, and maximum or worst-case erosion.

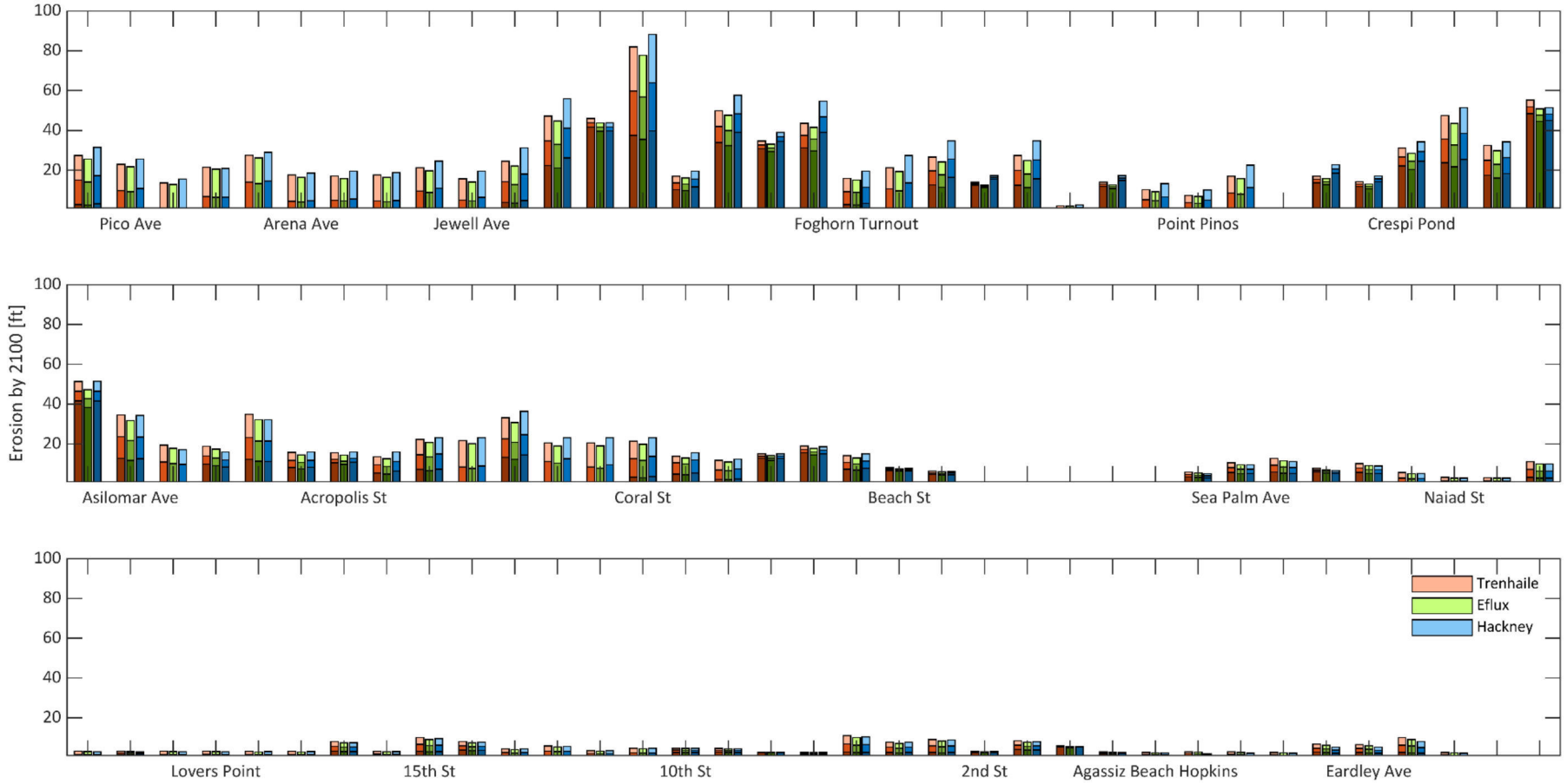


Figure 10. Modeled cliff erosion along the Pacific Grove coastline with 4.4 ft of sea level rise, estimated to occur by 2100. Red bars represent results from the Trenhaile erosion model, green bars represent results from the Energy Flux erosion model, and blue bars represent results from the Hackney model. The three color shares represent minimum or best-case erosion, mean erosion, and maximum or worst-case erosion.

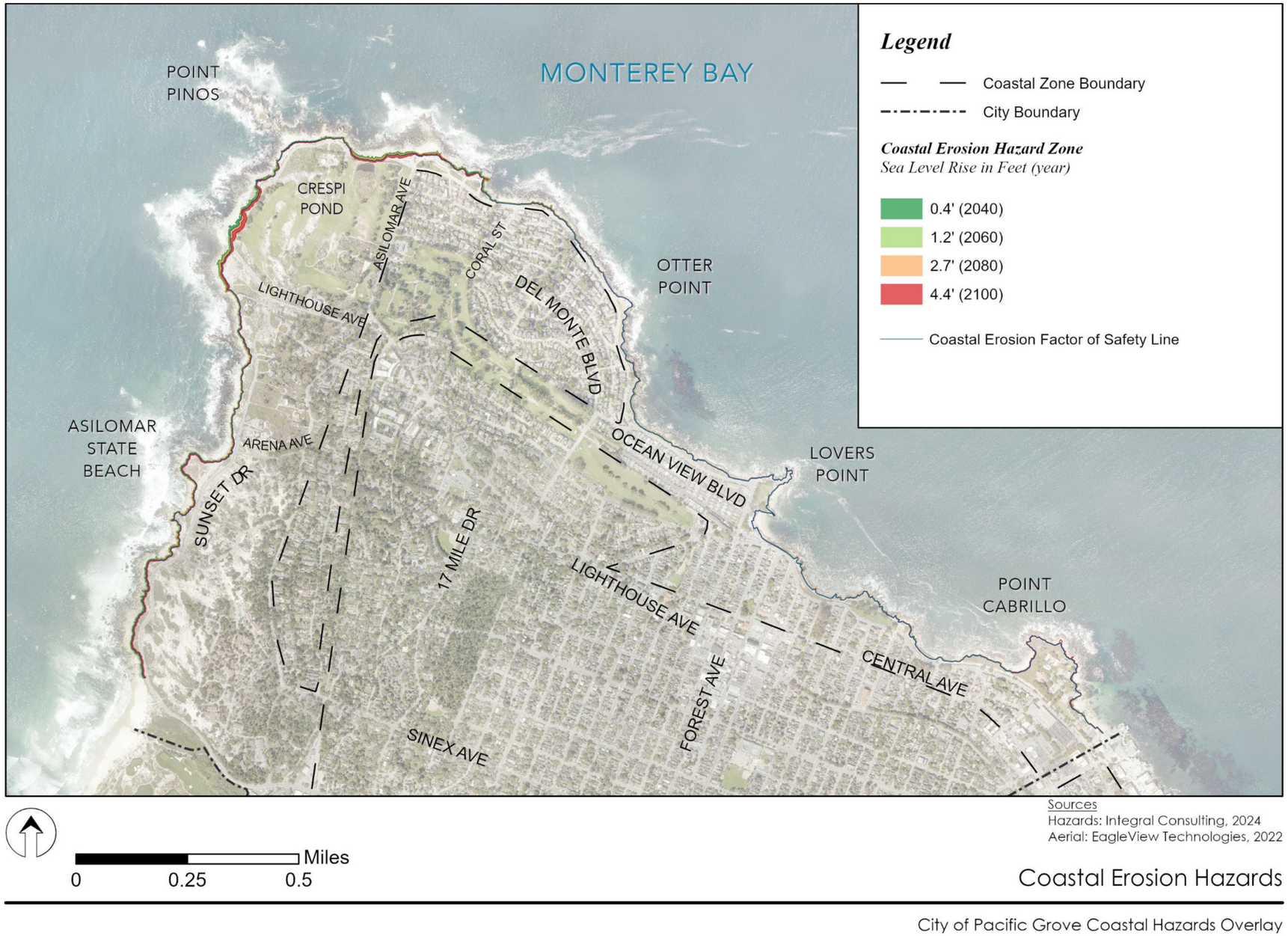


Figure 11. Coastal erosion hazard zones with sea level rise.

3.2 COASTAL EROSION EVENT AT THE GREAT TIDE POOL AND THE ASILOMAR DUNES STATE BEACH IN THE WINTER OF 2022/23

Integral performed a LiDAR survey at king low tides in December of 2022 and January 2023 which occurred before and after a large (~50-year) coastal storm wave event on January 5th 2023. Within the region, offshore wave heights reached 28 feet along the region, and considerable coastal wave flooding and erosion were reported along the Monterey Peninsula, including in Pacific Grove. The timing and spatial overlap of the surveys provided a unique insight into a severe erosion event and the potential storm-induced erosion extents regardless of sea level rise.

One location where erosion was most severe was at the Great Tide Pool along a section of the Asilomar Coastal Trail. Erosion was most severe within a 600 square-foot area, where the dune eroded back up to 50 feet and up to 5.5 feet of depth was lost (Figure 12 and Figure 13). The wooden lookout platform and boardwalk were destroyed, and rocks and debris from the foreshore were moved by waves and thrown over 100 feet and scattered around the dune field and trail.



Figure 12. Left: Portions of the damaged Asilomar Coastal Trail boardwalk that had been moved by wave action. Right: Erosion of the trail and dune near the Great Tide Pool, January 2023. Photo Source: City of Pacific Grove, 2023.

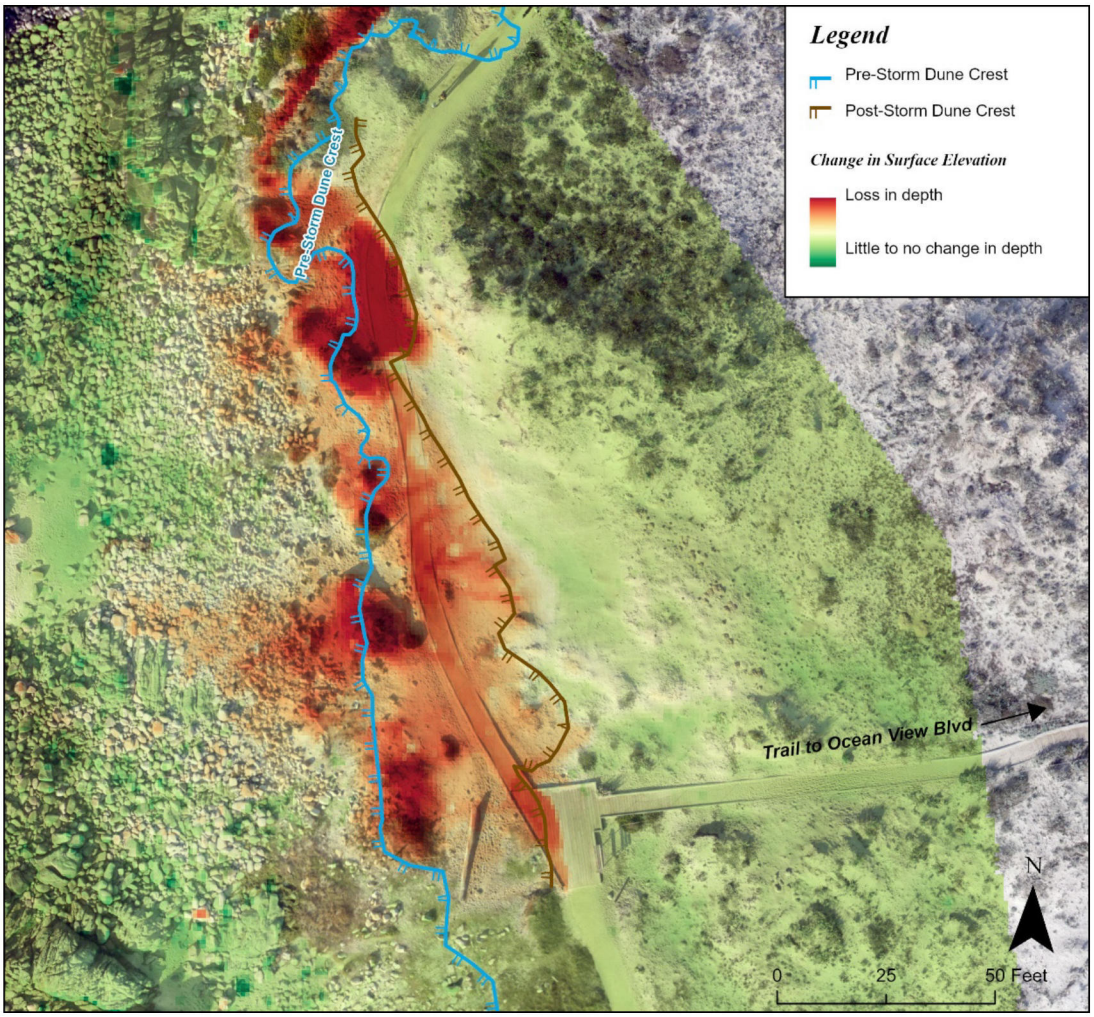


Figure 13. Documentation of an erosion event on January 5, 2023, at the Great Tide Pool area near Ocean View Blvd and Lighthouse Ave. Aerial image is pre-storm - December 2022.

One other notable location that historically has experienced significant erosion, and notably during the January 5th storm event, is at the Asilomar Gazebo located along the Asilomar Coastal Trail near Jewell Avenue and Sunset Drive. As seen in Figure 14 below, between 2015 and 2024 the coastal terrace fronting the gazebo has experienced significant erosion. The gazebo is projected to be vulnerable to coastal erosion in the near term and is located within the coastal erosion factor of safety line. See Section 4 for more details on potentially vulnerable locations to coastal hazards.



Figure 14. Documentation of erosion at the Asilomar Gazebo. Left: November 2015. Center: Erosion at the toe of the terrace is evident – January 2023. Right: Significant erosion of the terrace is evident with the failure of the wooden retaining wall and the steepening of the terrace face – February 2024.

3.3 TASK 2.2 COASTAL WAVE HAZARDS AND TIDAL INUNDATION

This section provides an overview of the detailed results and map of the coastal storm wave flooding hazard zone extents. First, an example is shown depicting the R2% wave runup values with 5 different sea level scenarios for one of the city transects where XBeach simulations were run (Figure 15). These results, available at all 14 transects, were subsequently used to develop coastal storm wave flooding hazard zones on the coast for existing conditions and four sea level rise horizons (1, 2, 3, and 4 ft). These wave flooding hazard zones with sea level rise are depicted in Figure 16.

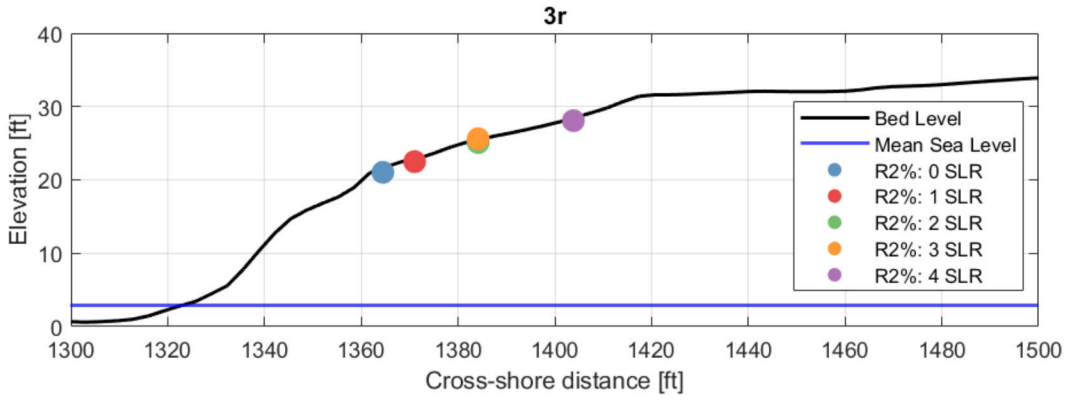


Figure 15. An example of XBeach results on a transect near Clyte St in Pacific Grove, showing the R2% wave locations on the transect bathymetry with five different sea level rise scenarios.

Maximum runup and R2% heights are reported for all fourteen transects and all five sea level scenarios in Table [5].

Table 4 Maximum and 98th percentile (R2%) runup heights across all 14 transects with all five sea level rise scenarios. Heights are relative to the NAVD88.

Runup heights with SLR										
	0 ft SLR		1 ft SLR		2 ft SLR		3 ft SLR		4 ft SLR	
Transect	**Max**	**R2%**	**Max**	**R2%**	**Max**	**R2%**	**Max**	**R2%**	**Max**	**R2%**
Pico Ave	23.9	22.3	25.6	23.0	27.2	23.9	29.2	27.6	29.2	27.6
North of Arena Ave	26.6	24.9	28.5	25.3	28.5	26.6	30.5	29.2	30.5	29.2
Great Tide Pool	24.3	22.6	25.9	23.3	26.6	25.3	27.6	26.9	27.9	27.2
South of Foghorn Turnout	24.6	23.6	25.9	23.9	26.2	24.6	26.2	24.6	26.2	25.3
Point Pinos	25.9	23.9	26.2	25.3	26.6	26.2	27.2	26.6	28.2	27.2
Crespi Pond	17.4	17.1	17.4	17.1	17.7	17.1	17.7	17.1	18.0	17.1
Coral St	20.7	19.7	21.6	21.3	22.6	21.6	23.3	22.3	24.3	23.3
Beach St	21.3	19.7	21.6	21.0	22.6	21.0	23.6	22.6	24.9	23.6
Siren St	22.6	17.4	23.9	19.0	25.9	21.6	26.6	22.0	29.5	23.3
Clyte St	24.6	21.0	25.3	22.6	27.6	25.3	28.5	25.6	30.8	28.2
Lovers Point	25.9	24.9	26.9	24.9	29.2	27.2	29.2	27.2	29.2	27.9
Grand Ave	25.3	20.3	28.9	21.6	28.9	22.3	29.2	24.6	31.8	25.3
15th St	29.8	22.6	29.8	23.3	30.2	24.6	32.5	26.9	32.5	28.2
5th St	21.3	18.4	22.3	19.4	25.3	21.3	25.6	23.6	25.9	24.9

[5] R2% heights for the Hopkins Marine Station were sourced form a site-specific study by Integral and HKA from 2021.

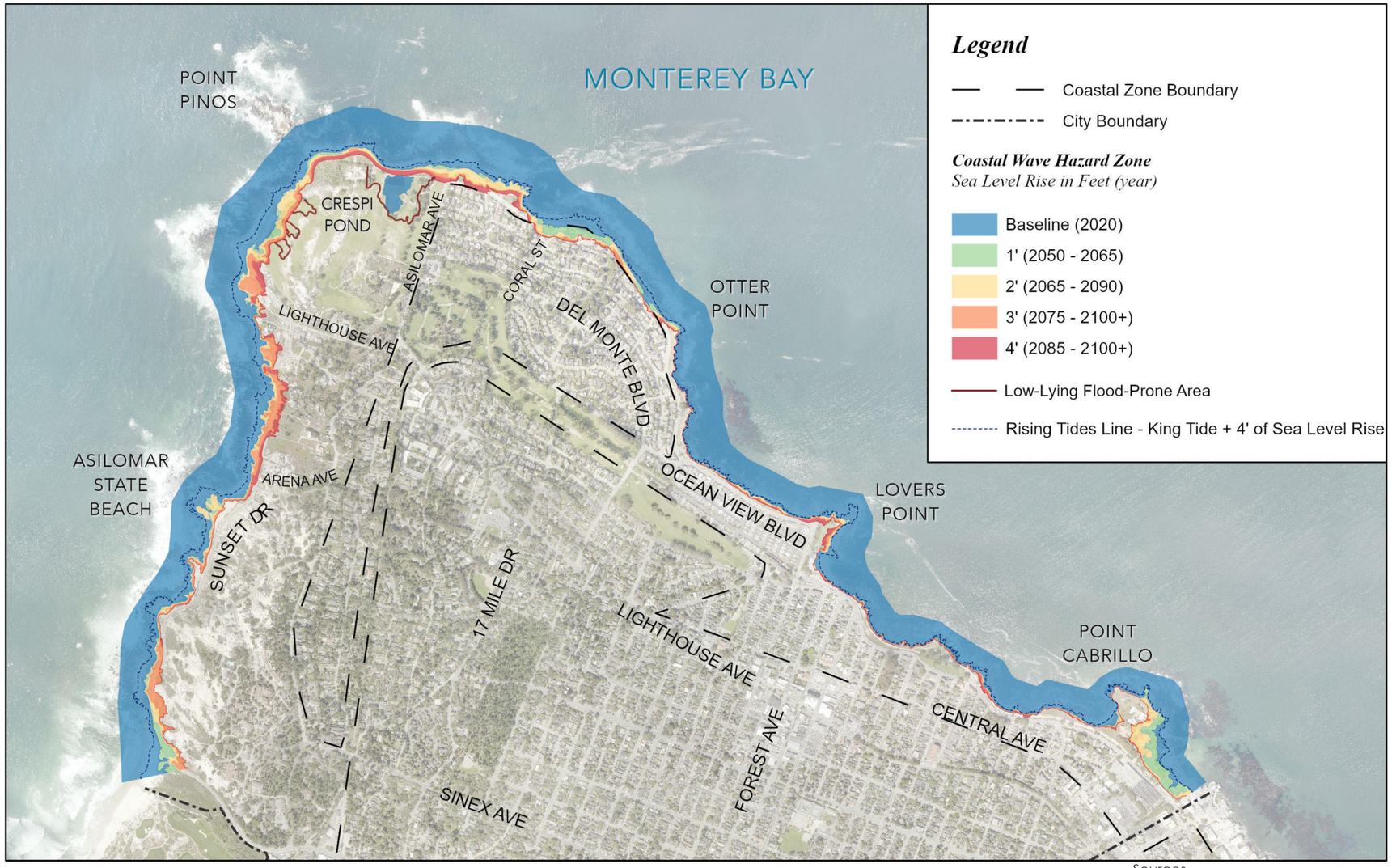


Figure 16. Coastal wave hazards from a 1% annual chance storm, rising tides, and the low-lying flood-prone area hazard zones with sea level rise.

3.4 TASK 2.3 TIDAL INUNDATION FINDINGS

Results from this analysis show that tidal inundation with 4 feet of sea level rise is not a significant threat to any developed land areas within the City. Tidal inundation may narrow beach widths and shift the rocky intertidal habitat areas to higher elevations, but no parcels or structures are at risk due to rising tides.

4 TASK 3 REVISED VULNERABILITY ASSESSMENT

This section provides an overview of vulnerabilities to coastal hazards and sea level rise for parcels and structures. The focus of this assessment is on the direct exposure of property and structures, and this assessment does not evaluate direct exposure to public infrastructure or other potential cascading impacts associated with climate change. The following tables enumerate the structures and parcels impacted by coastal erosion and coastal wave flooding through the end of the century. Overall, coastal waves cause greater hazard exposure than coastal erosion.

For coastal erosion, only the State Parks Gazebo, which is located near Jewell Avenue, is located within the coastal erosion factor of safety (meaning it is currently vulnerable to erosion). However, three other structures are located in proximity to the erosion hazard area, including two single-family residences on the ocean side of Sunset Drive in the Asilomar Dunes neighborhood, and one institutional building at the Hopkins Marine Station that is currently protected by coastal armoring. A total of 7.75 acres of parcels are predicted to be impacted by coastal erosion (Table 5).

Table 5 Cumulative acres of parcel exposed to **erosion** by year (sea level rise range in ft).

	2020–2040 (0–0.5 ft)	2040–2060 (0.5–1.2 ft)	2060–2080 (1.2–2.7 ft)	2080–2100 (2.7–4.4 ft)
Residential Land	0.02	0.04	0.08	0.15
Institutional Land	0.04	0.09	0.15	0.24
Parkland and Open Space	1.15	2.57	4.39	7.37
Grand Total	**1.21**	**2.70**	**4.62**	**7.75**

For coastal wave hazards, by 2100, a total of 28 structures and 81 acres of parcels are predicted to be impacted by coastal wave hazards from a 100-year storm wave event (Table 6 and Table 7). The majority of acres impacted are parkland and open space. In the near term, between 0 and 1 ft of sea level rise (2020 to 2050–2065), the most exposed areas to coastal wave hazards occur at six distinct locations:

1. At the southern part of the City near the Asilomar Conference Grounds, where coastal wave hazards may extend across Sunset Drive and into the conference grounds dunes
2. Around the pocket beach between the Great Tide Pool and the Foghorn Turnaround, where coastal wave hazards expose Ocean View Boulevard and the Pacific Grove Golf Links
3. At Crespi Pond, where wave splash and large thrown debris affect the trail and road, and low-lying areas of the Pacific Grove Golf Links will experience ponded flooding. The public restroom near Crespi Pond is within the coastal wave hazard factor of safety line and may be vulnerable to flooding

4. At the residential area between Coral Street and Esplanade Street, where Ocean View Boulevard and the first line of oceanfront homes are exposed
5. At the area between Esplanade Street and Otter Point, where Ocean View Boulevard and the parking lot at Otter Point are exposed
6. At the Hopkins Marine Station, with wave exposure at West Beach, Agassiz Beach and Agassiz Building, and around the Historic Boatworks and Marine Biology Library.

In the mid-term, between 1 and 2 ft of sea level rise (2050–2090), exposure at the locations listed above increases, with escalated exposure to the parking lots and turnarounds including at the Crespi, Asilomar, Acropolis, and Foghorn turnarounds. The lower-lying areas located along the central and eastern sides of the Hopkins Marine Station also see increased exposure.

In the long term, between 2 and 4 ft of sea level rise (2065–2100+), exposure at the locations listed above escalates, with increased exposure to the residential parcels in the Asilomar Dunes Neighborhood located between Arena Avenue and Jewell Avenue. Coastal wave hazards approach many of the homes here and may impact access.

Table 6 Number of structures exposed to **coastal wave hazards** by sea level rise horizon in feet (ranges of years projected).

	0 (2020)	0–1 (2020–2065)	1–2 (2050–2090)	2–3 (2065–2100+)	3–4 (2075-2100+)	**Grand Total**
Parks Gazebo				1		**1**
Single Family Homes		10	2	2	3	**17**
Institutional Buildings	4	2	3	1		**10**
Grand Total	**4**	**12**	**5**	**4**	**3**	**28**

Table 7 Cumulative acres of parcel exposed to **coastal wave hazards** by sea level rise horizon in feet (ranges of year projected).

	0 (2020)	0–1 (2020-2065)	1–2 (2050-2090)	2–3 (2065-2100+)	3–4 (2075-2100+)
Vacant Land				0.08	0.33
Residential Land	0.33	1.33	1.82	2.28	3.03
Parkland and Open Space	48.83	52.66	59.55	66.92	70.38
Institutional Land	2.09	4.82	6.93	7.26	7.50
Grand Total	**51.26**	**58.81**	**68.29**	**76.54**	**81.24**

COASTAL HAZARDS AND VULNERABILITY ASSESSMENT OVERVIEW BY 2100

Future sea level rise will lead to an acceleration in cliff top erosion throughout the City, as well as an increased risk of wave runup hazards and associated flooding. The following long-term vulnerabilities are projected:

Coastal Erosion Hazards

– By 2100, with ~4 ft of sea level rise, the following coastal erosion hazards are projected:

1. Erosion is projected to be highest at the Great Tide Pool and Crespi Pond, with projected erosion distances of 85 and 54 ft, respectively. These coastal erosion hazards are projected to impact Oceanview Blvd around Point Pinos and the Pacific Grove Golf Links.
2. Typical erosion distances along the open coast of the Asilomar Dunes neighborhood may reach 28 ft and exposes Sunset Drive at the intersection of Arena Avenue. One State Parks gazebo is exposed to erosion. Two residential structures located on the ocean side of Sunset Drive are proximal to the erosion hazard zone.
3. Typical erosion distances along the coast of the Beach Tract / Fairway Homes Neighborhood vary significantly but are highest between Crespi Pond and Coral Street where erosion can be as much as 54 ft. Erosion between Coral Street and Lovers Point is as high as 22 ft, with some sheltered coastal segments projected to have very little erosion, assuming no change in the current coastal protection structures. No structures are projected to be exposed to erosion in this area.
4. Erosion along the coast of the Pacific Grove Retreat Neighborhood is significantly less than other areas of the City's coastline, with typical erosion values of less than 10 ft. No structures are exposed to erosion in this area; however, one structure located behind coastal armoring at the Hopkins Marine Station, could be exposed to erosion if the armoring were to fail.

Wave Runup Hazards

– By 2100, with ~4 ft of sea level rise, the following wave runup hazards are projected:

1. Wave runup hazards are projected to be highest between the Great Tide Pool and Point Pinos and are projected to extend inland as much as 300 ft. These coastal wave hazards are projected to impact the Point Pinos Park area and Pacific Grove Golf Links. The low-lying area around Crespi Pond is also exposed to coastal wave hazards currently and may experience large wave-thrown

debris and splash along Ocean View Boulevard. Flooding of the low-lying area behind the road is expected to escalate with sea level rise and the public restroom near Crespi Pond is potentially vulnerable to flooding. The extent of hazards for low-lying flood-prone areas within the Pacific Grove Links is identified in Figure 16.

2. Wave runup extents along the open coast of the Asilomar Dunes neighborhood vary but may be as high as 280 ft. The residential parcels most exposed to wave flooding are between Arena Avenue and Jewell Avenue, with exposure to wave hazards projected to occur by 3 ft of sea level rise.
3. Wave runup extents along the Beach Tract / Fairway Homes Neighborhood are highest between Crespi Pond and Otter Point (near Beach Street), with the most exposed residential block between Coral Street and Esplanade Street. A total of 16 homes and 25 parcels are exposed in this neighborhood. Exposure to the properties and homes is projected to occur between 1 and 2 ft of sea level rise.
4. Wave runup extents along the Pacific Grove Retreat Neighborhood are minimal with the exception of the Hopkins Marine Station. Here, nine institutional buildings are exposed to coastal wave hazards.

Tidal Inundation

1. By 2100, and with sea level rise of up to 4 ft, no structures were projected to be exposed to daily or even king (annual) high tide inundation.

5 NEXT STEPS & RECOMMENDATIONS

1. Update the LCP Land Use Plan policies to incorporate the revised hazard modeling findings from this study into a coastal hazard overlay and make minor changes to the policy language as necessary.

2. Incorporate new hazard layers into a refined vulnerability assessment to map the potential vulnerabilities to the City's roadways, recreational assets, public infrastructure, and critical facilities.

3. Integrate the new hazard layers and vulnerability assessment findings into relevant City planning documents including:

    a. General Plan
    b. Capital Improvement Plans
    c. Shoreline Master Plan
    d. Local Hazard Mitigation Plan
    e. Climate Action and Adaptation Plan

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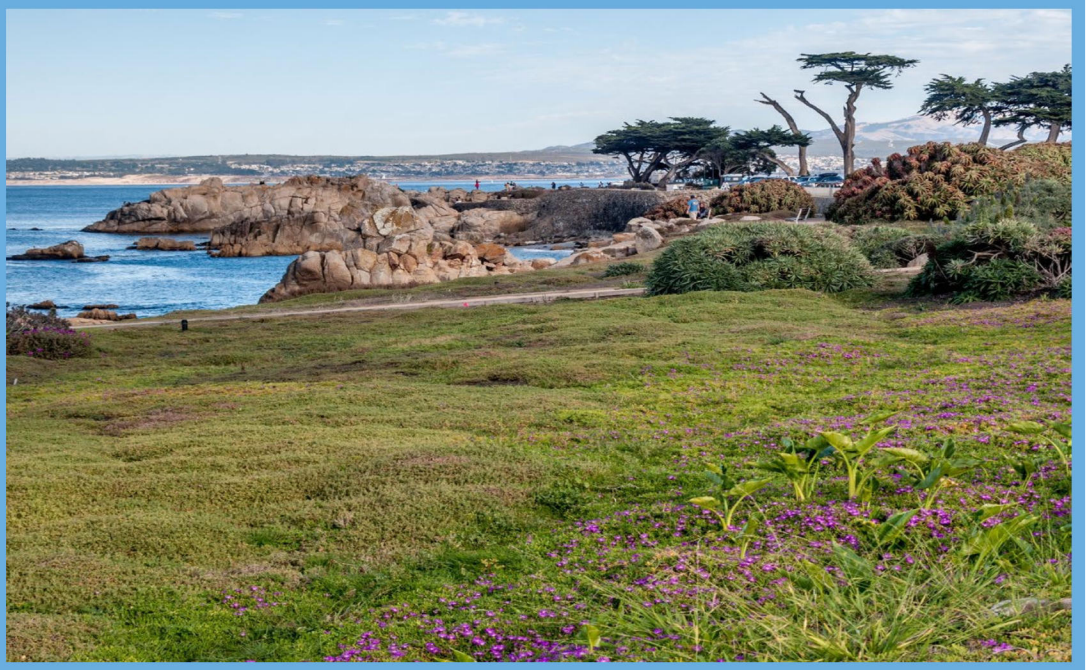
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Appendix J

Climate Change Vulnerability Assessment



CITY OF PACIFIC GROVE SAFETY ELEMENT UPDATE

CLIMATE CHANGE VULNERABILITY ASSESSMENT

Climate change is a global phenomenon that is expected to have wide ranging impacts on local communities. This Climate Vulnerability Assessment is an Appendix to the City of Pacific Grove Health and Safety Element of the General Plan. This assessment evaluates potential climate impacts on Pacific Grove community members, built and natural assets, and critical infrastructure and services.

Rincon Consultants, Inc. (hereinafter referred to as "Rincon") prepares vulnerability assessments that evaluate climate change hazards, including wildfire, based on numerous sources, including third party consultants, State and Federal mapping resources, and various software modeling programs that are considered industry standard best practices. Vulnerabilities were analyzed in collaboration with the City of Pacific Grove staff. Wildfire is unpredictable, and the specific conditions of wildfire could result in fire behavior that diverges from the assumptions used in this analysis. There is no guarantee that wildfire behavior and specific treatment to avoid such behavior will follow or prevent wildfire impacts. Rincon is not responsible for any damage to life or property that might occur based on the results of the vulnerability analyses herein, and any accompanying recommendations.

Climate Change Vulnerability Assessment

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Introduction

Background on Climate Change

Climate projections indicate that there will be increases in average temperature, more frequent and longer dry periods, increased frequency, severity and impacts of wildfire, increased intensity of the largest storms, and rise of sea level. These changes in climate can result in a range of impacts on priority populations, natural and recreational resources, buildings and facilities, and infrastructure and critical resources. This Climate Vulnerability Assessment is an Appendix to the City of Pacific Grove Health and Safety Element.

This report evaluates how climate change may impact priority populations, natural resources, buildings and facilities, and services and infrastructure in the City of Pacific Grove. This report is consistent with Government Code § 65302 (as amended by Senate Bill (SB) 379) which requires cities, counties, and unincorporated areas across California to prepare a Climate Change Vulnerability Assessment to inform updates to the Health and Safety Element of the General Plan. Understanding Pacific Grove's vulnerabilities to climate change provides a foundation to develop required climate adaptation goals, policies, and implementation programs for the City's Health and Safety Element.

Causes of Climate Change

Climate change is caused by the addition of excess greenhouse gases (GHGs) to the atmosphere, which traps heat near the earth's surface raising global average temperatures in what is referred to as the greenhouse effect. This increase in average temperatures across the globe affects sea level rise, precipitation patterns, the severity of wildfires, the prevalence of extreme heat events, water supply, and ocean temperatures and chemistry (NASA 2022). According to the Intergovernmental Panel on Climate Change (IPCC), GHGs are now higher than they have been in the past 400,000 years, raising carbon dioxide levels from 280 parts per million to 410 parts per million in the last 150 years (IPCC 2021). The dramatic increase in GHGs is attributed to human activities beginning with the industrial revolution in the 1800s, which represented a shift from an agrarian and handicraft-based economy to one dominated by industry and machine manufacturing (NASA 2022).

Pacific Grove Snapshot

Pacific Grove encompasses approximately 2.9 square miles (or approximately 1,830 acres) on the Monterey Peninsula in northern Monterey County. Pacific Grove is bordered by the Pacific Ocean to the north and west, the City of Monterey to the east, and the unincorporated community of Pebble Beach to the south. Pacific Grove is located approximately 15 miles to the southwest of Salinas and 50 miles to the southwest of San José. State Route 1 (SR-1) provides regional access to the City, with local roadways (including Highway 68, Lighthouse Avenue, and David Avenue) providing local access within the City. Pacific Grove enjoys a Mediterranean-like climate that is characterized by a winter rainy season and cool dry summers. According to the California Department of Finance, the Pacific Grove population was estimated to be 14,761 in 2022. The First Peoples of Pacific Grove have lived here for thousands of years, and there are many

sacred sites within the City. This land and their relationship to it continues to be of great importance to the First Peoples of Pacific Grove. Additional history of the First Peoples of Pacific Grove can be found at www.esselentribe.org, www.ohlonecostanoanesselennation.org, and www.costanoanrumsen.org

Lexicon

Several words and phrases are used throughout this assessment to illustrate climate vulnerabilities within Pacific Grove.

- **Adaptation.** The process of adjustment to actual or expected climate and its effects, either to moderate harm or exploit beneficial opportunities (IPCC 2012).
- **Adaptive Capacity.** The City of Pacific Grove's ability to cope with and adjust to the impacts of climate change (Cal OES 2020).
- **Asset.** Refers to a resource, structure, facility, or service that is relied on by a community.
- **Cascading Impact.** Climate hazard caused impacts that compromise infrastructure or disrupt critical services (i.e., power supply or water conveyance) broadening the scope of impact past a singular subject to reliant subsystems and populations (Collins et al. 2019).
- **Climate Hazard**. A dangerous or potentially dangerous condition created by the effects of the local climate (Cal OES 2020). Climate hazards of concern for Pacific Grove are drought, wildfire, sea level rise, severe storms and stormwater flooding, and extreme heat and warm nights.
- **Climate Indicator.** A measure of a particular aspect of the earth's climate that can be tracked over time to show trends and changes in climate. Climate indicators relevant to the City that are discussed in this report are temperature and precipitation. Changes in climate can result in increased frequency and intensity of climate hazards (USGCRP 2017).
- **Compounding Risk**. When two or more extreme events or average events occur simultaneously and increase the scope of impact or severity of the event; an additional risk brought about by increased frequency of events from climate change (Seneviratne et al. 2012).
- **Impact.** Effects on natural and human systems including effects on lives, livelihoods, health, ecosystems, economies, societies, cultures, services, and infrastructure due to the interaction of climate hazards and the vulnerabilities of the system or asset effected (IPCC 2012).
- **Mitigation.** An act or sustained actions to reduce, eliminate, or avoid negative impacts or effects (Cal OES 2020).
- **Priority Populations.** Certain populations experience increased exposure, risk, or sensitivity to climate change impacts and often have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts (Cal OES 2020). Assessing and mitigating impacts to these populations is prioritized given the increased risks and sensitivities.

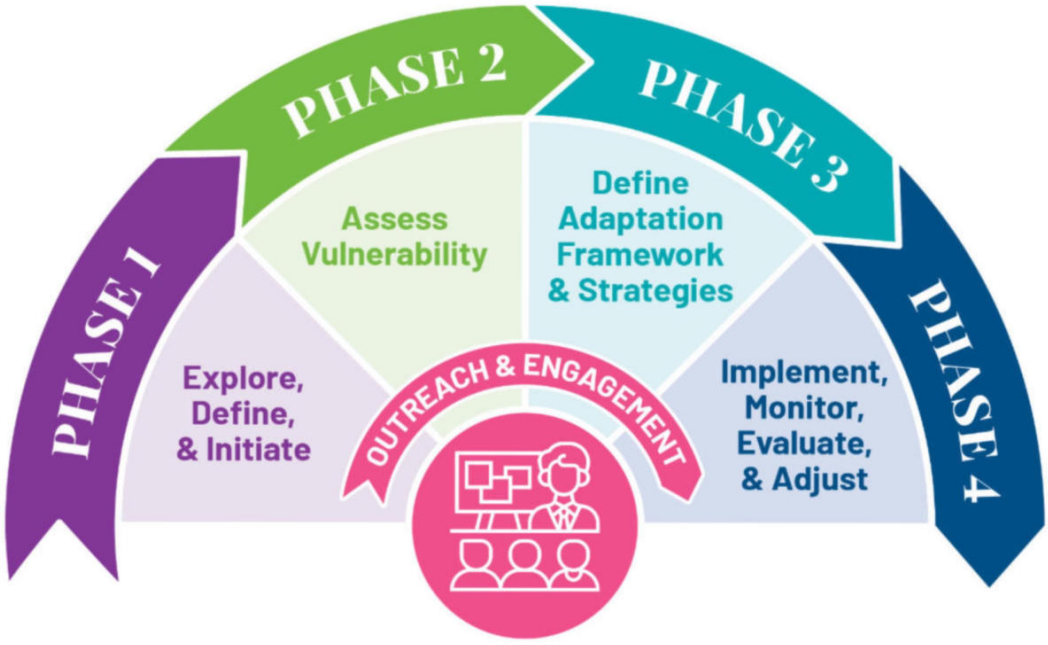
- **Resilience.** The capacity of an entity (an individual, a community, an organization, or a natural system) to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience (Cal OES 2020)
- **Sensitivities**. The degree to which a species, natural system, community, asset, or other associated system would be affected by changing climate conditions (Cal OES 2020).
- **Vulnerability.** The propensity or predisposition to be adversely affected (IPCC 2012).

Vulnerability Assessment Methodology

The following section details state guidance, methods, and sources used in the preparation of this report.

California Adaptation Planning Guide

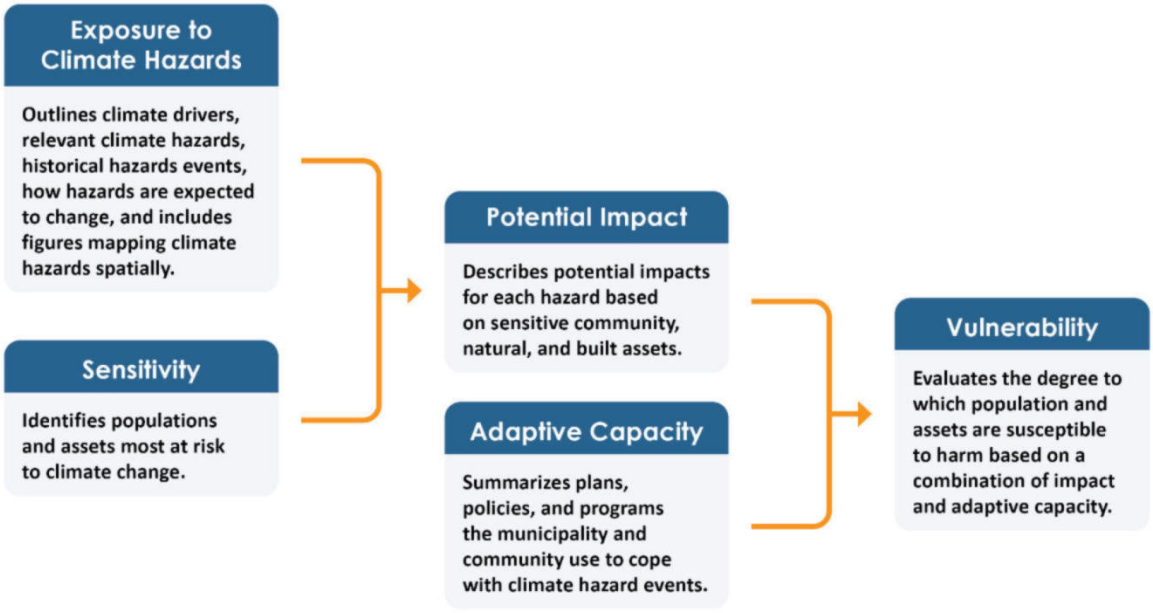
The Pacific Grove Climate Change Vulnerability Assessment follows the vulnerability assessment process recommended by the California Governor's Office of Emergency Services, as documented in the 2020 California Adaptation Planning Guide (Cal APG). The adaptation planning process outlined by the Cal APG consists of four phases, illustrated in the graphic below, with Phase 2 detailing the vulnerability assessment process (Cal OES, 2020).



Source: 2020 California Adaptation Planning Guide

The Pacific Grove Climate Change Vulnerability Assessment is prepared consistent with Phase 2 of the Cal APG and is composed of the following parts found in the Vulnerability Assessment Flow Diagram and described in further detail below.

Vulnerability Assessment Flow Diagram



This assessment is organized into the following sections:

1. **Introduction** describes the methodology and key data sources used to prepare the Climate Change Vulnerability Assessment.
2. **Exposure to Climate Hazards** outlines climate indicators, relevant climate hazards, historical hazards events, how hazards are expected to change, and includes figures mapping climate hazards spatially across Pacific Grove.
3. **Sensitivity** identifies populations and assets most at risk to climate change.
4. **Adaptive Capacity** summarizes plans, policies, and programs that help Pacific Grove cope with climate hazard events.
5. **Vulnerability Analysis** describes potential impacts for each hazard based on priority populations, natural, and built assets, with consideration given to their adaptive capacity. The chapter includes vulnerability scores of low, medium, or high for each population group and asset. See Vulnerability Scoring Methodology section below for more detail.
6. **Conclusion** presents the key findings of this report.

Vulnerability Scoring Methodology

Vulnerability scoring is a valuable step in the climate vulnerability assessment process because it identifies which assets and populations face the highest threat to climate hazards. This can aid in the prioritization of adaptation actions. The vulnerability score is a combination of the impact and adaptive capacity score. The impact and adaptive capacity scores are developed using a qualitative methodology outlined in the Cal APG, as seen in Table 1. Impact and adaptive capacity scores are identified for each asset and population for each climate hazard. The vulnerability score is prepared by combining the two scores as demonstrated in Table 2. The range of potential impacts spans 1 through 5 with 4-5 being the highest threat.

Table 1: Impact and Adaptive Capacity Scoring Rubric		
Score	**Impact**	**Adaptive Capacity**
Low	Impact is unlikely based on projected exposure; would result in minor consequences to public health, safety, and/or other metrics of concern.	The population or asset lacks capacity to manage changes; major changes would be required.
Medium	Impact is somewhat likely based on projected exposure; would result in some consequences to public health, safety, and/or other metrics of concern.	The population or asset has some capacity to manage climate impact; some changes would be required.
High	Impact is highly likely based on projected exposure; consequences to public health, safety, and/or other metrics of concern.	The population or asset has high capacity to manage climate impact; minimal to no changes are required.

Source: Cal OES 2020

Table 2: Vulnerability Score Matrix				
Potential Impacts	**High**	3	4	5
	Medium	2	3	4
	Low	1	2	3
		High	**Medium**	**Low**
Adaptive Capacity				

Source: Cal OES 2020

Key Data Sources

The following data sources and tools, many of which are recommended within the Cal APG, were used in preparation of this report.

- **Cal-Adapt** is an online tool that presents historic and modeled projections based on 10 different global climate models. The tool was developed and is maintained by the University of California with oversight from the California Energy Commission (CEC). This tool is used to present projection data related to minimum

and maximum temperature, precipitation, extreme heat, warm nights, drought, and wildfire.

- **California's Fourth Climate Change Assessment** was developed by the CEC and other State of California coordinating agencies to present up-to-date climate science, projections and potential impacts associated with climate change. The CEC and coordinating agencies developed nine regional reports to provide regional-scale climate information to support local planning and action. The Central Coast Region Summary Report (2018) presents an overview of climate science, regional projections, specific strategies to adapt to climate impacts, and key research gaps needed to spur additional progress on safeguarding the Central Coast Region from climate change. The Central Coast Region Summary Report was used to understand regional changes that may affect Pacific Grove both directly and indirectly.
- **The California Healthy Places Index (HPI)** is an online mapping tool that reports on community conditions that are known to predict health outcomes and life expectancy. The tool was prepared by the Public Health Alliance of Southern California, a collaborative of local health departments in Southern California. HPI displays 25 community characteristics at various legislative boundaries, including census tracts and city and county boundaries. The community characteristics relate to the following identified Policy Action Areas: economic, education, housing, health care access, neighborhood, clean environment, transportation, and social factors. HPI applies a relative percentile score across all census tracts in California using statistical modeling techniques based on the relationship of the Policy Action Areas to life expectancy at birth. Low percentile scores reflect unhealthy conditions. HPI is useful in providing both big picture and localized insights into community health. The limitation of this tool is the data behind the measurements and percentile scores is based on US Census information from the American Community Survey 2015-2019.
- **U.S. Census, 2022 American Community Survey (ACS) 5-year estimates** present demographic data by census tract and were used to supplement the HPI percentile score. U.S. Census data was used to identify the percentage of the Pacific Grove population that corresponds to each priority population.
- **State of California Sea Level Rise Guidance: 2024 Science and Policy Update (OPC 2024)** produced by the California Ocean Protection Council contains the best available science for sea level rise along California's coastline. This report updates and replaces the previous 2018 State of California Sea-Level Rise Guidance and incorporates the best available science on sea level rise into planning, design, permitting, investments, and other decisions to build resilience for coastal communities and ecosystems. The 2024 State of California Sea Level Rise Guidance provides higher-level recommendations for how to plan for and address sea level rise impacts and includes a set of projections recommended for use in planning, permitting investment, and other decisions. The 2024 State of California Sea Level Rise Guidance contains a set of projections for 13 tide gauges throughout California, which CCC recommends using for sea level rise studies.
- **Monterey County Multi-Jurisdictional Hazard Mitigation Plan** presents information on existing processes and plans in place that address the County and Pacific Grove's ability to prepare for climate change impacts and informed the adaptive capacity discussion of this report. The Multi-Jurisdictional Hazard Mitigation Plan (2022) was also used to identify recent historical events.

- **City of Pacific Grove Shoreline Management Plan (2020)** aims to provide public access along Pacific Grove's shoreline well into the future while protecting and enhancing the coast's natural and cultural resources. This reports provides recommendations, in conformity with policies under the California Coastal Act, to provide continuous recreational trail access along the shoreline and minimize the need for new seawalls, riprap and other forms of shoreline armoring while incorporating other opportunities to enhance and offer long-term protection from coastal erosion and sea level rise to other coastal amenities, public infrastructure, and natural and cultural resources.
- **City of Pacific Grove Land Use Plan and Implementing Ordinances (2020)** certified by California Coastal Commission (CCC) on March 11, 2020. This document provides policy direction for decision-makers, property owners, and the public regarding coastal land use and development. It also includes a land use map that shows the uses that are appropriate in each area, maps of sensitive biological resources, and maps of other coastal resources, as appropriate, such as coastal public accessways and scenic resources.

Data Limitations

The limitations of this report and analysis stem from gaps in data availability and completeness of data methods. Census data can miss portions of the population (e.g., individuals experiencing homelessness) and general demographic information may not fully identify the full extent of populations vulnerable to climate change (Cantwell 2021). Federal Emergency Management Agency (FEMA) 100-year and 500-year flood plains do not account for climate change projections, zones are instead based on historical information. The California Department of Forestry and Fire Protection (CalFire) very high fire hazard severity zones are based on vegetation, fire history, and terrain but also has similar limitations in not projecting fire zones into the future (OSFM 2022). Extrapolating landslides and air quality hazard exposure data in the context of climate change is difficult and the estimates of exposure to these hazards are likely to be underestimated.

The 2020 Pacific Grove Shoreline Management Plan Vulnerability Assessment presents information based on best available guidance. Even though the 2020 vulnerability assessment reflects the 2024 updated sea level rise scenarios, the Ocean Protection Council guidance for sea level rise scenarios has since been released and the scope of impacts has subsequently changed. Framed as a living document, the Sea Level Rise Vulnerability Assessment is intended to be regularly updated with best available science to yield a more accurate discussion of vulnerability.

The data presented in Cal-Adapt tools are projections, or estimates, of future climate. The limitation in these projections is that the long-term behavior of the atmosphere is expressed in averages – for example, average annual temperature, average monthly rainfall, or average water equivalent of mountain snowpack at a given time of year. The averages discussed often downplay the extremes by which daily weather events occur and when presented as an average, only show moderate changes within the climate. What is often lost in averages is that the frequency of extremes, like atmospheric rivers, may increase while low-moderate intensity weather events decrease through the end of the century. In instances of modeled precipitation projections, it maintains an average similar to historic levels which does not account for anticipated fluctuations in extremes (CEC 2024).

Exposure to Climate Hazards

Climate change is a global phenomenon that can impact local health, natural resources, infrastructure, emergency response, and many other aspects of society. Projected changes to the climate are dependent on location. The Cal-Adapt tool provides climate data from global scale models that have been localized (downscaled) to 3.7-mile by 3.7-mile grids (CEC 2024). The data in Cal-Adapt is combined with information from the California Fourth Climate Change Assessment to model future changes in specific types of hazards within this assessment. This report discusses Pacific Grove climate projections and impacts as part of California's Central Coast Region, as detailed in the California Fourth Climate Change Assessment Central Coast Region Report. Projections throughout this section are outlined by two separate Representative Concentration Pathways (RCP) (CEC 2024).

- **RCP 4.5** is a medium emissions scenario where global emissions peak by the year 2040.
- **RCP 8.5** is a high emissions scenario in which global emissions continue to rise through the end of the 21st century.

Additionally, projections are forecasted to mid-century (2035-2064) and end-century (2070-2099) as 30-year averages to be compared to a modeled historical baseline (1961-1990) (CEC 2024). The assessment of the impacts of sea level rise on the City of Pacific Grove is based on sea level rise projections modeled from the Monterey tide gauge, which is the nearest tide gauge to Pacific Grove (Table 7. Sea Level Scenarios for Monterey, Appendix 2, OPC [2024]). The sea level rise projections considered for Pacific Grove are 0.4, 2.8, and 6.4 feet, which represent the projections for the years 2030, 2070, and 2100, respectively. These are the same sea level rise projections used in the County of Monterey Multi-Jurisdictional Hazard Mitigation Plan (2022). Additionally, the scenarios from this plan align with the High sea level rise projections (for the Monterey tide gauge), which were selected to illustrate the potential inundation from a 100-year coastal storm and sea level rise in Pacific Grove. Both the High scenario and the County of Monterey Multi-Jurisdictional Hazard Mitigation Plan (2022) sea level rise scenario represent a more conservative approach to presenting potential coastal inundation. Meanwhile, the recent Coastal Hazards Modeling study (Integral 2024) used Intermediate-High sea level rise projections to assess future wave runup, shoreline, and coastal cliff erosion hazards. The Intermediate-High sea level rise projections for the Monterey tide gauge (OPC 2024) are 0.4 feet by 2040, 1.2 feet by 2060, 2.7 feet by 2080, and 4.4 feet by 2100 (the study adjusted the values by shifting the baseline year from 2000 to 2020).

This section presents information on temperature and precipitation, which are characterized as climate indicators. The section then provides information on projected changes to natural hazards, including drought, wildfire, sea level rise, severe storms and stormwater flooding, and extreme heat which result from changes to climate drivers.

Climate Drivers

The climate indicators most relevant to Pacific Grove are temperature and precipitation. The following section summarizes projected changes to these climate indicators. All projections are pulled from the Cal-Adapt Local Climate Change Snapshot tool and

supplemented with the Central Coast regional information found in the California Fourth Climate Change Assessment (CEC 2024, Kalansky et al. 2018).

Temperature

Pacific Grove has an average maximum temperature of 66.5°F and an average minimum temperature of 48.5°F (CEC 2024). Average minimum temperatures are expected to increase in Pacific Grove by approximately 2.5°F (RCP 4.5) to 3.2°F (RCP 8.5) by the mid-century and 3.5°F (RCP 4.5) to 6.3°F (RCP 8.5) by end-of-century. Average maximum temperatures are expected to increase by approximately 2.6°F (RCP 4.5) to 3.4°F (RCP 8.5) by mid-century and 3.7°F (RCP 4.5) to 6.4°F (RCP 8.5) by end-of-century (CEC 2024). Temperature increases affect various climate related hazards including drought, coastal and inland flooding, wildfire, and sea level rise, further described in the Hazards section. Global temperature increases cause ocean temperatures to rise which expands ocean waters. Glaciers, ice caps, and ice sheets melt from rising temperatures which further contribute to sea level rise (Hall et al. 2018).

Precipitation

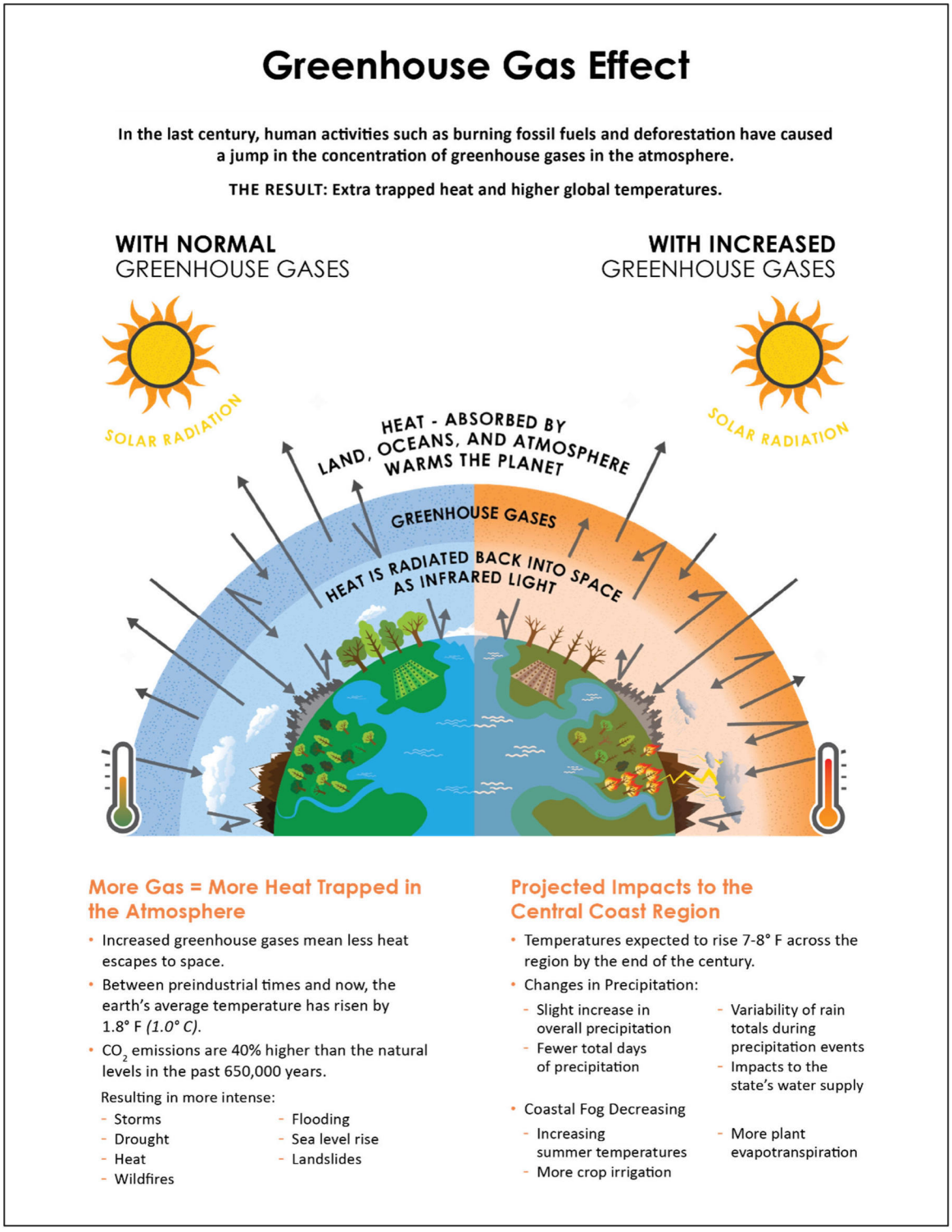
Climate projections show that there will be more frequent and longer dry periods punctuated by increased precipitation intensity of the largest storms or wet periods (CEC 2024). Projections for Pacific Grove predict that annual precipitation totals will decrease by 0.3 inches (RCP 4.5) and remain relatively stable (RCP 8.5) by mid-century. Annual precipitation totals will continue to remain stable (RCP 4.5) and increase slightly by 0.3 inches (RCP 8.5) by end-of-century (CEC 2024). Precipitation throughout the Central Coast region is predicted to generally increase but is more nuanced than projected changes in temperature (CEC 2024). As already observed in recent decades, precipitation changes are largely observed as more extreme variability with intense wet years followed by extreme drought (CEC 2024). Maximum 1-day precipitation values are projected to increase between 0.05 inches (RCP 4.5) and 0.09 inches (RCP 8.5) by mid-century. By end-of-century, maximum 1-day precipitation values are projected to increase between 0.08 inches and 0.15 inches (CEC 2024). These changes in extremes will produce little net change in precipitation totals as the wetter storms and drier dry periods are summed into the precipitation total, but the individual precipitation events and general conditions are expected to be more extreme and alter the risk landscape for related climate hazards (CEC 2024). In Pacific Grove precipitation changes are expected to affect drought and coastal and inland flooding.

Historical Precipitation Extremes

Precipitation volatility similar to what has been projected within the California Fourth Climate Change Assessment can be observed over the last two decades where wet years in 2005, 2011, and 2017 have been offset by extended droughts in 2001-2004, 2007-2010, 2012-2015, and 2018 to present (Kalansky Et. Al 2018).

Figure 1 on the following page summarizes the drivers and indicators of climate change globally, and the projected impacts of climate change on California's Central Coast based on California's Fourth Climate Change Assessment Central Coast Regional Report.

Figure 1 Climate Change Impacts to California's Central Coast



Hazards

This section describes projected changes for the following climate hazards:



Drought



Wildfire



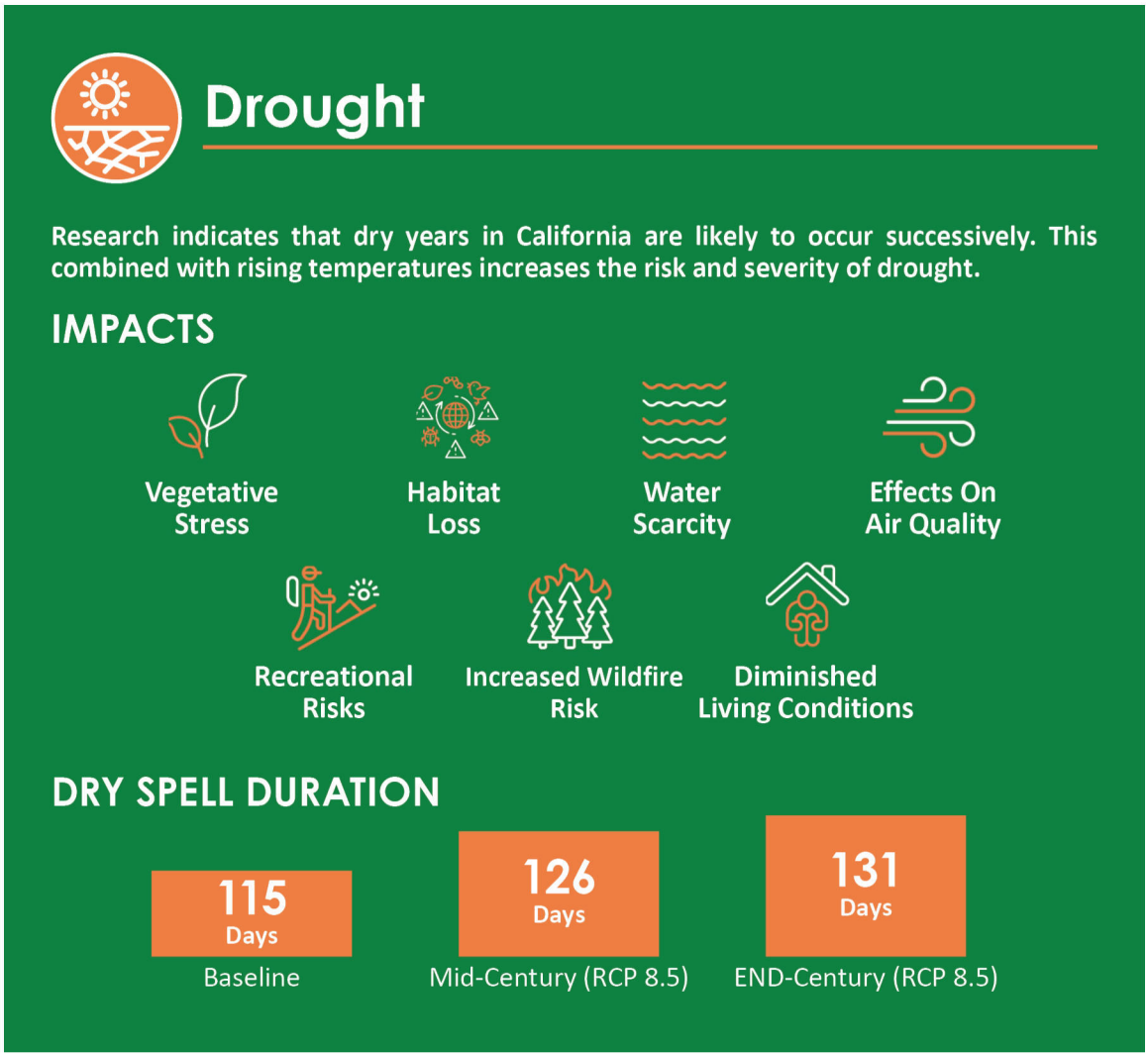
Sea Level Rise



Severe Storms & Stormwater Flooding



Extreme Heat



Drought

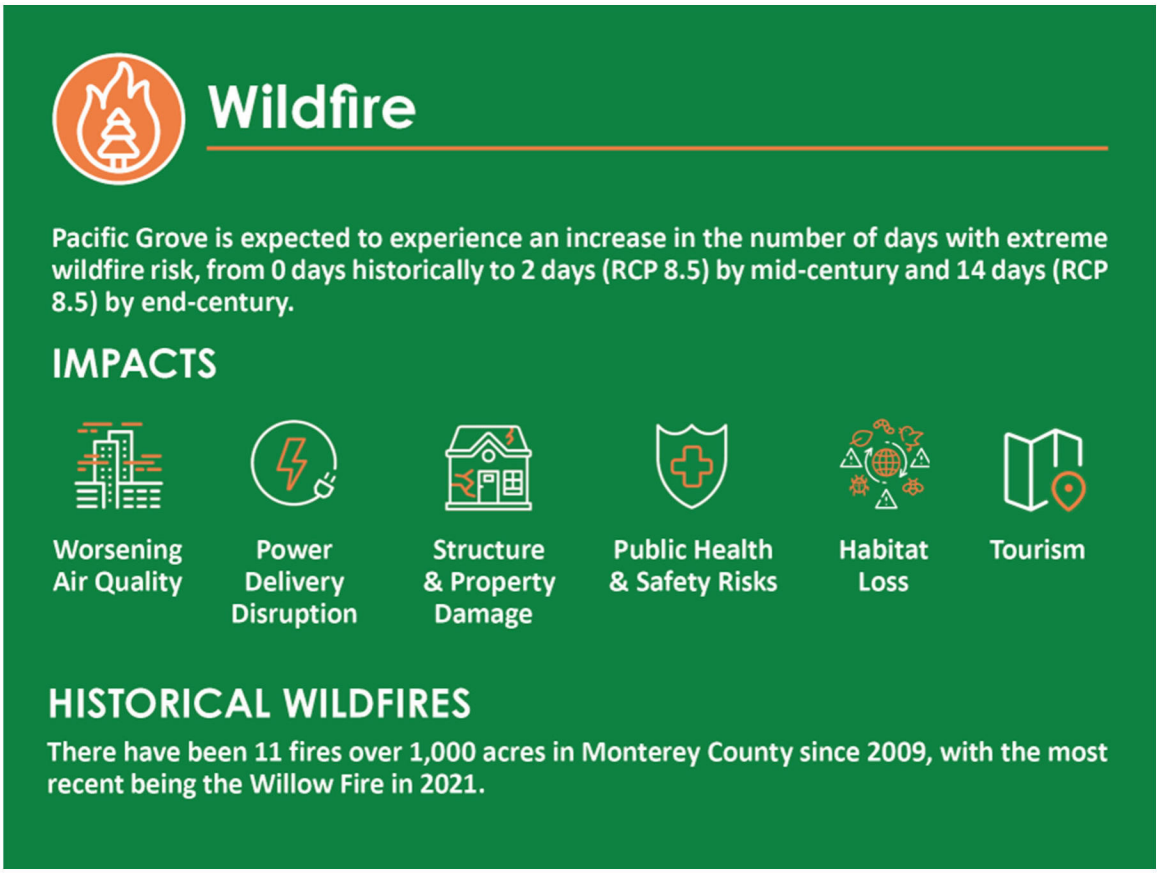
Climate change will increase the likelihood that low-precipitation years will coincide with above-average temperature years. Warming temperatures increase seasonal dryness and the likelihood of drought due to decreased supply of moisture and increased atmospheric demand for moisture as evaporation from bare soils and evapotranspiration from plants increases. The increased moisture loss from soils and vegetation amplifies dryness during periods without precipitation. In California's highly variable climate setting, climate models project less frequent but more extreme daily precipitation, with year-to-year precipitation becoming more volatile and the number of dry years increasing (Kalansky Et al. 2018).

Variability in the amount and timing of rainfall can obscure the trends towards drying and decreased water availability. Rain events are projected to become more infrequent, as reflected in the longer dry spell durations expected in the future. Warmer air holds more moisture and can result in storms that produce large amounts of rain at one time, reflected in increases in projected maximum one day precipitation forecasts. This high volume of rain at once can result in average annual precipitation measurements that only decrease slightly or even increase slightly over time; however, longer dry spells

punctuated by larger storm events results in more water lost to runoff rather than infiltration into the ground compared to smaller amounts of rain falling more consistently. This results in less groundwater recharge.

The duration of dry spells is projected to vary based on the emissions scenario. Like patterns in precipitation some of the annual variability is obscured within 30-year averages. Despite this, the clear trend is for maximum lengths of dry spells in Pacific Grove to increase through the end of century from an annual average of 111 days historically, to 123 days(RCP 4.5) and 126 days (RCP 8.5) by mid-century and 123 days (RCP 4.5) to 131 days (RCP 8.5) by end-century (CEC 2024). Pacific Grove is forecasted to experience only minor changes in precipitation annual averages through the end of the century, ranging from a 2 percent decrease (RCP 4.5) by mid-century to a 2 percent increase (RCP 8.5) in precipitation by end-century (CEC 2024). As described above, the increased variability and intensity of drought and precipitation events, and their related impacts, are obscured in these averages.

Drought can affect priority populations as well as natural and recreational resources throughout Pacific Grove. Vulnerabilities for natural resources can include stressed vegetation and habitat depletion while populations may be more vulnerable to heat stress and dehydration (Kalansky Et al. 2018). Potential impacts are discussed in more detail in the Vulnerability Analysis section.



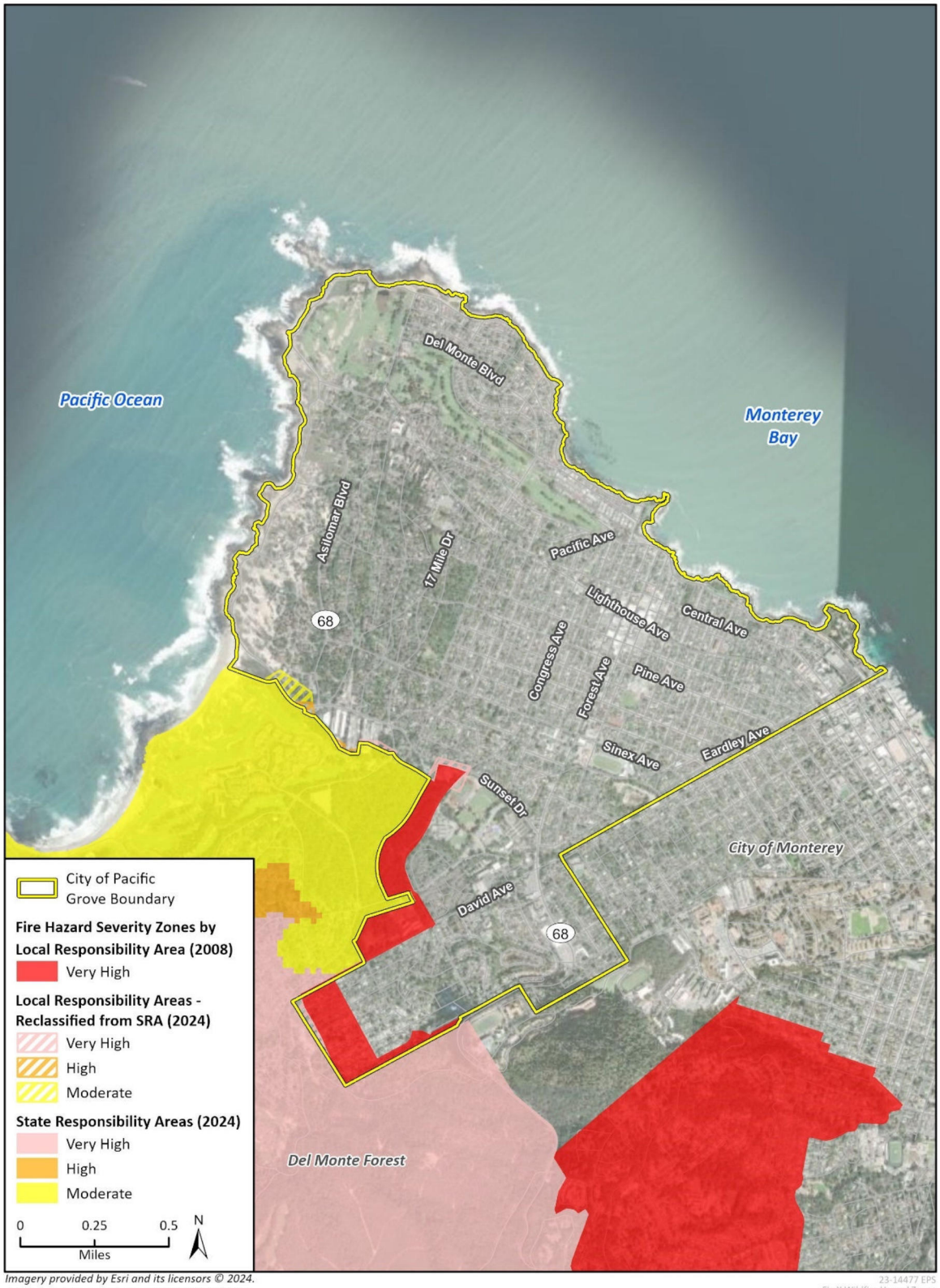
Wildfire

The frequency and intensity of wildfires have increased significantly within California over the past two decades (Kalansky Et al. 2018). For Pacific Grove this trend is projected to continue through mid- and end-century projections (CEC 2024). Numerous factors influence fire occurrence, severity, and impacts including climate change, development patterns, pest infestations, human activity, vegetation, wind, humidity, topography, and temperature. Key climate indicators contributing to conditions that favor the occurrence and spread of wildfire in the northern Central Coast region include temperature increases compounded with dry spell increases and/or precipitation declines that lead to vegetative stress and mortality, increasing fuel load and fuel dryness (Langridge 2018). Drought following a fire can also slow recovery of vegetation after a fire (increasing runoff during rain events), alter the types of vegetation that grow in the affected area (potentially shifting from coastal sage shrubs and chaparral to grasses), and potentially contribute to additional fire risk as grass lands tend to promote more frequent fires (Langridge 2018).

According to the California Department of Forestry and Fire Protection, the areas with the highest risk of wildfire are located in the southern limits of the City, where neighborhoods are more forested and contain a higher density of mature trees. These areas are considered by the California Department of Forestry and Fire Protection to be Very High Fire Hazard Severity Zones (VHFHSZ). The VHFHSZs are depicted in Figure 2 on the following page. The risk of wildfire decreases as distance from the more forested areas of the City increases.

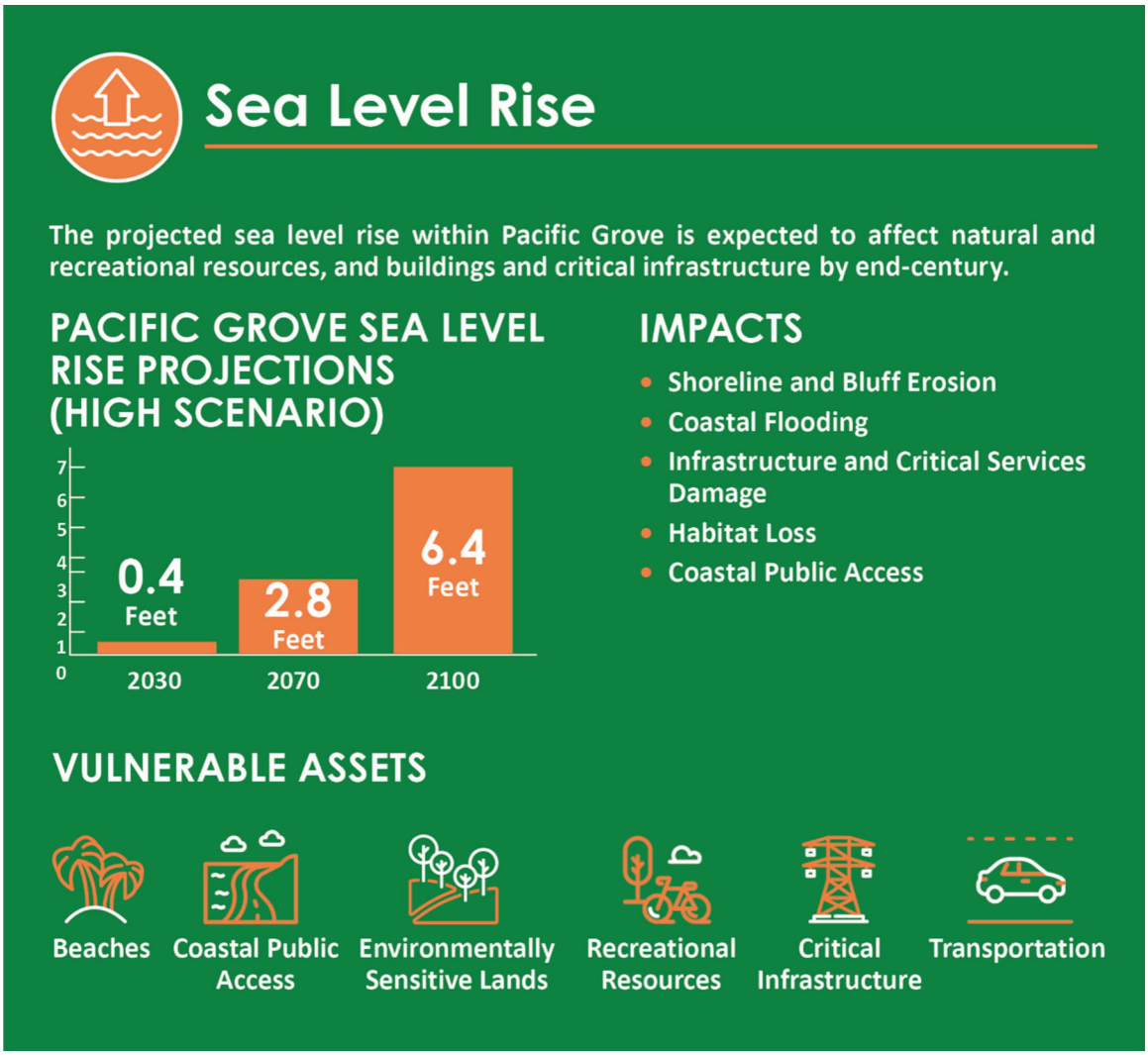
Climate change is expected to increase wildfire risk due to rising temperatures and drought conditions. Wildfires can create risk of injury, death, or financial hardship if personal property is damaged as well as physical damage to all other assets creating cascading risks for priority populations when infrastructure is damaged or off-line. Wildfire smoke locally, or regionally, can create hazardous air quality conditions that impact public health, and priority populations in particular. Potential impacts are discussed in more detail in the Vulnerability Analysis section.

Figure 2 Very High Fire Hazard Severity Zones



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Additional data provided by CALFIRE, 2008/2024.

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Fig X Wildfire Hazard Zones



Sea Level Rise

Sea levels in California are expected to rise in the coming decades as a result of global greenhouse gas emissions (OPC 2024). Rising seas increase the risk of coastal flooding, tidal and storm surge inundation, coastal erosion, wetland loss, and saltwater intrusion into groundwater. Pacific Grove's coastline extends from the City limit with Monterey, at Eardley Avenue and Ocean View Boulevard, to the western end of Lighthouse Avenue, a distance of approximately 3 miles. The city's coastline currently experiences erosion from winter storms, wave action and other natural processes. These forces continually reshape the shoreline, on many occasions with destructive effect. The projected sea level rise for California will exacerbate coastal erosion, wave action, and coastal flooding along the City's coastal areas. In addition, sea level rise has the potential to impact the City's coastal ecosystems and local groundwater aquifers which the City relies on for potable water.

To minimize the risks of sea level rise, CCC recommends taking a precautionary approach and that all communities assess the impacts of sea level rise using at the minimum the medium-high risk scenario for projects with greater consequences and/or a lower ability to adapt, such as residential and commercial structures. In this analysis, the impacts of

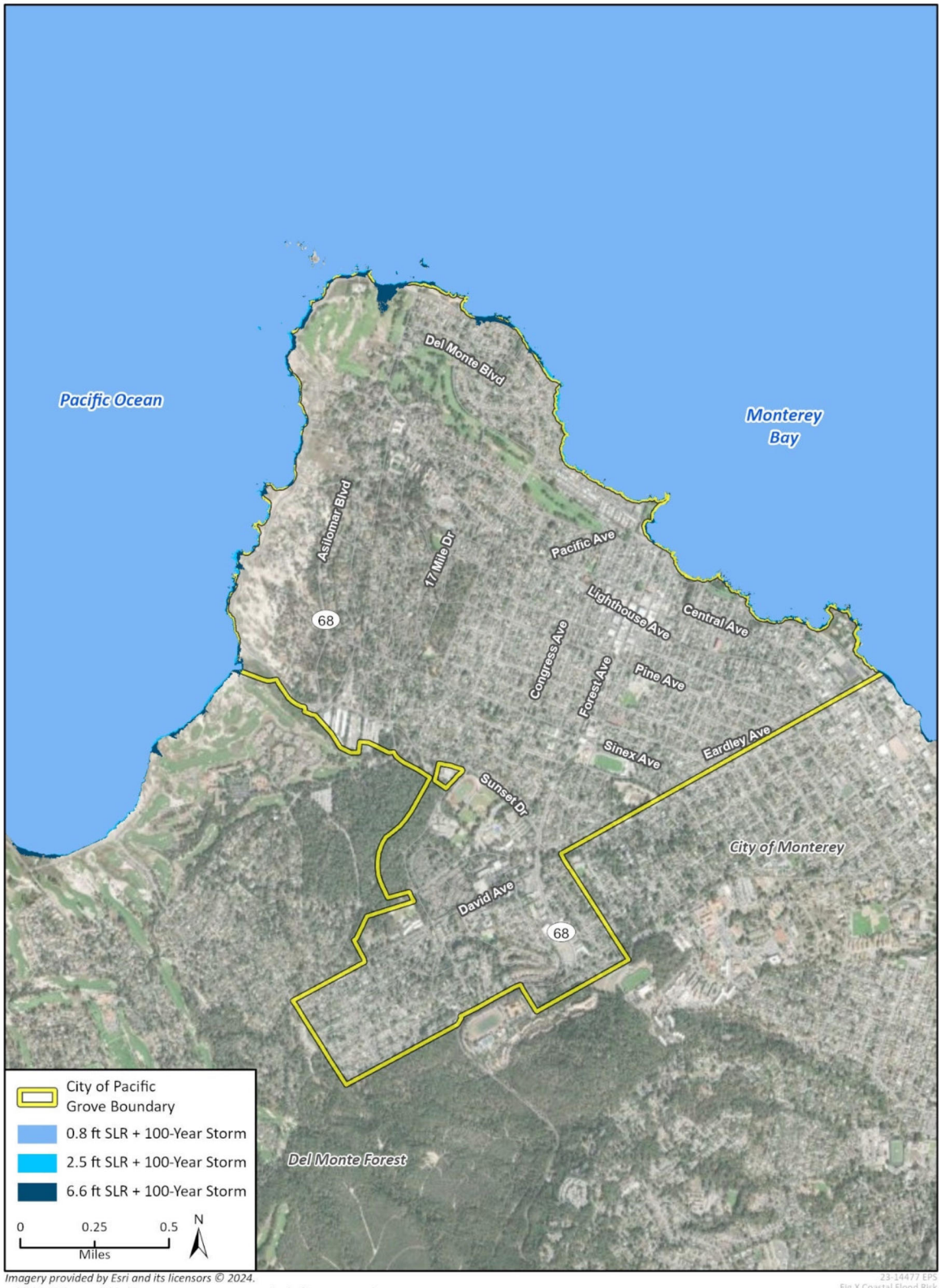
sea level rise were visualized using the Our Coast, Our Future tool, which contains the results of the Coastal Storm Modeling System (CoSMoS) and incorporates the 100-year storm scenario. The sea level rise scenarios of 0.8 feet (25 cm), 2.5 feet (75 cm), and 6.6 feet (200 cm) were combined with the 100-year storm. These sea level rise scenarios are from the Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022), which is used for planning purposes, and are in alignment with the High sea level rise projections reported in the State of California Sea Level Rise Guidance: 2024 Science and Policy Update for the Monterey tide gauge for the years 2040 (0.8 feet), 2070 (2.5 feet), and 2100 (6.6 feet). Since this climate change vulnerability assessment is prepared for planning purposes, the High scenarios provide the most conservative scenario for assessing potential coastal inundation combined with the 100-year return period and sea level rise at Pacific Grove. Figure 3 below shows the sea level rise projections for Pacific Grove.

With sea level rise, the shoreline and bluff at Pacific Grove State Beach will retreat due to coastal erosion, an increase in frequency and severity of storm surges, and the rising of the mean water level. This erosion will narrow the beach, which can negatively affect beach visitors and local tourism, sensitive ecosystems with potential loss of natural resources, and impact recreational resources such as the California Coastal Trail. In addition, due to sea level rise, Pacific Grove may experience incremental coastal flooding that could impact critical infrastructure (i.e., roads, and water and wastewater infrastructures) (County of Monterey 2022). Since Pacific Grove is adjacent to the Pacific Ocean, the City is also vulnerable to tsunamis as shown in Figure 4 (State of California 2021), which could also exacerbate impacts on the City's coastal resources. The areas vulnerable to Tsunamis along Pacific Grove's shoreline and presented in the tsunami vulnerability map prepared by the State of California (2021) (Figure 4) does not consider sea level rise.

In addition, in August 2024, the City completed a detailed city-wide, parcel-scale coastal hazard modeling assessment (Integral 2024). This assessment applied the conceptual shoreline site model information, which was developed evaluating previous shoreline research, relevant publicly available data sets, new topographic data to provide a site model of detailed shoreline characteristics, nearshore conditions, and history of coastal hazards along the City's coastline. The conceptual shoreline site model information was coupled with an ensemble of cliff erosion models to project future coastal cliff erosion hazards (including coastal storm wave runup extents and future high tide inundation) over a range of sea level rise scenarios. Differently than the sea level rise scenarios used to indicate potential coastal inundation combined with the 100-year coastal storms and sea level rise, which used the High scenario, the recent coastal hazard modeling assessment (Integral 2024), which will be used for regulatory purposes, used the Intermediate-High sea level rise scenarios for the Monterey tide gauge (OPC 2024) of 0.4 feet by 2040, 1.2 feet by 2060, 2.7 feet by 2080, and 4.4 by 2100 (the study adjusted the values by shifting the baseline year from 2000 to 2020). This new coastal storm wave flood hazard modeling effort identified 69 parcels and 28 structures exposed to coastal wave hazards by 2100 with 4.0 feet of sea level rise. In addition, the study identified 23 parcels, and one structure along the City's shoreline exposed to coastal erosion hazards by 2100 with 4.4 feet of sea level rise. Figure 5 shows the wave runup hazard and Figure 6 shows the erosion hazard. The figures focus on the area of Crespi Pond, Pacific Grove Golf Course, Ocean View Boulevard, and Sunset Drive.

Potential impacts due to sea level rise are discussed in more detail in the Vulnerability Analysis section.

Figure 3 Sea Level Rise Projections



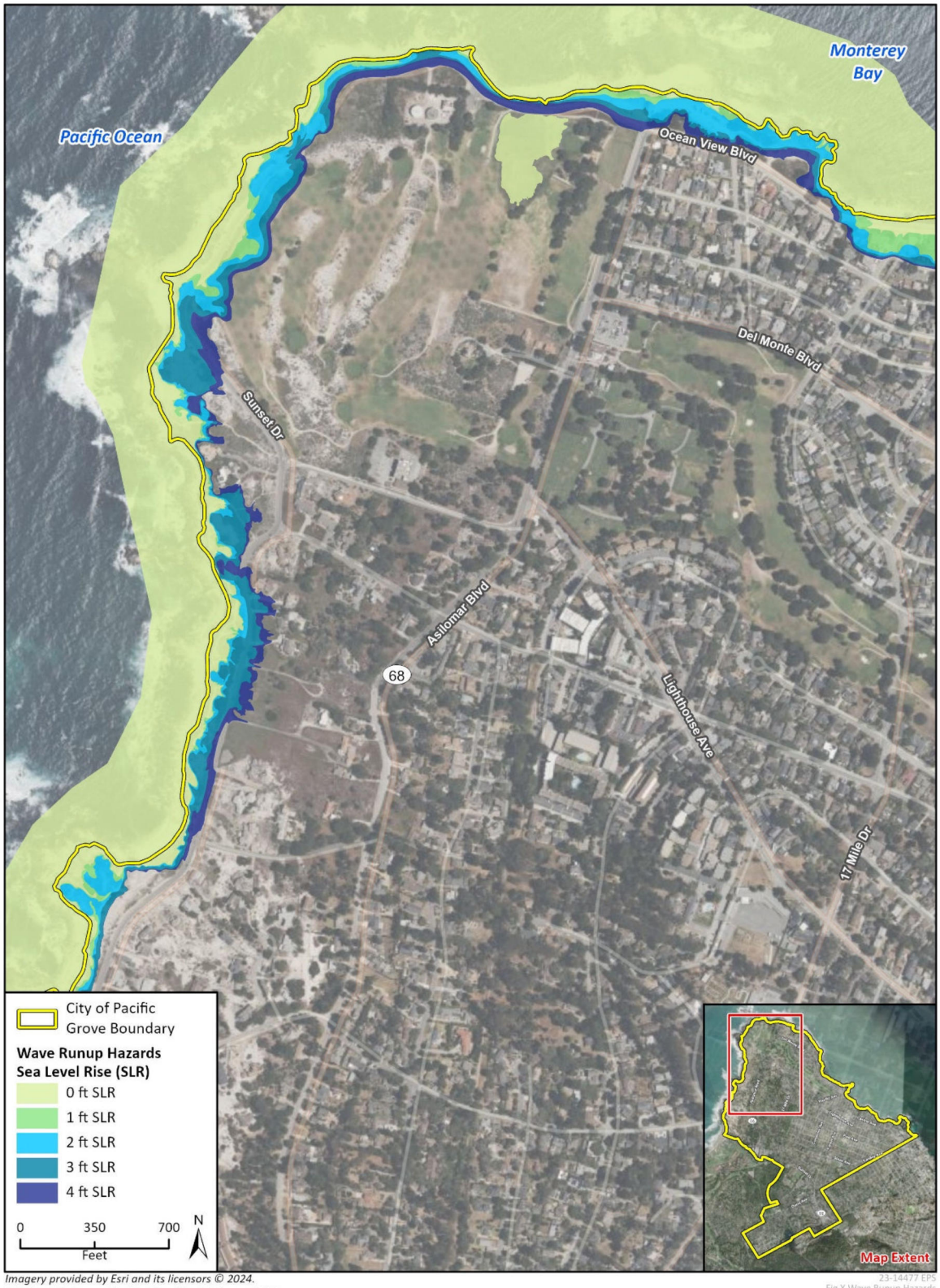
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Additional data provided by Our Coast Our Future web platform, accessed 2024.

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Fig X Coastal Flood Risk

Figure 4 Tsunami Inundation Scenario



Figure 5 Coastal Wave Hazard



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Additional data provided by City of Pacific Grove, 2024.

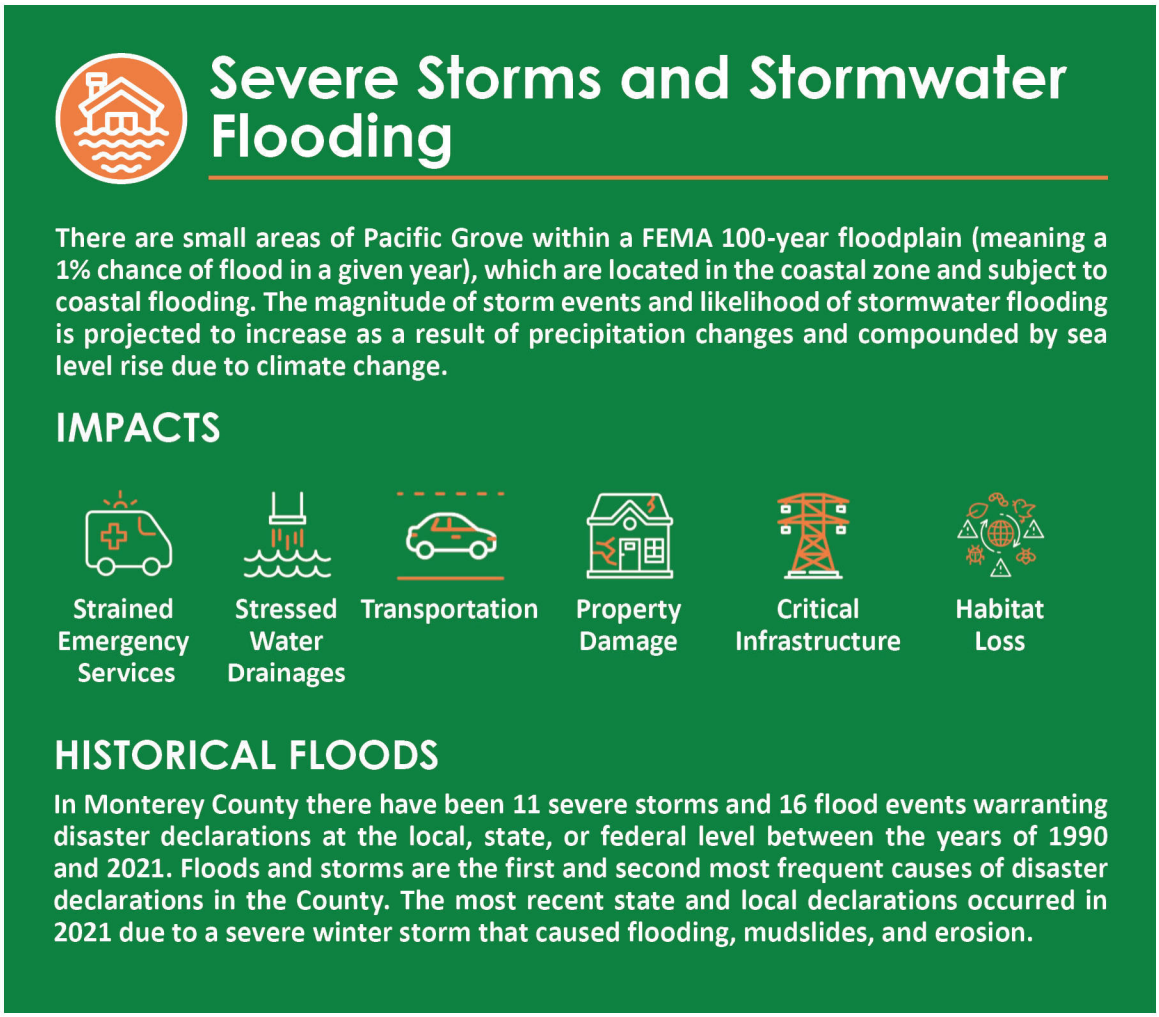
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Fig X Wave Runup Hazards

Figure 6 Coastal Erosion Hazards



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Additional data provided by City of Pacific Grove, 2024.

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Fig X Coastal Erosion Hazards



Severe Storms and Stormwater Flooding

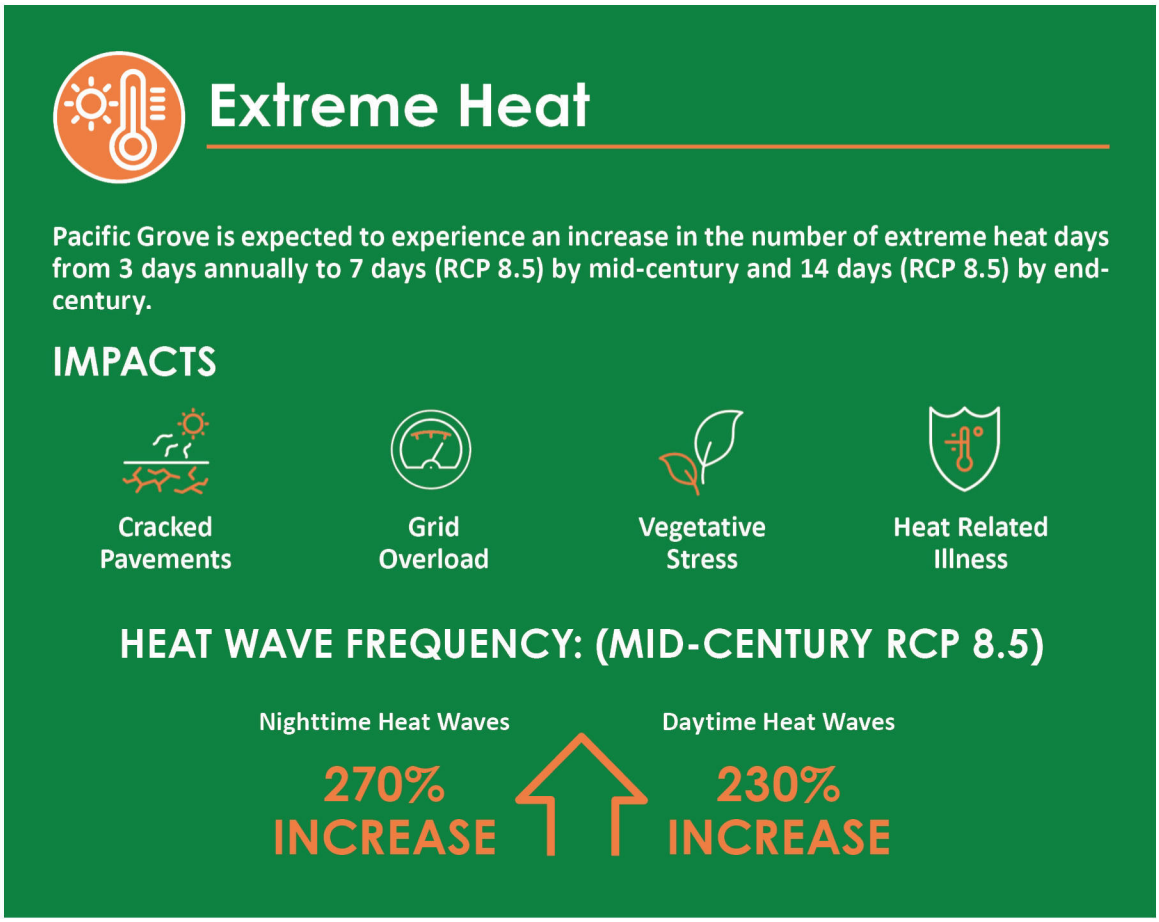
Climate change is likely to increase the magnitude of storm events, which will increase impact related to these events, likely leading to more frequent flood events throughout Pacific Grove and potentially increasing the extent of 100-year floods. Stormwater systems may be overwhelmed more frequently as more extreme rain events occur, causing localized flooding which could impact properties and close streets.

Flooding impacts result in direct physical damage from inundation (Kalansky Et al. 2018). Severe storms can compound risk from other climate hazards. Severe storms in the year following a wildfire can lead to mudslides and debris flows, as occurred in Monterey County during a severe winter storm event in 2021 and that resulted in the declaration of a state and local emergency.

According to the FEMA 100-year and 500-year flood zones, currently most of the City of Pacific Grove is not considered under flood risks as shown in Figure 7. However, expected changes in precipitation patterns include a continued risk of short and intense rainfall events and associated flash flooding, with the occasional greater-than-historical flooding events. These flooding events can also cascade into impacts on power, wastewater, and storm drainage infrastructure, exacerbating public health concerns. Potential impacts are discussed in more detail in the Vulnerability Analysis section.

Figure 7 FEMA Flood Zones





Extreme Heat

Extreme heat events are defined as days in which the daily maximum temperature exceeds the 98th percentile value of the historical average (CEC 2024), and for Pacific Grove, the threshold temperature is 88.7 °F (CEC 2024). Increased frequency of extreme heat days can result in increased public health risks, particularly to priority populations like older adults, young children, and individuals with underlying chronic diseases, through heat-related illnesses and increased vector-borne illnesses. Extreme heat can also damage roadways, overload electrical grid systems, and result in vegetation die-off or stress. Pacific Grove has historically experienced 3 extreme heat days a year and is projected to experience a mid-century total of 6 (RCP 4.5) to 7 (RCP 8.5) extreme heat days and an end-century total of 7 (RCP 4.5) to 14 (RCP 8.5) extreme heat days annually (CEC 2024). Warm nights can further exacerbate the risk of heat illness because they affect the body's ability to cool after a day of heightened temperatures. Pacific Grove has historically experienced 10 warm nights a year and is projected to experience a mid-century total of 29 (RCP 4.5) to 37 nights (RCP 8.5) and an end-century total of 41 (RCP 4.5) to 81 nights (RCP 8.5) annually (CEC 2024).

Extreme heat events have not historically posed much of a health and safety threat in Pacific Grove. However, because of the historically mild coastal temperatures and older housing stock, many homes do not have air conditioning. According to a 2009 statistic from the Healthy Places Index, only about 14.1 percent of households in Monterey County have air conditioning. With temperatures rising because of climate change, extreme heat

events are expected to become more common, and without air conditioning the health and safety impacts of these events are expected to increase. Potential impacts are discussed in more detail in the Vulnerability Analysis section.

Sensitivity

Climate change affects populations and assets differently depending on their sensitivity to the conditions created by climate hazards. This section identifies priority populations and assets within Pacific Grove. The Vulnerability Analysis section of this assessment presents an overview of the potential impacts that the climate hazards of concern may have on priority populations and assets identified. Populations and assets are grouped as follows:



Priority Populations



Natural and Recreational Resources



Buildings and Facilities



Infrastructure and Critical Services



Priority Populations

While all people in a community will experience climate change, some may be more affected than others. For example, older adults and young children are at higher risk for experiencing a heat related illness during an extreme heat event. Several factors influence sensitivity to climate hazards including an individual's health, age, and ability, as well as structural inequalities. Structural inequality may be characterized as the disparities in wealth, resources, and other outcomes that result from discriminatory practices of institutions such as the legal, educational, business, government, and health care systems (University of Pennsylvania 2022). Examples of structural inequality relevant to this analysis include inequities in access to health care, economic opportunity, education and other resources, and inequities found in basic needs and disproportionate exposure to environmental stressors (Cal OES 2020). Populations with characteristics and exposures that increase sensitivity to climate hazards should be prioritized when considering climate impacts, adopting climate resilience policies, and planning adaptation projects.

In addition to facing greater exposure to and risk from climate change impacts, priority populations often have fewer resources to adapt to and recover from climate change impacts.

These kinds of intersections between population characteristics and climate hazard exposure are important for understanding where there is increased risk from climate

change in the community. Understanding where climate vulnerability is greatest can help to prioritize adaptive capacity building and resilience planning efforts.

Following guidance from the Cal APG, populations that will likely experience disproportionate impacts from climate change were identified for Pacific Grove. The City has several higher-risk populations listed in Table 3 below.

Priority populations making up a slightly higher percentage of the population relative to the state include individuals with asthma, individuals with disabilities, children, military veterans, outdoor workers, individuals without vehicle access, and individuals with cardiovascular disease. In Table 3, these priority populations are highlighted in bold to indicate their higher prevalence in Pacific Grove relative to the state.

Table 3: Priority Populations in Pacific Grove

Population	Population Description	Percentage of Population or Households	State Percentage of Population or Household
Individuals with education attainment less than 4 years of college	Percent of people over age 25 without a bachelor's education or higher	42.8%	63%
High School Enrollment	Percent of 15-17 year olds in school	94.6%	97.6%
Renters	**Housing units that are renter occupied**	**51.1%**	**44.2%**
Non-white Communities	All individuals that do not identify as white	20.9%	62.8%
Older adults	**Individuals 65 years or older**	**27.5%**	**15.8%**
Individuals with Asthma	Percent of people with Asthma	8.71%	9.08%
Low Income	Percent of people earning more than 200% of federal poverty level	14.7%	30.9%
Individuals with no health insurance	Individuals aged 18 to 64 years old currently uninsured	6.7%	10.7%
Households without broadband internet	Households without access to broadband internet.	11.2%	13.9%

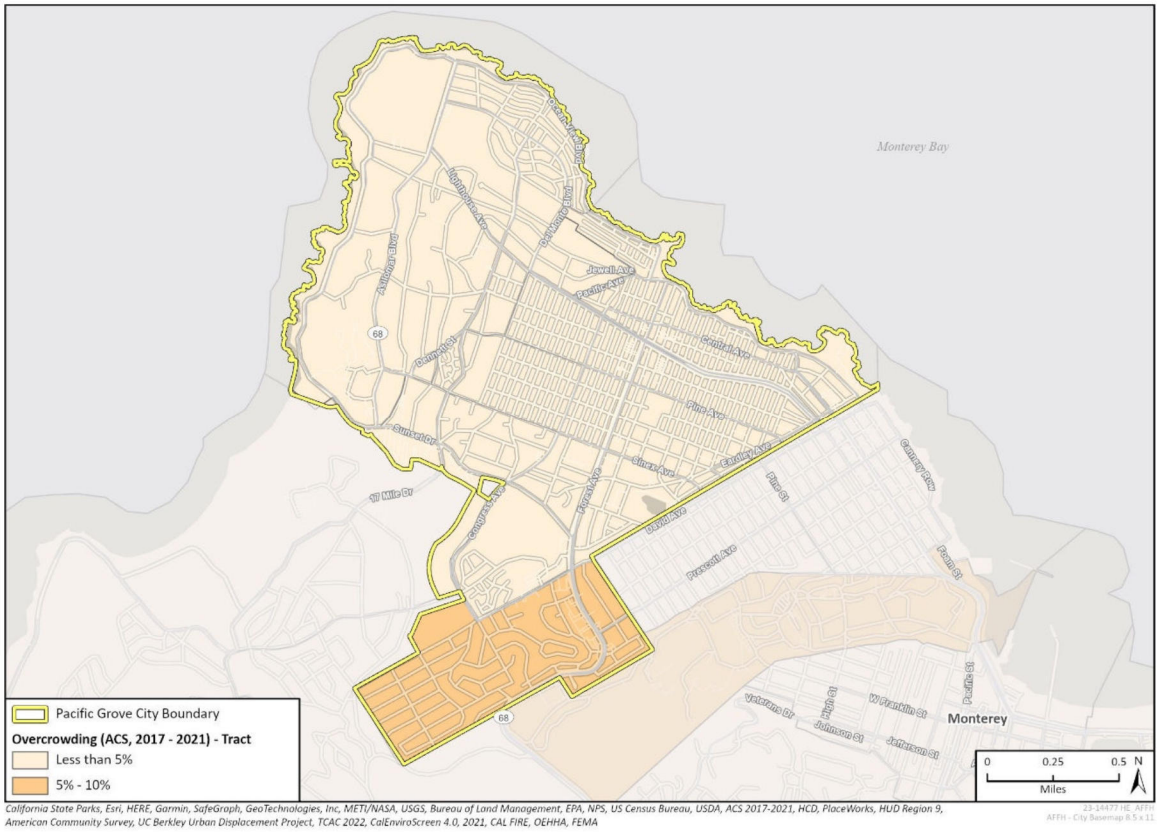
Table 3: Priority Populations in Pacific Grove			
Population	**Population Description**	**Percentage of Population or Households**	**State Percentage of Population or Household**
Households without a computer	Households without access to a computer.	5.9%	7%
Individuals with disabilities	**Individuals with access and functional needs (physical and mental)**	**12.8%**	**11.7%**
Children	Individuals 5 years and younger	3.5%	6.3%
Military Veterans	**Individuals who have served but are not currently serving in the US Armed Forces**	**8.6%**	**4.3%**
Unemployed	Percentage of population aged 25-64 who are unemployed	25.8%	27.1%
Limited or non-English speakers	Households with individuals who are non or limited English-speaking	17.3%	44.4%
Outdoor Workers	Individuals who are employed, 16 and older, and work outdoors	7.3%	8%
Individuals without vehicle access	Households without access to a vehicle	4.7%	7.1%
Overcrowded Households	Percent of households that are crowded.	7.6%	8.3%
People experiencing homelessness	Individuals who currently lack fixed, regular, and adequate housing	29 in Pacific Grove and 2,047 in Monterey Cunty*	N/A
Individuals with Cardiovascular Disease	**Percent of adults aged >=18 years who report ever having been told by a doctor, nurse, or other health**	**5.92%**	**5.16%**

Table 3: Priority Populations in Pacific Grove			
Population	**Population Description**	**Percentage of Population or Households**	**State Percentage of Population or Household**
	professional that they had angina or coronary heart disease.		
* 2022 Monterey County Point-In-Time Homeless Census and Survey. The 2022 Monterey County Homeless Census and Survey resulted in a total count of 2,047 persons: 1,357 unsheltered homeless people on streets countywide (66 percent) and 690 sheltered homeless people in emergency shelters, transitional housing and domestic violence shelters (34 percent). About one percent (or 29 persons) of these homeless persons were found in the City of Pacific Grove.			

Source: The percentages used in this table were acquired from the California Healthy Places Index 3.0 and U.S. Census, 2022 American Community Survey (ACS) 5-Year Estimates

Rates of overcrowding are low throughout the City but are slightly higher in the southern portion of the city, including the Del Monte Park neighborhood, where about five percent of households are overcrowded (Figure 8). Approximately seven percent of all households are overcrowded and five percent are severely overcrowded in the city. Like the County, renter households in Pacific Grove have a higher rate of overcrowding (13 percent) and severe overcrowding (10 percent) than owner households (one percent and zero percent). Overall rates of overcrowding in Pacific Grove increased over the past decade after decreasing between 2000 and 2011, primarily among renter households. Overcrowded areas are more sensitive to climate impacts, as they expose more people to climate-related risks, worsening the effects of climate change (Population Connection 2024).. Individuals living in overcrowded housing are more likely to face health and safety concerns and face financial barriers when preparing for and recovering from climate hazards. In addition, overcrowded housing can contribute to risk from heat related illness, which can lead to increased hospital visits and increased risk of mortality.

Figure 8 Overcrowded Households



Grouping Populations

Priority populations were grouped based on potential exposure to climate hazards, access to resources to prepare, cope with, or recover from climate hazards, whether individuals face societal disadvantages, or if individuals have heath conditions or health sensitivities that increase their risk from climate hazards. Often there are numerous interacting factors that impact a population's climate hazard risk; however, for the purpose of this assessment, they were grouped based on the sensitivity that increases their risk the most. Priority populations are grouped as outlined below:

- **Individuals with High Outdoor Exposure.** People experiencing homelessness.
- **Under-Resourced Individuals.** unemployed, households without a computer, households without broadband internet, individuals with educational attainment of less than 4 years of college, including individuals living in housing units that are renter-occupied and those residing in households that are overcrowded.
- **Individuals Facing Societal Barriers.** Non-white communities, limited or non-English speakers.
- **Individuals with Chronic Health Conditions or Health Related Sensitivities.** Older adults, children, individuals with disabilities, individuals with asthma, individuals with cardiovascular disease, and Military Veterans. Veterans are significantly more likely to have multiple chronic health conditions than the average non-veteran population and so are included in this population group (Boersma et al 2021).

Natural and Recreational Resources

Natural and recreational resources within Pacific Grove, as detailed in the Parks and Recreation Element of the General Plan and the Shoreline Management Plan, include the ocean and beaches, coastal public accessways, recreational trail, waterways, parks, hillsides, and the urban forest. Pacific Grove's shoreline provides wildlife-related and other educational and research opportunities, attracts community-minded volunteers, and offers many recreational opportunities to the City's residents and visitors.

Combined, natural and recreational resources make up over 400 acres of the existing land use designations within Pacific Grove as detailed in the General Plan. The Parks and Recreation Element of the General Plan identifies 280 parks, open spaces, and recreational facilities including the Shoreline Park Network, Neighborhood Parks, Community Parks, Regional and State Parks and numerous others. The map on the following page (Figure 9) shows the location of parks and recreational facilities throughout Pacific Grove.

While Pacific Grove is mostly developed, its coastal zone supports a wealth and diversity of environmentally sensitive habitats. Many of these, especially in the marine environment, are generally undisturbed and are endangered by changes in land use, offshore activities or climate stressors. Terrestrial habitats range from those that have undergone complete conversion to urban use, to those in a largely natural condition that benefit from active conservation management.

As described in the Pacific Grove Local Coastal Program, Environmentally Sensitive Habitat Areas are located within the City's Coastal Zone and include riparian and sand dune habitats within Asilomar State Beach and Conference Grounds; the Crespi Pond wetland, dune habitats within the Lighthouse Reservation; and any areas which may be determined as important habitat for Monarch or Smith's blue butterflies.

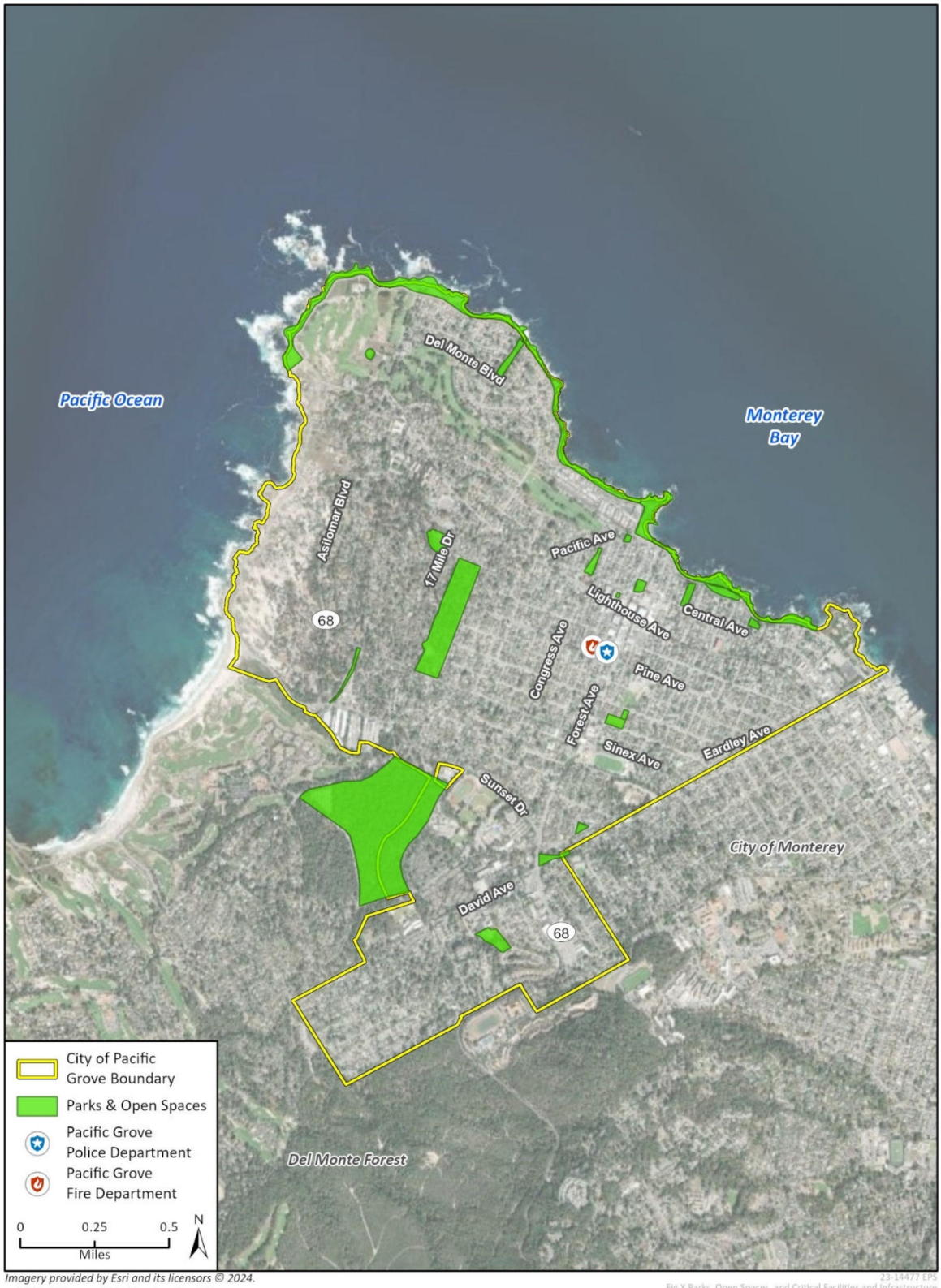
In addition, Federal or state listed species of flora and fauna are most likely to occur in undeveloped or aquatic habitats in the City, and they play a significant part in the visual and cultural identity of Pacific Grove. Along the coast, characteristic flora includes Menzies wallflower (*Erysimum menziesii ssp. menziesii*), Monterey spineflower (*Chorizanthe pungens var. pungens*), beach layia (*Layia carnosa*), rosy ice plant (*Drosanthemum floribundum*), and several trees such as Monterey pine (*Pinus radiata*), and Monterey cypress (*Cupressus macrocarpa*) and Coast Live Oak(*Quercus agrifolia*). Characteristic fauna include Monarch butterfly, Black-tailed deer (*Odocoileus hemionus*), Harbor seals (*Phoca vitulina richardii*), Southern sea otter *(Enhydra lutris nereis)*, Humpback whale (*Megaptera novaeangliae*), Gray whale (*Eschrichtius robustus*), Brown Pelican *(Pelecanus occidentalis)*, Brandt's Cormorant *(Phalacrocorax penicillatus)*, Double-crested Cormorant (*Phalacrocorax auritus*) and Pelagic Cormorant (*Phalacrocorax pelagicus*) and Black Oystercatcher (*Haematopus bachmani*)

Figure 9, Figure 10, and Figure 11 on the following pages show the parks and recreational facilities in Pacific Grove, the wetlands and non-wetland water features, and the vegetative communities and land cover types present throughout the City.

These resources provide habitat for wildlife and special status species, help manage water flows through the landscape, provide space for recreation, socializing, and cooling

off during hot days, and attract visitors to the area that bring tourism dollars and generate economic benefits for the City. These resources are spread throughout the City and face various levels of exposure to climate hazards. For example, increased temperatures and prolonged droughts can lead to water shortages, affecting both wildlife habitats and recreational activities. Additionally, more frequent and intense storms can cause flooding and erosion, damaging trails and other recreational resources in Pacific Grove.

Figure 9 Parks and Open Space Facilities



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Additional data provided by City of Pacific Grove, 2023.

23-14477 EPS
Fig X Parks, Open Spaces, and Critical Facilities and Infrastructure

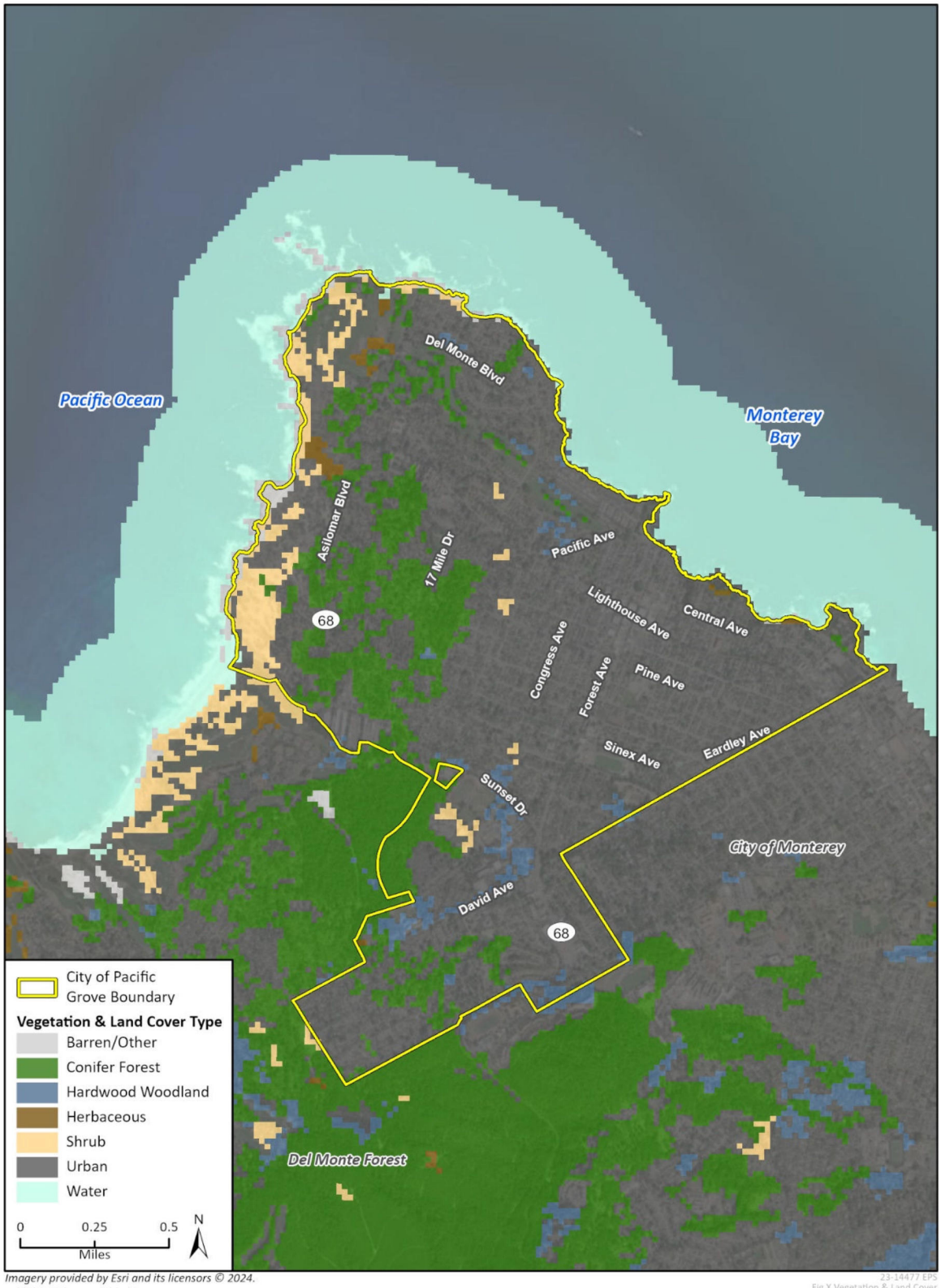
Figure 10 Rivers, Wetlands, and Open Water Areas



Imagery provided by Esri and its licensors © 2024.
Additional data provided by NWI, 2023.

23-14477 EPS
Fig X Rivers, Wetlands, Open Water Areas

Figure 11 Vegetation Communities and Land Cover Types



Imagery provided by Esri and its licensors © 2024.
Additional data provided by CALFIRE FRAP, 2022.

23-14477 EPS
Fig X Vegetation & Land Cover

Buildings and Facilities

Climate change is expected to amplify extreme weather and climate hazards in Pacific Grove. A jurisdiction's vulnerability increases when buildings and facilities are not designed, operated, and/or maintained to function effectively under extreme weather conditions or can be damaged by extreme weather conditions. The following City buildings and facilities are considered critical facilities and contribute to the community's resilience to climate change: municipal buildings, educational facilities, medical facilities, residential and commercial development, roadways and transportation facilities, fire stations, and police stations.

Infrastructure and Critical Resources

Within Pacific Grove there is a large array of infrastructure and critical services that are vulnerable to climate change. Assets within this category include water services, storm drainage and flood protection, fire services, emergency services, medical services, utilities and major utility corridors, public transportation, roadways, and active transportation routes. This asset group is sensitive to climate change impacts, such as drought, which is a current issue driven by severe scarcity and reliance on limited surface and groundwater sources, stormwater flooding of roadways, increased hospital visits during regional wildfires due to poor air quality, or increased energy demand during extreme heat events. These impacts can affect the ability of service lines and providers, such as water, electricity, and emergency services, to provide resources, by straining the existing capacity or creating conditions that prevent typical responses under normal conditions. These include but are not limited to Ocean View Boulevard/Sunset Drive between Esplanade Street and Asilomar Avenue and the Monterey Interceptor pipeline. Furthermore, infrastructure in place may not be prepared to sustain increasing and compounding hazards. For example, the sanitary sewer system may need additional lift capacity to adequately accommodate pumping wastewater for a growing population and increasing volumes of runoff from severe storm events.

Adaptive Capacity

Adaptive capacity is the ability to adjust to the consequences of climate change. This section summarizes the ways in which asset managers, including the City and other agencies and utilities, currently manage the negative impacts of climate change. Types of adaptive capacity include adjustments in behavior, resources, and technologies. The City of Pacific Grove has actively taken steps to increase the City's adaptive capacity. Existing policies, plans, programs, and institutions that increase the City's resilience to climate change impacts are listed in Table 4.

Table 4: Programs, Plans, and Policies to Manage Multiple Climate Hazard Impacts

Existing and Planned Programs, Plans, and Policies	Objectives
Monterey County Multi-Jurisdictional Hazard	The Plan assesses hazards within the County and participating cities, including Pacific Grove, and

Table 4: Programs, Plans, and Policies to Manage Multiple Climate Hazard Impacts	
Existing and Planned Programs, Plans, and Policies	**Objectives**
Mitigation Plan (County of Monterey 2022	identifies mitigation strategies that reduce or eliminate long-term risks to people and property from those hazards. Climate hazards addressed in the Plan include drought, flood, landslides, extreme heat, winter storms, sea level rise, and wildfire. The Plan outlines goals and objectives to mitigate risk to priority populations and physical assets across Monterey County with specific measures identified for City of Pacific Grove (see Annex I of the Multi-Jurisdictional Hazard Mitigation Plan).
Monterey County Emergency Operations Plan (EOP) (County of Monterey 2020)	The County EOP establishes the County's incident management organization that supports first responders, facilitates public information and interagency communication, and maintains continuity of government during a wide range of hazard and disaster situations. Monterey OES developed hazard and function specific annexes to the EOP that support implementation of the emergency operations plan including a care and shelter plan, debris management plan, disaster cost recovery plan, electrical power disruption plan, family assistance center plan, and mass evacuation and transportation plan. Additionally, a communication alert and warning plan and damage assessment plan are being developed. The high-level goals of the EOP are: 1) Provide for effective life safety measures; 2) Implement efficient and effective methods for mobilization, deployment, use, tracking, and demobilization of resources needed during emergencies and disasters.; 3) Provide all employees with the necessary basic guidelines for responding to emergencies and disasters through a coordinated and effective emergency response team; 4) Expedite effective business continuation and community recovery efforts after an emergency; and 5) Minimize damage to critical facilities and assets. In the hazard assessment the plan includes a high-level overview of climate change impacts, and it establishes a framework of response to multiple hazards exacerbated by climate change including coastal erosion, coastal storms, flooding, drought, wildfire, sea level rise, and landslides.

Table 4: Programs, Plans, and Policies to Manage Multiple Climate Hazard Impacts	
Existing and Planned Programs, Plans, and Policies	**Objectives**
	A copy of the County Emergency Operations Plan is provided to all County Departments and local governments including the City of Pacific Grove. The City of Pacific Grove Emergency Operations Plan, which is being prepared by the City, is separate from the County EOP, and the City is responsible for overall emergency response and recovery activities within its jurisdiction.
Monterey Peninsula Regional Emergency Coordination Center	Monterey Peninsula Regional Emergency Coordination Center (MPRECC) conducts a wide range of planning activities throughout the year in cooperation with City of Pacific Grove, California State University Monterey Bay (CSUMB) campus and surrounding communities. While not targeted to any specific disaster, the resulting plans and coordination of activities between agencies, provide important capacity for preparing and responding to all relevant hazards by helping to disseminate safety information and establish training and exercise goals related to emergency management. MPRECC currently assists with planning and coordination for the following: Training – for effective emergency management, Exercises – to improve emergency response capabilities, Emergency Resources – to coordinate access to equipment and other resources needed during an emergency, Regional and System-wide Collaboration – to increase collaborative efforts across the community to build resilience, and Public Outreach - to build disaster resilience in the community and a culture of safety by engaging community members.
Monterey Community Emergency Response Team (CERT) Program	The Community Emergency Response Team (CERT) program educates volunteers about disaster preparedness and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. CERT volunteers may assist neighbors and other emergency personnel in times of emergency, and support evacuations along with other responsibilities.
Monterey County Emergency Operations Center (EOC)	The EOC provides a common location to coordinate resource support for fire, police, public works, and other response agencies as well as coordinate

Table 4: Programs, Plans, and Policies to Manage Multiple Climate Hazard Impacts	
Existing and Planned Programs, Plans, and Policies	**Objectives**
	general public emergency notifications, evacuations and sheltering in the event of a large-scale emergency. • Incorporated cities, such as Pacific Grove, may issue emergency proclamations to the County of Monterey requesting emergency assistance.
Warning Systems/Services	Monterey County Office of Emergency Services has an online dashboard to provide public emergency alerts, weather warnings, and information about traffic/road closures, power outages, and additional hazard information. The County also has an alert system called "Alert Monterey County", that delivers voice recorded, text and teletypewriter (TTY) messages in English and Spanish to a database of landline telephones and mobile devices in a specific geographic area affected by a disaster or emergency as selected by the local government agency with the following limitations: The landline telephone database is the existing 9-1-1 database. Cell phone, Voice over Internet Protocol (VolP) phone and email notifications use a database created by individuals "registering" these devices on the County's website www.alertmontereycounty.org.
City of Pacific Grove Coastal Hazards Modeling Technical Methods and Results (2024)	The study provides a detailed city-wide, parcel-scale coastal hazard modeling assessment to support the City of Pacific Grove (City) in updating their LCP and coastal hazard overlay and updating their parcel vulnerability assessment. The impetus for this project came from several sea level rise reports submitted as part of Coastal Development Permit (CDP) applications under the 2020 revised Local Coastal Program for the City. Each of these site-specific technical reports identified substantially less risk from coastal hazards than previously identified, placed an extra reporting burden on local landowners, and required additional City planning resources which ultimately slowed down the local planning decision making process.
Pacific Grove Local Coastal Program Land Use Plan and Coastal Implementation Plan	The Local Coastal Program provides specific goals, policies, and proposed implementation actions that govern land and water use in the City's coastal zone.

Table 4: Programs, Plans, and Policies to Manage Multiple Climate Hazard Impacts	
Existing and Planned Programs, Plans, and Policies	**Objectives**
(certified by California Coastal Commission in 2020)	The plan establishes protective policies for marine and coastal resources, including for shoreline access, recreational resources, and environmentally sensitive habitat areas and impacts due to sea level rise.
Pacific Grove Shoreline Management Plan (2020)	The Shoreline Management Plan aims to provide public access along Pacific Grove's shoreline well into the future while protecting and enhancing the coast's natural and cultural resources. The City prepared the plan consistent with CCC requirements, the plan's overarching objectives are to provide continuous recreational trail access along the shoreline and minimize the need for new seawalls, riprap and other forms of shoreline armoring while incorporating other opportunities to enhance and offer long-term protection from coastal erosion and sea level rise to other coastal amenities, public infrastructure, and natural and cultural resources. As part of the Shoreline Management Plan, in 2018 the City prepared a Shoreline Vulnerability Assessment, a Geologic and Hydrologic Conditions Report, a Cultural Resource Assessment, and a Biological Resources Technical Report.
Recommendations to Mitigate Identified Threats to Coastal Wildlife for the City of Pacific Grove (2021)	The Coastal Wildlife Protection Advisory Committee (CWPAC) was formed as a City Manager advisory committee and recognized by the City Council in December 2018 to advise on collaboration with local agencies and organizations on enforcement, educational outreach, and development guidelines to protect coastal wildlife against significant future disruption of habitat. This document provides guidance and recommendations for the City of Pacific Grove and is a resource for others working to protect important local coastal wildlife.
Point Pinos Coastal Trail Study and Plan (2017)	Study for completing the coastal trail gap through Point Pinos. Outlines options for removing all recreational facilities from the 30-year setback zone. The Point Pinos Trail Project will complete the California Coastal Trail, eliminate existing informal trails that encroach into sensitive dune habitat, improve bicyclist and pedestrian safety and enhance the user experience. The overarching goal is to

Table 4: Programs, Plans, and Policies to Manage Multiple Climate Hazard Impacts	
Existing and Planned Programs, Plans, and Policies	**Objectives**
	facilitate public enjoyment of the Point Pinos coastline in a safe and environmentally responsible manner.
Coastal Bluff Protection Analysis and Geotechnical Investigation (2016)	The study evaluated options for responding to erosion at six coastal bluff sites near Perkins Park and Esplanade Park. The study also evaluated alternatives related to the protection of the Recreational Trail, Ocean View Boulevard, and the Sanitary Sewer Force Main under Ocean View Boulevard from coastal bluff erosion. The six areas are located seaward and just upcoast of Esplanade Park and seaward of and just upcoast of Perkins Park. At these locations, the Recreational Trail has been undermined, or is on the verge of being undermined by coastal erosion. The purpose of the study was: 1) Analyze coastal erosion hazards; 2) Explore and evaluate surface and subsurface conditions at the five coastal bluff sites; 3) Evaluate alternative means of responding to the coastal erosion hazards at each site; and 4) Provide geotechnical criteria for design and construction of the proposed repairs where they recommend coastal protection structures.
Mutual Aid Agreements	Pacific Grove police and fire departments currently have mutual aid agreements with Monterey County agencies.
Community Wildfire Protection Plan	Pacific Grove joined other adjacent jurisdictions to prepare a Community Wildfire Protection Plan (CWPP). The CWPP is a tool to help reduce the severity and impact of wildfires and increase community resilience. It is also intended to serve as a fire protection planning document that presents the community's physical characteristics, wildfire hazard, assets at risk from wildfire, wildfire risk reduction approaches, vegetation/fuel management projects, and goals and action items intended to reduce wildfire risk in the Plan Area.
TsunamiReady Certification	Pacific Grove is TsunamiReady certified. TsunamiReady is a voluntary community recognition program that promotes tsunami hazard preparedness as an active collaboration among federal, state/territorial and local emergency management

Table 4: Programs, Plans, and Policies to Manage Multiple Climate Hazard Impacts	
Existing and Planned Programs, Plans, and Policies	**Objectives**
	agencies, community leaders and the public. The main goal of the program is to improve public safety before, during and after tsunami emergencies. It aims to do this by establishing guidelines for a standard level of capability to mitigate, prepare for and respond to tsunamis and working with communities to help them meet the guidelines and ultimately become recognized as TsunamiReady by the National Weather Service.
StormReady Certification	Pacific Grove is StormReady certified. StormReady uses a grassroots approach to help communities develop plans to handle all types of extreme weather—from tornadoes to winter storms. The program encourages communities to take a new, proactive approach to improving local hazardous weather operations by providing emergency managers with clear-cut guidelines on how to improve their hazardous weather operations.
CalAm Urban Water Management Plan (UWMP) and MCWD UWMP	Urban Water Management Plans (UWMPs) are prepared to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. The California Urban Water Management Planning Act (Act) requires every urban water supplier that provides water for municipal services to more than 3,000 connections or is supplying more than 3,000 acre-feet of water annually to assess the reliability of its water sources over a 20-year planning horizon. Water supplies can change frequently, UWMP are updated every five years, adopted and submitted to the Department of Water Resources (DWR). The UWMP addresses current and future water supply, historical drought events and water shortage contingency planning, considers adaptive management practices for increasing impacts due to climate change.

Vulnerability Analysis

This section describes the impacts each climate hazard has on community assets and services described in the Sensitivity section. An impact score and an adaptive capacity score are identified for each asset, along with an overall vulnerability score consistent with the scoring methodology described above in the section titled Vulnerability Assessment Methodology.



Priority Populations



Natural and Recreational Resources



Buildings and Facilities



Infrastructure and Critical Services



Priority Populations

Potential Impacts

Drought

In Pacific Grove, the ongoing moratorium on new water connections, resulting from the City's constrained water supply, intensifies the impacts of drought and water shortages on the community. Consequently, even minor increases in prices could significantly affect the population. This situation particularly impacts priority populations, given the high cost of water in the City.

The Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022) describes the overall impact potential for Pacific Grove's residents as relevant to the entire population of the City and describes numerous potential impacts of drought and water shortages on the community. Health issues may include problems related to low water flows, poor water quality, or dust. Other possible impacts include recreational risks, effects on air quality, diminished living conditions related to energy, hygiene, compromised food and nutrition, and increased incidence of illness and disease. Water shortages can affect access to safe, affordable water, with substantial impacts on low-income families and communities burdened with environmental pollution. A prolonged drought could also cause economic impacts. Increased demand for water and electricity may result in shortages and higher costs of these resources. While economic impacts will be most significant on industries that use water or depend on water for their business, cascading economic effects can hurt many sectors of the economy. Agriculture, which will likely be impacted by drought conditions, is a major economic driver in Monterey County, and the City could be impacted economically.

Individuals with High Outdoor Exposure are at risk to drought conditions and associated cascading impacts. During prolonged drought conditions, people experiencing homelessness may have difficulty accessing clean and affordable drinking water (Gamble et al. 2016).

During periods of prolonged drought, *under-resourced individuals* are more likely to experience the cost burden associated with increased water rates (Feinstein et al. 2017). These individuals may struggle to access clean and affordable drinking water which may cause dehydration and/or exacerbate underlying health conditions and illnesses (Gamble et al. 2016).

Individuals Facing Societal Barriers are at risk to drought conditions and associated cascading impacts. Individuals in these groups may face systemic and/or cultural barriers when seeking to access affordable and clean drinking water, which may cause dehydration and/or exacerbate underlying health conditions and illnesses (Gamble et al. 2016).

Individuals with chronic health conditions or health related sensitivities are at risk to drought conditions and associated cascading impacts. Prolonged drought conditions can lead to lower water quality and dustier conditions which can impact individuals sensitive to worsening air and water quality.

Wildfire

The highest wildfire risk is concentrated in the southern part of the City, characterized by more forested neighborhoods and a higher density of mature trees. Climate change could lead to an increase in wildfire frequency, disproportionately affecting priority populations. This could result in potential property damage, health risks from poor air quality, and disruptions due to power outages. These impacts could be further intensified by regional fires and associated power outages.

Individuals with High Outdoor Exposure are more likely to breathe in particulate matter and other harmful air pollutants during wildfire events. People experiencing homelessness are particularly at-risk during wildfire events as they often suffer from respiratory conditions, mental illness, and chronic health conditions that may be exacerbated from physical contact with wildfire or smoke inhalation. People experiencing homelessness face disproportionate risks due to limited access to shelter, access to transportation to evacuate from burning areas, and lack of access to information (Gin et al. 2021). They may also have their personal belongings destroyed or damaged during a wildfire event (CDPH 2017), and they are more exposed to wildfire smoke, which increases these individuals' risk of respiratory, cardiovascular, and other adverse health outcomes (Vargo et al. 2023).

Under-resourced individuals are less likely to receive medical treatment for smoke inhalation or burns and may experience injuries or death (CDPH 2017). These individuals may have their belongings and homes damaged by a wildfire. If this occurs, under-resourced individuals are likely to suffer from the cost burden associated with losses or damage. Households without a computer or internet may not receive communications and evacuations to safely evacuate from hazard areas. Individuals without vehicle access are vulnerable during wildfires because they no do have access to a vehicle to evacuate. Renters have limited control over home hardening and improvements that may protect against fire and smoke. Subsequently, they may experience economic and health impacts and a greater loss of belongings than homeowners (Gamble et al. 2016).

Individuals Facing Societal Barriers may experience increased exposure to risk of wildfire and associated impacts, barriers to assistance and resources for responding to wildfire, or both. Generally, non-white communities are more likely to live in or near wildfire hazard zones and in housing with insufficient protection against wildfire. Limited or non-English speakers may not be able to read wildfire or smoke advisory warnings or governmental guidance, potentially causing them to experience greater exposure to smoke and/or wildfire. Individuals in these groups have may face systematic and/or cultural barriers to access resources to safely evacuate hazard areas (Gamble et al. 2016). Individuals in these groups may experience injuries or death from smoke inhalation or burns (CDPH 2017).

Individuals with chronic health conditions or health related sensitivities may experience injuries or death from smoke inhalation or burns (CDPH 2017). Older adults, military veterans, and pollution burdened individuals are vulnerable to health impacts from wildfire smoke pollutants because they are more likely to have underlying respiratory and/or cardiovascular conditions and illnesses. Children may experience respiratory health impacts from wildfire smoke because their respiratory systems are not fully developed and are sensitive to stressors. Individuals with cardiovascular disease may experience severe cardiovascular health impacts if exposed to wildfire smoke pollutants. Individuals with asthma may experience severe respiratory health impacts such as difficulty breathing if exposed to wildfire smoke pollutants. Individuals with disabilities, children, and older adults may have difficulty evacuating from wildfires, increasing the risk of health impacts from wildfire smoke inhalation or fire burns (EPA 2022).

Severe Storms and Stormwater Flooding

The areas adjacent to Pacific Grove's coastline are mapped by FEMA as coastal areas vulnerable to coastal storms, flooding and additional hazards associated with storm waves. Though FEMA floodplains provide useful information about flood risk, they are based on historical flow data from river gauges and do not account for current or future climate changes and sea level rise. According to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022), the priority populations that would be affected by severe weather events are the elderly, low-income populations, limited or non-English speakers, and people with life-threatening illnesses. In addition, the projected increase in frequency and intensity of extreme precipitation events can lead to stormwater flooding, impacting priority populations more directly by causing rapid inundation of streets and homes, disrupting access to essential services, and increasing health risks. See Figure 7 for the locations of the FEMA flood plains.

Individuals with High Outdoor Exposure are more likely to be exposed to stormwater flooding, associated pollutants and debris, and related risks. People experiencing homelessness are disproportionately at risk to health impacts during flood events because they often live in flood hazard areas and do not have access to transportation to evacuate inundated areas. They may also have their personal belongings destroyed or damaged during a flood event (Ramin & Svoboda 2009).

Under-resourced individuals may experience injuries or death from high velocity flooding and are less likely to receive medical treatment (CDPH 2017). Individuals in these groups may experience cost burdens if their belongings and homes are damaged from floodwater inundation. Individuals without vehicle access have limited or no access to a vehicle to evacuate flood hazard areas. Households without a computer or internet may not receive communications and emergency alerts to safely evacuate from hazard areas

(CDPH 2020). Renters have limited control over home improvements that may protect against flood damage. Subsequently, they may experience economic and health impacts and a greater loss of belongings than homeowners (Gamble et. al 2016).

Individuals Facing Societal Barriers may have higher exposure or greater barriers for responding to flooding and storm events, leading to increased risk of impacts. Non-white communities are more likely to live in housing with insufficient protection against stormwater flooding. Limited or non-English speakers may not be able to read flood warning or governmental guidance, potentially causing them to experience greater exposure to flooding. Individuals in these groups may face systematic and/or cultural barriers when seeking to access resources needed to safely evacuate hazard areas (Gamble et al. 2016).

Individuals with chronic health conditions or health related sensitivities may face challenges with safely navigating areas inundated by stormwater, evacuating, or may be more physically sensitive to pollutant exposure if they come into contact with floodwaters. Older people and children are particularly at risk to injury and/or death from high velocity flooding (CDPH 2017). Stormwater flooding may also limit access to transportation systems, healthcare centers, and emergency response to those that are injured or in need of consistent medical care, such as those with chronic health conditions or illnesses. Children, older adults, individuals with disabilities, and individuals with chronic health conditions or illnesses may not be able to safely evacuate floodwater hazard areas.

Sea Level Rise

According to the Pacific Grove Shoreline Management Plan (2020) and the Monterey Multi-Jurisdictional Hazard Mitigation Plan (2022), sea level rise will increase shoreline and bluff erosion rates, with the potential of negatively impacting the City's open spaces, and natural and recreational resources along its coastline. According to the State Sea Level Rise Guidance (OPC 2024), sea level rise hazards will have disproportionate impacts on communities with the least capacity to adapt and may exacerbate existing environmental injustices.

All Priority Populations have been, and will continue to be, disproportionately overburdened by pollution and climate change. Sea level rise will add to those burdens. Shoreline and bluff erosion would lead to impacts on Pacific Grove coastal resources and will unduly affect all priority population. These impacts can manifest as complete community displacement, loss of areas with recreational, cultural, and/or historic significance, loss of personal property, worsened health, reduced or lost wages, and loss of free or affordable public access to the coast. While many coastal cities in California include expensive beachfront homes, the coast is used regularly for recreation by thousands of working-class residents who are visiting or live nearby. Furthermore, Priority Populations may lack financial or other resources to plan for sea level rise as well as the ability to adequately respond to impacts once they occur. In addition, sea level rise would threaten job sites for local residents (OPC 2024).

Extreme Heat

The Monterey Multi-Jurisdictional Hazard Mitigation Plan (2022) estimated that 15,050 people in Pacific Grove would be potentially exposed to extreme heat events. In areas that are historically cooler, people are more likely to be impacted by heat waves as they are less acclimated to higher temperatures, and may have fewer adaptations such as air

conditioning, as well as less familiarity with the health dangers and symptoms of heat related illnesses.

Individuals with High Outdoor Exposure are at higher risk of health impacts from extreme heat. People experiencing homelessness are exposed to health-related impacts associated with extreme heat because they have limited access to shelter and air conditioning. The primary health impacts to these populations are heat-related illnesses, such as heat stress, heat stroke, and dehydration, which can be life-threatening (CDPH 2020).

Under-resourced individuals may not be able to pay for adequate air conditioning or fans, increasing their exposure to extreme heat. Individuals without vehicle access don't have access to a vehicle to travel to cooling centers or move to temporary shelters during an extreme heat event (Cooley et al. 2012). Under-resourced individuals are less likely to receive medical care for illnesses triggered or exacerbated by extreme heat. Households without a computer or broadband internet may not have access to governmental guidance and resources, increasing their likelihood to experience health impacts from extreme heat exposure (CDPH 2017).

Non-white communities often live in housing with insufficient protection from extreme heat events that lack air conditioning or affordable air conditioning. Limited or non-English speakers may not be able to read heat advisory warnings or governmental guidance, potentially causing them to experience greater exposure to extreme heat (Gamble et al. 2016). These populations may not have access to medical services to treat heat-related illnesses. In addition, overcrowded housing can contribute to the risk of heat-related illness, which can, in turn, lead to hospital visits and increased risk of mortality. If the electricity grid is strained during a heat wave and there are power outages, this can further increase the risk of heat related illnesses if access to adaptations such as air conditioning, fans, and refrigeration are lost.

Individuals with chronic health conditions or health related sensitivities are particularly at risk to heat related illnesses during extreme heat events. Individuals with disabilities, older adults, and children may have difficulty turning on air conditioning or traveling to cooling centers during extreme heat events. Extreme heat conditions can exacerbate asthma, cardiovascular disease, certain disabilities, and other respiratory and cardiovascular conditions, potentially causing heat-related illnesses (CDPH 2020). Children are still physiologically developing which means that they are less able to regulate their bodies during extreme heat events (Kenny et al. 2014).

Adaptive Capacity

Pacific Grove has plans, policies, and programs in place that protect priority populations across all climate hazards. The level of enforceability, implementation, and efficacy varies based on the hazard type. Impact and adaptative capacity scores are provided in Table 5, below.

Most of the plans and actions for Pacific Grove are at the County level, which increases the risks and decreases the adaptive capacity of Pacific Grove as it relates to priority populations. County-level plans may not fully account for the unique local conditions, needs, and vulnerabilities of Pacific Grove and its residents and priority populations, thereby limiting the effectiveness of these strategies in mitigating climate change impacts to the City.

The entire City's population is vulnerable to drought, which can lead to health issues, poor living conditions, and reduced access to affordable water. Furthermore, small price increases can significantly impact the population due to the already high cost of water in Pacific Grove. The City has implemented a water conservation program, which includes free water-saving devices and services to help residents identify ways to save water, rebates for installing water-efficient appliances, and offers free water conservation audits to assist in identifying potential leaks and improving water efficiency at home.

Despite the absence of a Community Wildfire Management Plan or Fire Safe Council in Pacific Grove, the City is equipped with resources for Fire and Emergency Preparedness. The City's resilience is further strengthened by mutual aid agreements with the County and the consolidation of its fire department with the City of Monterey Fire Department. These strategies enhance Pacific Grove's adaptive capacity, enabling it to effectively manage and respond to wildfires.

Development near fire hazard severity zones and the potential health impacts from wildfire smoke increase the risk for wildfires for priority populations. Although Pacific Grove lacks a Community Wildfire Management Plan or a Fire Safe Council, the City offers informative resources on Fire and Emergency Preparedness, has mutual aid agreements with the County, and its fire department was merged with the City of Monterey Fire Department.

The Local Coastal Program document and the Shoreline Management Plan discuss the potential impacts of sea level rise. However, neither of these documents mention adaptation strategies that benefit priority populations afflicted by sea level rise. The County has the Monterey Regional Stormwater Management Program (MRSWMP), and the City is in the process of preparing a comprehensive Stormwater System Master Plan. The Pacific Grove Local Coastal Program mentions water management. However, it has no mention of addressing potential severe storms and drought to priority populations.

Extreme heat events pose significant risks to approximately 15,050 people in Pacific Grove. Priority populations are highly exposed to extreme heat, as these groups often have limited adaptive capacity due to factors like lack of air conditioning, inadequate housing, language barriers, and chronic health conditions. The City has limited existing adaptive capacity to extreme heat due to the lack of programs in place to address the associated risks of extreme heat to priority populations.

Table 5: Priority Populations Vulnerability Scores

Climate Hazard	Impact Score	Adaptive Capacity Score	Vulnerability Score
Drought	High	Medium	4-High
Wildfire	High	Medium	4-High
Severe Storms and Stormwater Flooding	Medium	Medium	3-Medium
Sea Level Rise	Medium	Low	4-High
Extreme Heat	High	Low	5-High

Natural and Recreational Resources

Though most of the City is developed, Pacific Grove does include natural resources such as sensitive habitats, and open space important to sensitive wildlife and plant species. Recreational resources such as parks, coastal trails, and open space may also include habitat important to sensitive plants and wildlife. Climate hazards such as erosion or flooding of habitat areas along the coast, wildfires, or vegetation mortality from drought can cause stress and physical damage to natural and recreational resources. Compounding climate hazards can stress these natural ecosystems past their ability to absorb individual climate hazards resulting in the loss of that resource. For example, shoreline and bluff erosion could damage recreational resources, and vegetation and wildlife may not be able to recover as readily from the combined impacts of more frequent and severe drought, while also experiencing the effects of storms and extreme heat events. In addition, during climate hazards such as extreme heat or drought, wildlife will seek out more favorable habitats which tend to be where people recreate (USDA 2020), increasing reliance on already limited resources. Natural and recreational resources in Pacific Grove are highly vulnerable to the effects of climate change, which is described in further detail below.



Potential Impacts

Drought

Drought currently poses a significant challenge to Pacific Grove's natural and recreational resources. The City's water supply is under stringent regulation, resulting in a moratorium on new water connections. This situation leaves both natural resources and recreational spaces highly vulnerable to the impacts of drought.

Impacts from drought involve risks associated with water scarcity and availability for reliant natural resources. Extended or variable drought conditions affect the amount and duration water is available in ephemeral and permanent waters sources, impacting plants and wildlife dependent on those water resources (Burkett 2000). Wetlands and non-wetland waters such as the Majella Slough and Crespi Pond provide habitat for a variety of special status plant and animal species. Several federal or state listed species documented within Pacific Grove would be negatively impacted by drought, including migrating bird species and sensitive riparian habitat that is rare within the City. Recreational facilities, environmentally sensitive habitats areas, and urban forestry can be impacted due to water scarcity and water stress, in particular turf, landscaping, and trees may require more water, face greater likelihood of water stress, and as a result be more highly impacted by heat and pests or to die. This can increase maintenance costs for the City and reduce the quality of recreational spaces. Both natural resources and recreational spaces are highly exposed to impacts from drought.

Wildfire

The largest impacts to natural resources are caused by wildfires. Direct impacts include mortality and loss of resources and wildlife from wildfire, as well as indirect mortality due to uninhabitable areas, loss of available food sources and seed bank (Backlund 2008). The severity and frequency of wildfires can exacerbate these impacts further through habitat conversions resulting in degraded or new vegetation communities that no longer support the species (Bell et.al 1999, Stephenson et.al 1999, Coop et. al 2020). Recovery of these resources following a severe wildfire can take years, decades, if ever.

Severe Storms and Stormwater Flooding

Flooding impacts are mainly caused by associated erosion and the detrimental effects flooding can have on water quality, especially to aquatic species dependent on water quality for survival (Talbot 2018). Other impacts include damage from inundation within storm flooded areas such as habitats and lands along the City's coastline. Additionally, stormwater flooding can reduce overall water quality through algae blooms causing water quality issues within wetlands (EPA 2022).

Sea Level Rise

Sea level rise would negatively impact natural and recreational resources along Pacific Grove's coastline. Worsening of shoreline and bluff erosion due to sea level rise and wave action would exacerbate the impacts on these resources. In addition, environmentally sensitive lands such as wetlands, riparian areas, dunes and coastal bluff vegetation are most affected by sea level rise and show limitations in ability to shift habitat location. According to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022), sea level rise and coastal erosion would negatively impact public parks and trails including Lovers Point, Hopkins Marine Station, and the Pacific Grove Golf Course. Furthermore, the greatest increase in coastal flooding due to sea level rise is expected to occur near Point Pinos and Otter Point, with notable increases at Lovers Point. There will also be negative impacts to ecosystems, both on land and in the ocean, leading to local extinctions, migrations, and habitat management challenges.

Coastal erosion poses a significant threat to the Monterey Interceptor pipeline, which transports all untreated sewage from the City to the Monterey One Water Regional Treatment Plant in Marina. This critical facility is at risk of the long-term effects of coastal erosion and sea level rise. The pollution from such a spill would degrade water quality, threatening endangered species and disrupting fragile ecosystems. Additionally, a spill would have dire consequences for recreational resources, as beaches, coastal parks, and marine reserves could become contaminated, impacting tourism, fishing, and the community's enjoyment of Pacific Grove natural assets.

The recent coastal hazard modeling (Integral 2024) also indicates that sea level rise and coastal erosion would impact the recreational areas mentioned above. The results show that sea level rise and coastal erosion will impact public access to the City's shoreline, beaches, Monterey Bay, and Asilomar Coastal Trails, as well as the Pacific Grove Golf Course, Crespi Pond, coastal dunes and the Great Tide Pool along a section of the Asilomar Coastal Trail. These are all valuable recreational and natural resources for the City. The study also indicates that tidal inundation with 4 feet of sea level rise may narrow beach widths and shift the rocky intertidal habitat areas to higher elevations.

The study also concluded that with 4.4 feet of sea level rise 7.37 acres of parks and open spaces could be impacted by coastal erosion, and a total of 70.38 acres could be exposed to coastal wave hazards with 4 feet of sea level rise.

Extreme Heat

Both mid- and end- of century projections depict increases in extreme heat days (CEC 2024). The impacts under extreme heat and warm nights are similar to impacts experienced by priority populations. Wildlife under these conditions face impacts of heat stress and heat related illness as well as disrupted reproductive cycles, and compounding risks associated with early and extended seasonal temperature increases

(Backlund 2008). Because it is seasonally warmer earlier in the year species can emerge early with no food source and potentially face a delayed cold front which increases mortality rates. Timing of seasonal warmth may not overlap with food sources and extreme heat may stress dependent vegetation communities and wildlife (Dale 1997, Hamerlynck 1995, Maclean 2011). Plants are more likely to experience heat stress and drying, species' habitat ranges may shift and be replaced with invasive species that are incompatible with native species resource needs. Some pests can proliferate more easily with warmer temperatures (Hamerlynck 1995), and some plants and animals ill-suited to the new warmer conditions may suffer increased mortality rates. Natural resources are highly exposed to extreme heat and warm nights.

Adaptive Capacity

The City has in place the Recommendations to Mitigate Identified Threats to Coastal Wildlife, the Local Coastal Program, and the Shoreline Management Plan, which is supported by the Shoreline Management Plan Vulnerability Assessment, the Biological Assessment, and the Cultural Assessment. These documents briefly discuss the impacts of drought and wildfire on sensitive habitats; however, they do not offer adaptation strategies to reduce potential impacts on Pacific Grove's natural and recreational resources. These documents are intended to limit development impacts and mitigate impacts and do offer insights on how sea level rise will impact natural resources.

The Pacific Grove Local Water Project (LWP) consists of a water treatment plant to recycle a portion of Pacific Grove's municipal wastewater. Recycled water produced at the LWP, located at the retired Point Pinos Wastewater Treatment Plant, is used primarily for landscape irrigation at the Pacific Grove Golf Links and El Carmelo Cemetery and can produce up to 125 acre-feet of recycled water annually.

The Shoreline Management Plan (2020) provided draft management strategies to address impacts related to sea level rise and coastal hazard to Pacific Grove natural and recreational resources. In 2016, the City prepared a Coastal Bluff Protection Analysis and Geotechnical Investigation to evaluate alternatives related to the protection of the Recreational Trail, Ocean View Boulevard, and the Sanitary Sewer Force Main under Ocean View Boulevard from coastal bluff erosion. In addition, the City prepared the Point Pinos Coastal Trail Study and Plan (2017) to complete the coastal trail gap through Point Pinos and outline options for removing all recreational facilities from the 30-year setback zone. Overall impact and adaptive capacity scores for climate impacts on natural and recreational resources for Pacific Grove are included in Table 6 below.

Table 6: Natural and Recreational Vulnerability Scores			
Climate Hazard	**Impact Score**	**Adaptive Capacity Score**	**Vulnerability Score**
Drought	High	Medium	4-High
Wildfire	Low	Low	3-Medium
Severe Storms and Stormwater Flooding	Medium	Low	3-Medium
Sea Level Rise	High	High	3-Medium
Extreme Heat	Medium	Low	4-High



Buildings and Facilties

Buildings and facilities are primarily impacted by physical exposure and damage related to climate hazards. Impacts associated with critical services are discussed under Infrastructure and Critical Services.

Potential Impacts

Drought

Drought will have minimal impact on the physical structures of buildings and facilities across Pacific Grove; however, the ongoing moratorium on new water connections and the constraints on water supply may significantly limit the development of new housing and expansion of facilities, potentially hindering future growth and infrastructure projects.

Wildfire

The structures and buildings that are adjacent to wildfire hazard zones are at risk of structural damage from wildfires. According to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022), there are no buildings currently located in the VHFHSZ in Pacific Grove.

Severe Storms and Stormwater Flooding

According to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022), the main risk associated with severe weather in Pacific Grove is coastal storm flooding and wave runup. Increases in the occurrence and intensity of severe storm events are a direct impact of climate change that has the potential to expose development to severe damage. Flooding can cause buildings and facilities to be temporarily unusable, cause physical damage, and be disruptive to businesses, visitors, and residents during flooding and post-flooding repairs. Properties in poor condition or in high-risk locations may be

susceptible to the most damages. The County of Monterey Multi-Jurisdictional Hazard Mitigation Plan (2022) identifies 3 residential properties and 36 non-residential properties located in the 100-year flood zone, including the Hopkins Marine Station, which is located within an area that is prone to coastal flooding and their buildings and facilities have been battered at times in recent years by storm surges and these impacts are expected to increase (Shoreline Management Plan 2020). Combined sea level rise, storm surge, and stormwater runoff there may be an increased risk of damage to some buildings and facilities over time, mainly for development located along the City's coastline.

Sea Level Rise

The Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022) identifies no structures located within sea level hazard areas that would experience inundation from sea level rise alone. Two factors account for this: first, the base elevation of developed areas in Pacific Grove is sufficiently high, due to the bluffs along the shoreline, and second, relatively few structures are located immediately adjacent to the shoreline. However, when the effects of sea level rise and coastal flooding from storms are combined, about 75 houses in the Otter Point area would be subject to flooding. In the Lovers Point area, coastal flooding and sea level rise would mostly affect Lovers Point Park and nearby commercial businesses. Near Asilomar State Beach, development density is low and coastal flooding would have minimal effect on development. According to the Shoreline Management Plan (2020) the Hopkins Marine Station is located at a low elevation on the shoreline, the institution is facing serious challenges from sea-level rise.

Worsening of shoreline and bluff erosion along Pacific Grove's coastline due to sea level rise, would mainly impact open spaces, natural resources, and critical infrastructure. However, according to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022), bluff erosion due to sea level rise would expose between 3 residential properties and 42 non-residential properties with 0.8 feet of sea level rise and 16 residential properties and 58 non-residential properties with 6.6 feet of sea level rise. See Figure 3, Figure 5, and Figure 6 for maps of the coastal areas projected to be impacted by sea level rise and coastal hazards.

The recent coastal hazard modeling study conducted by the City (Integral 2024) also provides an overview of vulnerabilities to coastal hazards and sea level rise for parcels and structures in Pacific Grove. The study concluded that buildings along the City's coastline are more vulnerable to impacts of coastal erosion and coastal wave hazards.

The buildings that would be impacted by coastal erosion include the State Parks Gazebo located near Jewell Avenue. It could be exposed to coastal erosion with 2.7 feet of sea level rise. In addition, two single-family residences on the ocean side of Sunset Drive in the Asilomar Dunes neighborhood and one institutional building at the Hopkins Marine Station that is currently protected by coastal armoring are also vulnerable to coastal erosion and sea level rise. With sea level rise, coastal waves would create greater hazard exposure for the buildings along the City's coastline. A total of 28 structures would be vulnerable to coastal wave hazards. The low-lying areas of the City would be the most impacted. In addition, with 1 to 2 feet of sea level rise the Hopkins Marine Station would be exposed to coastal wave hazards, and with 4 feet of sea level rise residential parcels in the Asilomar Dunes Neighborhood located between Arena Avenue and Jewell Avenue

would be more exposed to coastal wave hazards, which could also impact the access to the homes.

Extreme Heat

Extreme heat could impact occupants of buildings and facilities that are not adequately weatherized for increased temperatures but is expected to have little impact on the buildings or facilities themselves.

Adaptive Capacity

Pacific Grove has limited existing adaptive capacity to increase the weatherization of buildings and facilities throughout the City. This means that risks related to climate hazards including wildfire, extreme temperatures, severe storms and stormwater flooding, and sea level rise are significant. The Local Coastal Program, and the Shoreline Management Plan do offer adaptive capacity for the City in the form of best practice land use for development exposed to flooding and sea level rise. The Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022) and the Shoreline Management Plan acknowledges several concerns in the City's ability to protect its buildings and facilities against potential climate-related impacts. In addition, the Shoreline Management Plan provides robust strategies and recommendations to address impacts related to sea level rise and coastal hazard to Hopkins Marine Station building and facilities located at a low elevation on the shoreline. Impact and adaptive capacity scores for buildings and facilities in Pacific Grove are provided in Table 7, below.

Table 7: Buildings and Facilities Vulnerability Scores

Climate Hazard	Impact Score	Adaptive Capacity Score	Vulnerability Score
Drought	Medium	Low	4-High
Wildfire	Low	Medium	2-Low
Severe Storms and Stormwater Flooding	Medium	Medium	3-Medium
Sea Level Rise	Medium	High	2-Low
Extreme Heat	Low	Low	3-Medium

Infrastructure and Critical Services

Overall vulnerabilities associated with this asset category involve structural preparedness and service reliability in the face of climate change. This section is mainly concerned with the cascading impacts that physical damage to buildings and facilities can have on services and infrastructure.

Potential Impacts

Drought

Drought can impact water reliability and water infrastructure. Currently, Pacific Grove has limited water to distribute and maintains a Water Wait List. Water is allocated in accordance with Chapter 11.68 of the City's Municipal Code. If a project requires additional water beyond what is allocated by the Monterey Peninsula Water Management District, an applicant may apply to place a project on the Water Wait List. All emergency services depend on water, particularly firefighters who require adequate water supply for fire suppression. Water providers within the Pacific Grove will encounter increased difficulty as drought impacts general service reliability. Drought impacts can create service strain for emergency and medical services. Cracked pavements from drought compounded with extreme heat affect roadways and transportation routes. A prolonged drought could also cause significant economic impacts on industries that use water or depend on water for their business.

Wildfire

Mostly of the Pacific Grove is out of the VHFHSZ and no critical facilities or infrastructure are located within the VHFHSZ. However, utility lines have the potential to be damaged in high-risk locations, resulting in oil and gas leaks and power outages. Utility lines under certain high wind conditions can also trigger wildfires through downed power lines (Kalansky et al. 2018). Power safety shut offs in response to wildfire risk can affect service reliability of power. Increased frequency of wildfires can place strain on fire and emergency services. Evacuation routes could be disrupted during a wildfire event limiting emergency responders and the ability for people to evacuate as well. After a wildfire, displaced communities may need temporary shelters. Future plans should include strategies to minimize the risk of service disruption and additional hazards related to utility lines in or near VHFHZs. Additionally, any new residential development should include evacuation planning and ensure an adequate number of ingress and egress routes.

Severe Storm and Stormwater Flooding

Impervious surfaces can inhibit the absorption and drainage of water and augment stormwater flooding in areas of Pacific Grove. There is risk of damage from increased extreme precipitation events including erosion, washouts, and sinkholes. Storm drainage and flood protection services for the City may be impacted by these events. According to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022), the main risk associated with severe weather in Pacific Grove is coastal storm flooding and wave runup. Increases in the occurrence and intensity of severe storm events are a direct impact of climate change that has the potential to expose infrastructure to severe damage. The most common problems associated with severe weather are loss of utilities and compromised access to roadways. In addition, transportation routes in the City

could be impacted by coastal flooding. Much of Ocean View Boulevard/Sunset Drive between Esplanade Street and Asilomar Avenue is subject to coastal flooding. Although located outside of Pacific Grove, one especially critical transportation link that could be prone to flooding is the Del Monte Boulevard tunnel in Monterey, which provides one of two major access routes into Pacific Grove.

Sea Level Rise

Sea level rise would exacerbate coastal storm flooding and wave runup consequently increasing the vulnerability and potential impacts on infrastructure and critical services along Pacific Grove's coastline. Potential impacts include additional risks of coastal flooding on wastewater infrastructures, inundation damage to critical pump station facilities, loss of utilities and compromised access to roadways. According to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022), seven of the City's wastewater pump stations could be inundated by coastal flooding. If flooding causes the pumps to fail, the wastewater system would backup behind the pump station, with potentially serious health consequences. In an extreme situation, storm surges could damage a pump station and result in spillage of wastewater. In addition, shoreline and bluff erosion would be exacerbated due to sea level rise as well. Coastal erosion could negatively impact the Monterey Interceptor pipeline, which transports all of the untreated sewage from the City to the Monterey One Water Regional Treatment Plant in Marina, and is a critical facility deemed at risk of the long-term effects of coastal erosion and sea level rise.

The 2024 coastal hazard modeling study (Integral 2024) also identified infrastructure and critical services vulnerable to sea level rise and coastal hazards along the City's shoreline. By 2100, coastal wave hazards would extend through Sunset Drive and areas close to Crespi Pond, where waves splash and throw debris that may affect the trail and along Ocean View Boulevard. In addition, flooding of the low-lying area behind the road is expected to escalate with the rise of sea level.

With 1 to 2 feet of sea level rise, parking lots and turnarounds would be vulnerable to coastal wave hazards. The vulnerable areas include the Crespi, Asilomar, Acropolis, and Foghorn turnarounds, and the area between Esplanade Street and Otter Point, where Ocean View Boulevard and the parking lot at Otter Point would be exposed. Furthermore, with 4 feet of sea level rise, coastal erosion hazards are projected to impact Oceanview Blvd around Point Pinos and Sunset Drive at the intersection of Arena Avenue.

Extreme Heat

As temperatures increase, roadways and active transportation routes are vulnerable to damage such as cracked surfaces through exposure to sustained heat (Kalansky et al. 2018). Additional impacts from extreme heat are associated with increased emergency service calls which could strain medical services. Electrical infrastructure could be overwhelmed by demand and result in blackouts or energy providers could conduct power safety shutoffs to avoid impacts to electrical facilities. Power outages have significant impacts on communication networks, water conveyance, and priority populations. The ability for emergency services to fully function is a cascading impact of power outages which can place additional strain on services during extreme heat events.

Adaptive Capacity

The drought in Pacific Grove could strain the water supply, impact infrastructure and services, and exacerbate vulnerabilities in wastewater infrastructure. The adaptive capacity of infrastructure and critical services in Pacific Grove is supported by the Monterey Peninsula Water Management District (MPWMD), which focuses on augmenting water supplies, promoting water conservation, and facilitating water reuse and reclamation. They also provide for the integrated management of ground and surface water and strategic investments and community initiatives to secure long-term water sustainability through projects like Pure Water Monterey, which enhances groundwater replenishment by recycling and purifying wastewater for potable use.

Pacific Grove's wastewater infrastructure is highly vulnerable to the impacts of sea level rise and coastal storm flooding, particularly the main sewer trunk line and pump stations situated within 150 feet of the shoreline. The adaptive capacity of Pacific Grove's wastewater infrastructure is currently limited. The Shoreline Management Plan (2020) and the Coastal Bluff Protection Analysis and Geotechnical Investigation (2016) provide some draft management strategies to relocate structures and critical services. These documents prioritize structures and critical services that have experienced repetitive loss or are in high-risk areas such as the Sanitary Sewer Force Main under Ocean View Boulevard located in coastal hazard areas.

The relevant existing plans, policies, and programs for Pacific Grove are mainly multi-hazard based. All multi-hazard plans, programs and systems are designed to address service and infrastructure failings and contingencies. Existing planning covers sea level rise and coastal erosion, with some mention of wildfire, drought, severe weather, and extreme heat. Relevant plans and systems in place are found below:

- Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022)
- Monterey County Emergency Operations Plan (EOP) (2020)
- Monterey Emergency Operations Center (EOC)
- Monterey Peninsula Regional Emergency Coordination Center

Cascading risks of services and power dependencies are addressed in relation to wildfire, flooding, and severe weather throughout these plans and programs.

Table 8: Infrastructure and Critical Services Vulnerability Scores

Climate Hazard	Impact Score	Adaptive Capacity Score	Vulnerability Score
Drought	High	Low	5-High
Wildfire	Medium	Medium	3-Medium
Severe Storms and Stormwater Flooding	High	Medium	4-High
Sea Level Rise	High	Medium	4-High
Extreme Heat	Medium	Low	4-High

Conclusion

This report evaluates how climate change may impact community members, natural resources, critical facilities, buildings, services, and infrastructure in Pacific Grove. The report provides a list of priority population groups and assets for which adaptation policies and programs should be developed and implemented to increase community resilience. Climate vulnerability is based on the combination of potential impacts and adaptive capacity, as identified in the Vulnerability Analysis section of the report.

A list of asset categories and vulnerability scores is provided in Table 9 on the next page. This report identified priority populations, natural and recreational resources, buildings and facilities, and infrastructure and critical services as assets highly sensitive to climate change within Pacific Grove. The vulnerability of these assets are discussed below:

- Priority populations in Pacific Grove are highly susceptible to the impacts of wildfire and extreme heat. Climate change affects all members of a community. However, certain groups such as older adults and young children are at a higher risk of heat-related illnesses during extreme heat events. Power outages, often associated with extreme weather events, can exacerbate these risks by disabling cooling systems and other essential services. Additionally, smoke from wildfires can cause hazardous air quality conditions that can negatively impact public health, especially those with pre-existing conditions such as asthma. With the increasing frequency of wildfires due to climate change, these priority populations are at a higher risk of being affected.
- Natural and recreational resources are highly vulnerable to extreme heat, drought, and sea level rise. Vulnerability for natural resources related to extreme heat and drought is focused on habitat conversions and damage, mortality, and scarcity of resources for plants and wildlife. Coastal erosion and sea level rise can reduce the area of critical habitat for environmentally sensitive habitats. Sea level rise and shoreline and bluff erosion can also negatively impact coastal recreation areas reducing access for residents and visitors, and potentially impacting local tourism related to those recreational resources along Pacific Grove's coastline.
- Buildings and facilities in Pacific Grove that are adjacent to the coastline are at risk of structural damage from sea level rise and coastal erosion.
- Infrastructure and critical services in Pacific Grove, including water services, storm drainage and flood protection, fire services, emergency services, medical services, utilities and major utility corridors, public transportation, roadways, and active transportation routes are highly vulnerable to wildfire, extreme heat, severe storms and stormwater flooding, coastal hazards, and sea level rise. A few critical facilities including roadways, main sewer trunk line and access points are close to the City's coastline and potentially susceptible to damage from severe storms and stormwater flooding, coastal hazards, and sea level rise, and potentially disrupting or impacting emergency services. All climate hazards may potentially impact infrastructure and related services in various ways, such as downed powerlines during severe storms, stormwater flooding on roads, coastal erosion mudslide related damage to infrastructure, increased demand for electricity during heat waves overloading the grid, public safety power shutoffs to avoid wildfire ignitions, and enhanced road cracking from excessive heat. All forms of power outages can

affect how critical services are able to perform their needed functions during a hazard, and increased frequency and intensity of hazards can strain emergency and other critical services due to increased demand.

Table 9: Summary of Pacific Grove High Vulnerability Scores			
Climate Hazard	**Impact Score**	**Adaptive Capacity Score**	**Vulnerability Score**
Priority Populations			
Drought	High	Medium	4-High
Wildfire	High	Medium	4-High
Severe Storms and Stormwater Flooding	Medium	Medium	3-Medium
Sea Level Rise	Medium	Low	4-High
Extreme Heat	High	Low	5-High
Natural and Recreational Resources			
Drought	High	Medium	4-High
Wildfire	Low	Low	3-Medium
Severe Storms and Stormwater Flooding	Medium	Low	3-Medium
Sea Level Rise	High	High	3-Medium
Extreme Heat	Medium	Low	4-High
Buildings and Facilities			
Drought	Medium	Low	4-High
Wildfire	Low	Medium	2-Low
Severe Storms and Stormwater Flooding	Medium	Medium	3-Medium
Sea Level Rise	Medium	High	2-Low
Extreme Heat	Low	Low	3-Medium
Infrastructure and Critical Services			
Drought	High	Low	5-High
Wildfire	Medium	Medium	3-Medium
Severe Storms and Stormwater Flooding	High	Medium	4-High
Sea Level Rise	High	Medium	4-High
Extreme Heat	Medium	Low	4-High

This assessment establishes a foundation for identifying adaptation policies and programs that can increase resilience in the City of Pacific Grove. The Pacific Grove Health and Safety Element will include policies and programs to increase the resilience of the population groups and asset categories with the highest vulnerability to climate change, as presented in this report.

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Appendix K

Traffic Volume Noise Estimates

Traffic Noise Calculator: FHWA 77-108 **Project: 23-14477 (2031 No Project)**

		Output						Inputs															Auto Inputs	
		dBA at 50 feet			Distance to CNEL Contour																			
ID	N_ID	$L_{eq\text{-}24hr}$	L_{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway	Segment	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever	Ground Absorption	Lane Distance
1	4314	-1.8	-0.4	0.2	0	0	0	Asilomar Ave	Del Monte Blvd To Shell Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
2	10945	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Esplanade St To Coral St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
3	4622	44.5	45.9	46.5	1	3	6	17 Mile Dr	Dennett St/Pine Ave To Pico Ave/Short St	425	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
4	4685	53.0	54.4	55.1	5	11	23	Pine Ave	Melrose St To 17 Mile Dr/Dennett St	3,023	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
5	12753	64.8	66.1	66.8	31	66	142	Holman Hwy	Forest Ave To Syida Dr	14,662	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
6	36727	58.7	60.0	60.7	12	26	56	Sunset Dr	0 To Walnut St	11,093	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
7	10921	38.8	40.1	40.8	1	1	3	17 Mile Dr	Melrose St To Sinex Ave	114	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
8	12767	55.6	56.9	57.6	7	16	35	Asilomar Ave	Sinex Ave To Sunset Dr	2,470	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
9	12765	52.2	53.5	54.2	4	9	20	Sunset Dr	Grove Acre Ave To Crocker Ave	2,470	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
10	12766	52.2	53.5	54.2	4	9	20	Sunset Dr	Crocker Ave To Asilomar Ave	2,470	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
11	5054	45.9	47.3	47.9	2	4	8	17 Mile Dr	Maple St/Sunset Dr To Sinex Ave	589	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
12	12764	57.4	58.7	59.4	10	21	46	Sunset Dr	17 Mile Dr/Maple St To Grove Acre Ave	8,273	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
13	12763	58.7	60.0	60.7	12	26	56	Sunset Dr	Walnut St To 17 Mile Dr/Maple St	11,079	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
14	4531	55.1	56.4	57.1	7	15	32	Asilomar Ave	Pico Ave To Arena Ave	2,182	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
15	4840	52.5	53.8	54.5	5	10	21	Sinex Ave	Dennett St To Crocker Ave	2,639	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
16	11915	52.6	53.9	54.6	5	10	22	Asilomar Ave	Sinex Ave To Pico Ave	1,236	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
17	4824	52.5	53.8	54.5	5	10	21	Sinex Ave	Crocker Ave To Asilomar Ave	2,639	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
18	4830	52.5	53.8	54.5	5	10	21	Sinex Ave	Crocker Ave To Crocker Ave	2,639	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
19	4769	53.0	54.4	55.0	5	11	23	Dennett St	Evergreen Rd To Grove Acre Ave	3,019	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
20	4821	37.5	38.9	39.6	0	1	2	17 Mile Dr	Melrose St To Dennett St/Pine Ave	85	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
21	10924	53.5	54.8	55.5	5	12	25	Dennett St	Grove Acre Ave To 17 Mile Dr/Pine Ave	3,363	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
22	4839	50.0	51.4	52.0	3	7	15	Dennett St	Sinex Ave To Evergreen Rd	1,512	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
23	4394	51.7	53.1	53.7	4	9	19	Asilomar Ave	Jewell Ave To Lighthouse Ave	1,015	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
24	4455	52.0	53.3	54.0	4	9	20	Asilomar Ave	Arena Ave To Jewell Ave	1,076	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
25	10951	47.6	49.0	49.7	2	5	10	Asilomar Ave	Lighthouse Ave To 0	872	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
26	36690	34.4	35.7	36.4	0	1	1	Asilomar Ave	0 To Del Monte Blvd	41	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
27	10943	53.8	55.1	55.8	6	12	26	Asilomar Ave	Lighthouse Ave To Lighthouse Ave	1,620	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
28	12752	65.0	66.4	67.1	32	69	148	Holman Hwy	Syida Dr To Presidio Blvd	15,600	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
29	4648	21.7	23.1	23.7	0	0	0	Ocean View Blvd	Carmel Ave To 12Th St/Monterey Coastal Bike Path	2	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
30	4846	56.9	58.6	59.3	10	21	45	Lighthouse Ave	Monterey Ave To 11Th St	5,080	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
31	4860	56.3	58.0	58.8	9	19	41	Lighthouse Ave	Monterey Ave To 11Th St	4,503	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
32	4952	53.5	54.8	55.5	5	12	25	Pine Ave	14Th St To 15Th St	3,225	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
33	4968	30.2	31.5	32.2	0	0	1	Congress Ave	Junipero Ave To Spruce Ave	16	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
34	4971	59.3	60.6	61.3	13	28	61	Forest Ave	Spruce Ave To Pine Ave	8,301	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
35	5047	53.8	55.1	55.8	6	12	26	Pine Ave	9Th St To 10Th St	3,483	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
36	5097	56.5	58.2	58.9	9	20	42	Lighthouse Ave	Eardley Ave To 1St St	4,661	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
37	10880	56.8	58.5	59.2	10	20	44	Lighthouse Ave	1St St To Eardley Ave	4,961	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
38	11172	59.8	61.1	61.8	14	31	66	Central Ave	11Th St To Carmel Ave	9,404	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
39	11184	60.7	62.0	62.7	16	35	75	Central Ave	Eardley Ave To Dewey St/Lighthouse Ave	11,512	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
40	5445	58.8	60.2	60.8	12	26	57	Forest Ave	Alley To Hillcrest Ave	7,533	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
41	5747	56.1	57.4	58.1	8	17	37	David Ave	Devisadero St To Devisadero St	5,873	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
42	12754	64.8	66.1	66.8	31	66	142	Forest Ave	Holman Hwy To Bishop Ave	14,662	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
43	12760	62.9	64.2	64.9	23	49	106	Forest Ave	Morse Dr To Sunset Dr	18,597	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
44	36725	65.1	66.4	67.1	32	69	149	Forest Ave	Prescott Ln To Forest Hill Blvd	15,311	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
45	12759	65.3	66.6	67.3	33	71	153	Forest Ave	Forest Hill Blvd To David Ave	16,006	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
46	10843	56.4	57.7	58.4	8	18	39	David Ave	Forest Ave To Devisadero St	6,357	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
47	12772	65.8	67.1	67.8	36	77	166	Forest Ave	David Ave To Forest Lodge Rd	18,073	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
48	12771	62.9	64.2	64.9	23	49	106	Forest Ave	Forest Lodge Rd To Morse Dr	18,597	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
49	5343	31.5	32.8	33.5	0	0	1	Congress Ave	Hillcrest Ave To Rosemont Ave	21	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
50	5359	-1.8	-0.4	0.2	0	0	0	Congress Ave	0 To Hillcrest Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
51	12761	59.0	60.3	61.0	13	27	58	Sunset Dr	19Th St To Congress Ave	11,904	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
52	5392	-1.8	-0.4	0.2	0	0	0	Congress Ave	Cedar St/Sunset Dr To Marino Pines Rd	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
53	5615	58.8	60.2	60.8	12	26	57	Forest Ave	Sunset Dr To Beaumont Ave	7,533	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
54	12773	58.7	60.0	60.7	12	26	56	Sunset Dr	Forest Ave To 19Th St	11,064	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
55	5488	58.8	60.2	60.8	12	26	57	Forest Ave	Beaumont Ave To Alley	7,533	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
56	5144	30.2	31.5	32.2	0	0	1	Congress Ave	Sinex Ave To Gibson Ave	16	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
57	5238	33.9	35.2	35.9	0	1	1	Congress Ave	Rosemont Ave To Sinex Ave	37	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
58	5050	30.2	31.5	32.2	0	0	1	Congress Ave	Gibson Ave To Junipero Ave	16	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
59	5982	57.3	58.6	59.3	10	21	45	Prescott Ln	Devisadero St/Seaview Ave To Devisadero St/Prescott Ave	7,978	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
60	12757	64.8	66.1	66.8	31	66	142	Forest Ave	0 To Piedmont Ave/Stuart St	14,702	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
61	12755	64.8	66.1	66.8	31	66	142	Forest Ave	Bishop Ave To 0	14,702	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
62	6032	56.4	57.7	58.4	8	18	39	Prescott Ln	Devisadero St/Seaview Ave To Forest Ave	6,569	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
63	12756	64.2	65.5	66.2	28	60	130	Forest Ave	Piedmont Ave/Stuart St To Prescott Ln	12,897	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
64	5372	58.7	60.1	60.8	12	26	56	Forest Ave	Spazier Ave To Sinex Ave	7,176	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
65	5400	59.1	60.4	61.1	13	27	59	Forest Ave	Hillcrest Ave To Hillcrest Ave	7,970	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
66	5393	58.6	59.9	60.6	12	26	55	Forest Ave	Hillcrest Ave To Spazier Ave	7,176	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
67	5057	59.3	60.6	61.3	13	28	61	Forest Ave	Junipero Ave To Spruce Ave	8,301	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
68	5153	59.3	60.6	61.3	13	28	61	Forest Ave	Gibson Ave To Junipero Ave	8,344	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
69	5236	58.7	60.1	60.7	12	26	56	Forest Ave	Sinex Ave To Gibson Ave	7,364	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
70	4995	54.1	55.4	56.1	6	13	27	Pine Ave	Carmel Ave To 12Th St	3,821	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
71	4967	54.2	55.5	56.2	6	13	28	Pine Ave	13Th St To 14Th St	3,812	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
72	4977	54.2	55.5	56.2	6	13	28	Pine Ave	12Th St To 13Th St	3,830	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
73	5024	53.8	55.1	55.8	6	12	26	Pine Ave	Monterey Ave To 11Th St	3,483	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
74	5010	54.2	55.5	56.2	6	13	28	Pine Ave	11Th St To Carmel Ave	3,809	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
75	5035	53.8	55.1	55.8	6	12	26	Pine Ave	10Th St To Monterey Ave	3,483	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
76	4447	44.7	46.0	46.7	1	3	7	Ocean View Blvd	Moss St To Moss St	431	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
77	4620	49.3	50.6	51.3	3	6	13	Lighthouse Ave	Cypress Ave To Lobos Ave	1,263	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
78	4814	53.0	54.7	55.5	5	12	25	Pine Ave	Park St To Congress Ave	3,245	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
79	4736	44.5	45.8	46.5	1	3	6	Congress Ave	Laurel Ave To Short St	406	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
80	4492	41.1	42.5	43.1	1	2	4	Ocean View Blvd	0 To Neptune Ave	194	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20

81	4541	54.3	55.6	56.3	6	13	28	Lighthouse Ave	Chestnut St To Alder St/Del Monte Blvd	4,025	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
82	4735	52.8	54.5	55.2	5	11	24	Pine Ave	Cedar St To Locust St	3,054	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
83	4691	53.0	54.4	55.1	5	11	23	Pine Ave	Alder St To Melrose St	3,024	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
84	4714	53.0	54.3	55.0	5	11	23	Pine Ave	Walnut St To Chestnut St	2,973	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
85	4705	53.0	54.3	55.0	5	11	23	Pine Ave	Chestnut St To Alder St	2,973	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
86	4724	52.5	53.8	54.5	5	10	22	Pine Ave	Locust St To Walnut St	2,668	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
87	4535	44.9	46.2	46.9	1	3	7	17 Mile Dr	Heacock Ave To Lighthouse Ave	462	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
88	4569	44.7	46.0	46.7	1	3	7	17 Mile Dr	Pico Ave/Short St To Heacock Ave	444	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
89	4534	53.9	55.3	56.0	6	12	27	Lighthouse Ave	Alder St/Del Monte Blvd To Bentley St	3,718	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
90	36750	52.8	54.5	55.2	5	11	24	Lighthouse Ave	0 To 17 Mile Dr	3,075	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
91	4511	53.3	55.0	55.7	6	12	26	Lighthouse Ave	Bentley St To 0	3,429	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
92	4804	29.9	31.6	32.3	0	0	1	Congress Ave	Pine Ave To Laurel Ave	16	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
93	4772	53.7	55.0	55.7	6	12	26	Pine Ave	Wood St To Granite St	3,477	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
94	4744	53.4	54.7	55.4	5	11	25	Pine Ave	Willow St To Cedar St	3,185	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
95	4755	53.2	54.5	55.2	5	11	24	Pine Ave	Granite St To Willow St	3,046	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
96	4794	54.0	55.3	56.0	6	13	27	Pine Ave	Cypress Ave To Lobos Ave	3,638	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
97	4888	30.3	31.7	32.3	0	0	1	Congress Ave	Spruce Ave To Pine Ave	16	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
98	4782	53.8	55.2	55.9	6	12	26	Pine Ave	Lobos Ave To Wood St	3,638	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
99	4805	53.5	54.8	55.5	5	12	25	Pine Ave	Congress Ave To Cypress Ave	3,245	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
100	4553	54.4	55.7	56.4	6	13	29	Lighthouse Ave	Walnut St To Chestnut St	4,025	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
101	4584	54.6	56.3	57.0	7	15	32	Lighthouse Ave	Willow St To Cedar St	4,611	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
102	4564	54.0	55.7	56.4	6	13	29	Lighthouse Ave	Locust St To Walnut St	4,015	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
103	4574	54.0	55.7	56.4	6	13	29	Lighthouse Ave	Cedar St To Locust St	4,015	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
104	4604	49.2	50.9	51.6	3	6	14	Lighthouse Ave	Wood St To Granite St	1,328	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
105	4592	54.8	56.5	57.2	7	15	33	Lighthouse Ave	Pacific Ave To Willow St	4,878	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
106	4598	49.2	50.9	51.6	3	6	14	Lighthouse Ave	Pacific Ave To Granite St	1,328	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
107	4610	49.1	50.8	51.6	3	6	14	Lighthouse Ave	Lobos Ave To Wood St	1,323	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
108	4396	45.0	46.7	47.4	2	3	7	Ocean View Blvd	Siren St To Balboa Ave	512	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
109	4439	43.9	45.2	45.9	1	3	6	Ocean View Blvd	Moss St To Siren St	366	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
110	4352	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Beach St To Esplanade St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
111	4377	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Shell Ave To Beach St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
112	4327	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Esplanade St To Esplanade St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
113	4385	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Balboa Ave To Shell Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
114	4555	44.4	45.8	46.5	1	3	6	Ocean View Blvd	16Th St To 17Th St/Jewell Ave	418	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
115	4649	49.3	50.6	51.3	3	6	13	Lighthouse Ave	Park St To Caledonia Ave/Congress Ave	1,268	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
116	4658	48.7	50.4	51.1	3	6	13	Forest Ave	Central Ave To Park Pl	1,186	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
117	4680	44.4	45.7	46.4	1	3	6	Congress Ave	Short St To Caledonia Ave/Lighthouse Ave	413	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
118	4715	55.1	56.5	57.2	7	15	32	Forest Ave	Lighthouse Ave To Central Ave	3,226	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
119	4733	59.8	61.2	61.8	14	31	66	Lighthouse Ave	Grand Ave To Forest Ave	9,479	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
120	4940	53.0	54.7	55.4	5	12	25	Pine Ave	15Th St To Fountain Ave	3,225	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
121	10960	43.8	45.2	45.8	1	3	6	Ocean View Blvd	17Th St/Jewell Ave To Monterey Coastal Bike Path	351	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
122	11163	55.0	56.3	57.0	7	15	31	Central Ave	16Th St To 17Th St	4,716	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
123	11165	55.0	56.3	57.0	7	15	31	Central Ave	Forest Ave To 16Th St	4,716	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
124	4672	52.8	54.1	54.8	5	10	22	Lighthouse Ave	18Th St To 19Th St	2,836	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
125	4806	60.3	62.0	62.7	16	35	75	Forest Ave	Laurel Ave To Lighthouse Ave	11,015	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
126	4873	54.5	55.8	56.5	6	13	29	Pine Ave	16Th St To 17Th St	4,180	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
127	4844	54.6	55.9	56.6	6	14	30	Pine Ave	18Th St To 19Th St	4,180	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
128	4857	54.6	55.9	56.6	6	14	30	Pine Ave	17Th St To 18Th St	4,180	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
129	4829	54.6	55.9	56.6	6	14	30	Pine Ave	19Th St To Park St	4,189	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
130	4660	51.6	52.9	53.6	4	9	19	Lighthouse Ave	19Th St To Park St	2,106	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
131	4890	60.1	61.8	62.5	16	34	73	Forest Ave	Pine Ave To 0	10,554	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
132	4905	52.2	53.5	54.2	4	10	21	Pine Ave	Grand Ave To Forest Ave	2,498	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
133	36770	60.1	61.4	62.1	15	32	69	Forest Ave	0 To Laurel Ave	9,753	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
134	4891	54.5	55.8	56.5	6	13	29	Pine Ave	Forest Ave To 16Th St	4,180	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
135	4926	53.5	54.8	55.5	5	12	25	Pine Ave	Fountain Ave To Grand Ave	3,225	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
136	4697	55.0	56.3	57.0	7	15	31	Lighthouse Ave	16Th St To 17Th St	4,569	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
137	4716	54.5	56.2	57.0	7	15	31	Lighthouse Ave	Forest Ave To 16Th St	4,569	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
138	4684	54.5	56.2	57.0	7	15	31	Lighthouse Ave	17Th St To 18Th St	4,590	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
139	11160	53.4	55.1	55.8	6	12	26	Central Ave	17Th St/19Th St To Caledonia Ave	3,513	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
140	4635	44.5	45.8	46.5	1	3	6	Caledonia Ave	Congress Ave/Lighthouse Ave To Central Ave/Grove St	418	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
141	4636	49.3	50.6	51.3	3	6	13	Lighthouse Ave	Caledonia Ave/Congress Ave To Cypress Ave	1,263	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
142	11159	53.4	55.1	55.8	6	12	26	Central Ave	Caledonia Ave To Caledonia Ave/Grove St	3,519	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
143	11161	55.0	56.3	57.0	7	15	31	Central Ave	18Th St To 17Th St/19Th St	4,708	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
144	11162	55.0	56.3	57.0	7	15	31	Central Ave	17Th St To 18Th St	4,714	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
145	4788	59.9	61.2	61.9	14	31	67	Lighthouse Ave	14Th St To 15Th St	9,585	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
146	4799	59.8	61.5	62.2	15	33	70	Lighthouse Ave	13Th St To 14Th St	9,863	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
147	11168	60.2	61.9	62.6	16	35	74	Central Ave	14Th St To 15Th St	10,805	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
148	4708	33.7	35.0	35.7	0	1	1	Fountain Ave	15Th St To Central Ave	35	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
149	4748	39.7	41.1	41.8	1	1	3	Fountain Ave	Lighthouse Ave To 15Th St	141	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
150	4768	59.9	61.2	61.9	14	31	67	Lighthouse Ave	15Th St To Fountain Ave	9,581	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
151	11166	58.7	60.4	61.1	13	28	59	Central Ave	Fountain Ave To Grand Ave	7,696	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
152	4749	59.8	61.2	61.8	14	31	66	Lighthouse Ave	Fountain Ave To Grand Ave	9,472	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
153	11164	58.1	59.8	60.6	12	25	54	Central Ave	Grand Ave To Forest Ave	6,756	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
154	11167	59.4	60.8	61.4	13	29	62	Central Ave	15Th St To Fountain Ave	8,672	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
155	4819	57.1	58.4	59.1	9	20	44	Lighthouse Ave	Carmel Ave To 12Th St	5,080	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
156	4837	56.6	58.3	59.0	9	20	43	Lighthouse Ave	Carmel Ave To 12Th St	4,772	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
157	4809	56.9	58.6	59.3	10	21	45	Lighthouse Ave	12Th St To 13Th St	5,080	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
158	4816	56.6	58.3	59.0	9	20	43	Lighthouse Ave	12Th St To 13Th St	4,765	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
159	4835	56.9	58.6	59.3	10	21	45	Lighthouse Ave	11Th St To Carmel Ave	5,080	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
160	4853	56.5	58.3	59.0	9	20	43	Lighthouse Ave	11Th St To Carmel Ave	4,724	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
161	11170	59.5	61.2	62.0	15	31	68	Central Ave	12Th St To 13Th St	9,404	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
162	11171	59.8	61.1	61.8	14	31	66	Central Ave	Carmel Ave To 12Th St	9,404	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
163	11169	60.5	61.8	62.5	16	34	73	Central Ave	13Th St To 14Th St	11,020	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
164	4578	42.0	43.3	44.0	1	2	4	Ocean View Blvd	Fountain Ave/Monterey Coastal Bike Path To Grand Ave/Monterey Coastal Bike Path	237	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
165	4611	33.7	35.0	35.7	0	1	1	Forest Ave	Union St To Bike Trail/Ocean View Blvd	35	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
166	10995	42.0	43.3	44.0	1	2	4	Ocean View Blvd	Grand Ave/Monterey Coastal Bike Path To Bike Trail/Forest Ave	237	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
167	4625	53.1	54.4	55.1	5	11	24	Forest Ave	Park Pl To Union St	3,050	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
168	4559	44.4	45.8	46.5	1	3	6	Ocean View Blvd	Bike Trail/Forest Ave To 16Th St	418	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
169	41380	43.7	45.0	45.7	1	3	6	Ocean View Blvd	Monterey Coastal Bike Path To Mermaid Ave	351	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
170	4517	40.7	42.0	42.7	1	2	3	Ocean View Blvd	Mermaid Ave To 0	174	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20

171	4616	42.0	43.3	44.0	1	2	4	Ocean View Blvd	15Th St To Fountain Ave/Monterey Coastal Bike Path	236	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
172	4637	27.8	29.1	29.8	0	0	0	Ocean View Blvd	13Th St To 14Th St	9	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
173	4627	41.9	43.2	43.9	1	2	4	Ocean View Blvd	14Th St To 15Th St	233	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
174	4639	21.7	23.1	23.7	0	0	0	Ocean View Blvd	12Th St/Monterey Coastal Bike Path To 13Th St	2	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
175	4488	41.1	42.5	43.1	1	2	4	Ocean View Blvd	Neptune Ave To Marine St	194	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
176	4475	41.1	42.5	43.1	1	2	4	Ocean View Blvd	Naiad St To Clyte St	194	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
177	4466	41.1	42.5	43.1	1	2	4	Ocean View Blvd	Clyte St To Moss St	194	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
178	4486	41.1	42.5	43.1	1	2	4	Ocean View Blvd	Marine St To Naiad St	194	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
179	5074	44.2	45.6	46.2	1	3	6	Eardley Ave	Evans Ave To Central Ave	397	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
180	5171	53.7	55.0	55.7	6	12	26	Pine Ave	1St St To 2Nd St	3,507	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
181	5114	54.2	55.5	56.2	6	13	28	Pine Ave	5Th St To 6Th St	3,801	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
182	5200	36.4	37.7	38.4	0	1	2	2Nd St	Alley To Pine Ave	64	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
183	5087	54.1	55.5	56.1	6	13	28	Pine Ave	7Th St To 8Th St	3,874	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
184	5066	53.8	55.1	55.8	6	12	26	Pine Ave	8Th St To 9Th St	3,483	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
185	5099	54.2	55.5	56.2	6	13	28	Pine Ave	6Th St To 7Th St	3,801	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
186	5266	47.7	49.0	49.7	2	5	10	Spruce Ave	2Nd St To Eardley Ave	852	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
187	47116	31.7	33.1	33.7	0	0	1	Spruce Ave	2Nd St To 2Nd St/Eardley Ave	22	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
188	5306	47.6	49.0	49.6	2	5	10	Spruce Ave	Line St/Pine St To 2Nd St	874	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	1	Soft	50	0.5	6
189	47117	36.3	37.6	38.3	0	1	2	2Nd St	Eardley Ave/Spruce Ave To Alley	64	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
190	5140	53.6	54.9	55.6	5	12	26	Pine Ave	3Rd St To 4Th St	3,444	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
191	5125	54.2	55.5	56.2	6	13	28	Pine Ave	4Th St To 5Th St	3,801	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
192	5158	53.7	55.1	55.7	6	12	26	Pine Ave	2Nd St To 3Rd St	3,444	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
193	5161	32.2	33.6	34.2	0	0	1	Eardley Ave	Alley To Laine St/Laurel Ave	24	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
194	5198	32.1	33.4	34.1	0	0	1	Eardley Ave	Pine Ave/Spencer St To Alley	24	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
195	5199	53.7	55.0	55.7	6	12	26	Pine Ave	Eardley Ave/Spencer St To 1St St	3,498	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
196	5109	42.8	44.1	44.8	1	2	5	Eardley Ave	Acacia Ave To Lighthouse Ave	275	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
197	5128	32.1	33.4	34.1	0	0	1	Eardley Ave	Laine St/Laurel Ave To Acacia Ave	24	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
198	5119	56.9	58.2	58.9	9	19	42	Lighthouse Ave	Line St To Eardley Ave	4,780	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
199	10881	56.5	58.2	59.0	9	20	43	Lighthouse Ave	Eardley Ave To Line St	4,720	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
200	10872	43.9	45.6	46.3	1	3	6	Eardley Ave	Lighthouse Ave To Evans Ave	397	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
201	5108	61.9	63.2	63.9	20	42	91	Central Ave	Eardley Ave To Lighthouse Ave	15,310	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
202	4661	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	11Th St To Carmel Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
203	4913	57.0	58.3	59.0	9	20	43	Lighthouse Ave	3Rd St To 4Th St	4,918	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
204	4928	56.5	58.2	58.9	9	20	43	Lighthouse Ave	3Rd St To 4Th St	4,691	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
205	11180	60.6	62.3	63.1	17	37	80	Central Ave	4Th St To 5Th St	12,078	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
206	4681	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	9Th St To 10Th St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
207	4875	57.0	58.3	59.0	9	20	43	Lighthouse Ave	7Th St To 8Th St	4,924	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
208	4892	56.5	58.2	58.9	9	20	43	Lighthouse Ave	7Th St To 8Th St	4,691	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
209	11176	59.8	61.5	62.2	15	33	70	Central Ave	8Th St To 9Th St	10,006	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
210	11178	60.9	62.3	62.9	17	36	79	Central Ave	6Th St To 7Th St	12,246	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
211	4859	56.8	58.1	58.8	9	19	42	Lighthouse Ave	9Th St To 10Th St	4,716	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
212	4866	56.7	58.4	59.2	9	20	44	Lighthouse Ave	8Th St To 9Th St	4,924	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
213	10877	56.3	58.0	58.8	9	19	41	Lighthouse Ave	9Th St To 10Th St	4,498	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
214	4867	56.3	58.0	58.8	9	19	41	Lighthouse Ave	10Th St To Monterey Ave	4,503	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
215	4852	56.7	58.4	59.1	9	20	44	Lighthouse Ave	10Th St To Monterey Ave	4,911	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
216	4883	56.5	58.2	58.9	9	20	43	Lighthouse Ave	8Th St To 9Th St	4,691	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
217	4668	-2.1	-0.4	0.3	0	0	0	Ocean View Blvd	Monterey Ave To 11Th St	0	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
218	11174	59.8	61.1	61.8	14	31	66	Central Ave	10Th St To Monterey Ave	9,404	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
219	11173	59.8	61.1	61.8	14	31	66	Central Ave	Monterey Ave To 11Th St	9,404	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
220	11175	60.1	61.4	62.1	15	32	69	Central Ave	9Th St To 10Th St	10,034	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
221	4678	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	10Th St To Monterey Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
222	4887	57.0	58.3	59.0	9	20	43	Lighthouse Ave	5Th St To 6Th St	4,924	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
223	4901	56.5	58.2	58.9	9	20	43	Lighthouse Ave	5Th St To 6Th St	4,691	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
224	4880	56.7	58.4	59.2	9	20	44	Lighthouse Ave	6Th St To 7Th St	4,924	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
225	4895	56.5	58.2	58.9	9	20	43	Lighthouse Ave	6Th St To 7Th St	4,691	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
226	4897	56.7	58.4	59.2	9	20	44	Lighthouse Ave	4Th St To 5Th St	4,924	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
227	4916	56.5	58.2	58.9	9	20	43	Lighthouse Ave	4Th St To 5Th St	4,691	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
228	11179	60.7	62.4	63.1	17	37	81	Central Ave	5Th St To 6Th St	12,246	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
229	4730	52.7	54.0	54.7	5	10	22	Ocean View Blvd	7Th St To 8Th St	2,788	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
230	11177	60.1	61.4	62.1	15	32	69	Central Ave	7Th St To 8Th St	10,006	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
231	4701	52.7	54.0	54.7	5	10	22	Ocean View Blvd	8Th St To 9Th St	2,788	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
232	4752	45.6	47.0	47.6	2	3	7	Ocean View Blvd	0 To 7Th St	547	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
233	36818	59.0	60.4	61.0	13	27	59	Central Ave	Lighthouse Ave To 1St St	12,023	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
234	45197	-1.8	-0.4	0.2	0	0	0	1St St	Sloat Ave To 2Nd St/Ocean View Blvd	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
235	4958	56.8	58.1	58.8	9	19	41	Lighthouse Ave	1St St To 2Nd St	4,691	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
236	10879	56.7	58.4	59.1	9	20	44	Lighthouse Ave	1St St To 2Nd St	4,896	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
237	11182	60.6	62.3	63.0	17	37	80	Central Ave	2Nd St To 3Rd St/Evans Ave	12,019	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
238	4932	57.0	58.3	59.0	9	20	43	Lighthouse Ave	2Nd St To 3Rd St	4,896	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
239	4943	56.5	58.2	58.9	9	20	43	Lighthouse Ave	2Nd St To 3Rd St	4,691	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
240	11181	60.6	62.3	63.1	17	37	80	Central Ave	3Rd St/Evans Ave To 4Th St	12,083	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
241	11183	60.9	62.2	62.9	17	36	78	Central Ave	2Nd St To 1St St	12,019	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
242	4836	-1.8	-0.4	0.2	0	0	0	1St St	Central Ave To Sloat Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
243	10893	45.6	47.0	47.6	2	3	7	Ocean View Blvd	3Rd St To 4Th St	547	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
244	4757	45.6	47.0	47.6	2	3	7	Ocean View Blvd	0 To 5Th St	547	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
245	4764	45.6	47.0	47.6	2	3	7	Ocean View Blvd	1St St/2Nd St To 3Rd St	547	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
246	11193	60.7	62.0	62.7	16	35	75	Lighthouse Ave	Central Ave/Dewey St To Central Ave	11,512	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
247	11906	-2.1	-0.4	0.4	0	0	0	Ocean View Blvd	Asilomar Ave/Sunset Dr To Acropolis St	0	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
248	10944	-1.8	-0.4	0.2	0	0	0	Asilomar Ave	Surf Ave To Ocean View Blvd/Sunset Dr	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
249	4297	-1.8	-0.4	0.2	0	0	0	Asilomar Ave	Shell Ave To Surf Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
250	11899	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Acropolis St To Coral St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
251	48666	58.0	59.3	60.0	11	23	50	Sunset Dr	Cedar St To 0	9,493	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
252	48667	58.0	59.3	60.0	11	23	50	Sunset Dr	Cedar St/Congress Ave To Cedar St	9,493	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
253	48668	52.9	54.2	54.9	5	11	23	Sunset Dr	0 To Congress Ave	2,899	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
254	48669	51.3	52.6	53.3	4	8	18	Sunset Dr	Congress Ave To Congress Ave	2,003	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
255	48670	58.2	59.5	60.2	11	24	52	Sunset Dr	Congress Ave To Cedar St/Congress Ave	9,901	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
256	48917	59.1	60.4	61.1	13	27	59	Sunset Dr	0 To 0	12,111	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20

Traffic Noise Calculator: FHWA 77-108 **Project: 23-14477 (2031 Plus Project)**

		Output						Inputs															Auto Inputs	
		dBA at 50 feet			Distance to Ldn Contour																			
ID	N_ID	$L_{eq\text{-}24hr}$	L_{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway	Segment	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever	Ground Absorption	Lane Distance
1	4314	-1.8	-0.4	0.2	0	0	0	Asilomar Ave	Del Monte Blvd To Shell Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
2	10945	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Esplanade St To Coral St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
3	4622	44.6	45.9	46.6	1	3	6	17 Mile Dr	Dennett St/Pine Ave To Pico Ave/Short St	429	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
4	4685	53.2	54.6	55.2	5	11	24	Pine Ave	Melrose St To 17 Mile Dr/Dennett St	3,159	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
5	12753	64.9	66.3	67.0	31	68	145	Holman Hwy	Forest Ave To Syida Dr	15,250	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
6	36727	58.9	60.2	60.9	12	27	57	Sunset Dr	0 To Walnut St	11,534	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
7	10921	38.9	40.3	40.9	1	1	3	17 Mile Dr	Melrose St To Sinex Ave	117	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
8	12767	55.7	57.0	57.7	8	16	35	Asilomar Ave	Sinex Ave To Sunset Dr	2,532	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
9	12765	52.3	53.6	54.3	4	10	21	Sunset Dr	Grove Acre Ave To Crocker Ave	2,532	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
10	12766	52.3	53.6	54.3	4	10	21	Sunset Dr	Crocker Ave To Asilomar Ave	2,532	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
11	5054	46.2	47.5	48.2	2	4	8	17 Mile Dr	Maple St/Sunset Dr To Sinex Ave	622	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
12	12764	57.7	59.0	59.7	10	22	48	Sunset Dr	17 Mile Dr/Maple St To Grove Acre Ave	8,752	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
13	12763	58.9	60.2	60.9	12	26	57	Sunset Dr	Walnut St To 17 Mile Dr/Maple St	11,514	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
14	4531	55.1	56.4	57.1	7	15	32	Asilomar Ave	Pico Ave To Arena Ave	2,211	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
15	4840	52.4	53.8	54.4	5	10	21	Sinex Ave	Dennett St To Crocker Ave	2,630	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
16	11915	52.7	54.0	54.7	5	10	22	Asilomar Ave	Sinex Ave To Pico Ave	1,267	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
17	4824	52.4	53.8	54.4	5	10	21	Sinex Ave	Crocker Ave To Asilomar Ave	2,630	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
18	4830	52.4	53.8	54.4	5	10	21	Sinex Ave	Crocker Ave To Crocker Ave	2,630	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
19	4769	53.2	54.5	55.2	5	11	24	Dennett St	Evergreen Rd To Grove Acre Ave	3,146	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
20	4821	37.5	38.9	39.6	0	1	2	17 Mile Dr	Melrose St To Dennett St/Pine Ave	85	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
21	10924	53.7	55.0	55.7	6	12	26	Dennett St	Grove Acre Ave To 17 Mile Dr/Pine Ave	3,503	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
22	4839	50.3	51.6	52.3	3	7	15	Dennett St	Sinex Ave To Evergreen Rd	1,609	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
23	4394	51.8	53.1	53.8	4	9	19	Asilomar Ave	Jewell Ave To Lighthouse Ave	1,034	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
24	4455	52.1	53.4	54.1	4	9	20	Asilomar Ave	Arena Ave To Jewell Ave	1,093	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
25	10951	47.7	49.0	49.7	2	5	10	Asilomar Ave	Lighthouse Ave To 0	874	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
26	36690	34.3	35.7	36.3	0	1	1	Asilomar Ave	0 To Del Monte Blvd	41	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
27	10943	53.8	55.1	55.8	6	12	26	Asilomar Ave	Lighthouse Ave To Lighthouse Ave	1,616	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
28	12752	65.2	66.5	67.2	33	70	151	Holman Hwy	Syida Dr To Presidio Blvd	16,208	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
29	4648	27.6	29.0	29.7	0	0	0	Ocean View Blvd	Carmel Ave To 12Th St/Monterey Coastal Bike Path	9	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
30	4846	57.1	58.8	59.5	10	22	46	Lighthouse Ave	Monterey Ave To 11Th St	5,353	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
31	4860	56.7	58.4	59.1	9	20	44	Lighthouse Ave	Monterey Ave To 11Th St	4,879	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
32	4952	54.0	55.3	56.0	6	13	27	Pine Ave	14Th St To 15Th St	3,635	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
33	4968	34.5	35.8	36.5	0	1	1	Congress Ave	Junipero Ave To Spruce Ave	42	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
34	4971	59.8	61.1	61.8	14	31	66	Forest Ave	Spruce Ave To Pine Ave	9,448	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
35	5047	54.0	55.3	56.0	6	13	27	Pine Ave	9Th St To 10Th St	3,662	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
36	5097	56.8	58.5	59.2	10	21	45	Lighthouse Ave	Eardley Ave To 1St St	5,030	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
37	10880	56.9	58.7	59.4	10	21	45	Lighthouse Ave	1St St To Eardley Ave	5,181	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
38	11172	60.0	61.3	62.0	15	32	68	Central Ave	11Th St To Carmel Ave	9,895	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
39	11184	60.9	62.2	62.9	17	36	78	Central Ave	Eardley Ave To Dewey St/Lighthouse Ave	12,017	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
40	5445	59.3	60.6	61.3	13	28	61	Forest Ave	Alley To Hillcrest Ave	8,430	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
41	5747	56.5	57.8	58.5	9	18	40	David Ave	Devisadero St To Devisadero St	6,508	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
42	12754	64.9	66.3	67.0	31	68	145	Forest Ave	Holman Hwy To Bishop Ave	15,250	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
43	12760	63.1	64.5	65.2	24	51	110	Forest Ave	Morse Dr To Sunset Dr	19,763	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
44	36725	65.3	66.6	67.3	33	71	153	Forest Ave	Prescott Ln To Forest Hill Blvd	15,963	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
45	12759	65.5	66.8	67.5	34	73	158	Forest Ave	Forest Hill Blvd To David Ave	16,790	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
46	10843	56.9	58.3	58.9	9	20	42	David Ave	Forest Ave To Devisadero St	7,186	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
47	12772	66.1	67.4	68.1	37	80	173	Forest Ave	David Ave To Forest Lodge Rd	19,209	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
48	12771	63.1	64.5	65.2	24	51	110	Forest Ave	Forest Lodge Rd To Morse Dr	19,763	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
49	5343	31.2	32.5	33.2	0	0	1	Congress Ave	Hillcrest Ave To Rosemont Ave	20	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
50	5359	-1.8	-0.4	0.2	0	0	0	Congress Ave	0 To Hillcrest Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
51	12761	59.2	60.5	61.2	13	28	60	Sunset Dr	19Th St To Congress Ave	12,433	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
52	5392	-1.8	-0.4	0.2	0	0	0	Congress Ave	Cedar St/Sunset Dr To Marino Pines Rd	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
53	5615	59.3	60.6	61.3	13	28	61	Forest Ave	Sunset Dr To Beaumont Ave	8,430	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
54	12773	58.8	60.1	60.8	12	26	56	Sunset Dr	Forest Ave To 19Th St	11,333	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
55	5488	59.3	60.6	61.3	13	28	61	Forest Ave	Beaumont Ave To Alley	8,430	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
56	5144	34.5	35.8	36.5	0	1	1	Congress Ave	Sinex Ave To Gibson Ave	42	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
57	5238	36.3	37.6	38.3	0	1	2	Congress Ave	Rosemont Ave To Sinex Ave	64	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
58	5050	34.5	35.8	36.5	0	1	1	Congress Ave	Gibson Ave To Junipero Ave	42	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
59	5982	57.6	58.9	59.6	10	22	47	Prescott Ln	Devisadero St/Seaview Ave To Devisadero St/Prescott Ave	8,535	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
60	12757	65.0	66.3	67.0	31	68	146	Forest Ave	0 To Piedmont Ave/Stuart St	15,291	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
61	12755	65.0	66.3	67.0	31	68	146	Forest Ave	Bishop Ave To 0	15,291	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
62	6032	56.6	57.9	58.6	9	19	40	Prescott Ln	Devisadero St/Seaview Ave To Forest Ave	6,825	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
63	12756	64.3	65.6	66.3	28	61	132	Forest Ave	Piedmont Ave/Stuart St To Prescott Ln	13,115	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
64	5372	59.3	60.6	61.3	13	28	61	Forest Ave	Spazier Ave To Sinex Ave	8,096	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
65	5400	59.7	61.0	61.7	14	30	65	Forest Ave	Hillcrest Ave To Hillcrest Ave	9,121	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
66	5393	59.1	60.5	61.2	13	28	60	Forest Ave	Hillcrest Ave To Spazier Ave	8,096	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
67	5057	59.8	61.1	61.8	14	31	66	Forest Ave	Junipero Ave To Spruce Ave	9,448	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
68	5153	59.8	61.2	61.8	14	31	66	Forest Ave	Gibson Ave To Junipero Ave	9,491	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
69	5236	59.3	60.6	61.3	13	28	61	Forest Ave	Sinex Ave To Gibson Ave	8,356	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
70	4995	54.4	55.7	56.4	6	13	29	Pine Ave	Carmel Ave To 12Th St	4,085	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
71	4967	54.5	55.8	56.5	6	14	29	Pine Ave	13Th St To 14Th St	4,076	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
72	4977	54.5	55.8	56.5	6	14	29	Pine Ave	12Th St To 13Th St	4,095	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
73	5024	54.0	55.3	56.0	6	13	27	Pine Ave	Monterey Ave To 11Th St	3,662	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
74	5010	54.5	55.8	56.5	6	14	29	Pine Ave	11Th St To Carmel Ave	4,070	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
75	5035	54.0	55.3	56.0	6	13	27	Pine Ave	10Th St To Monterey Ave	3,662	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
76	4447	44.7	46.0	46.7	1	3	6	Ocean View Blvd	Moss St To Moss St	428	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
77	4620	49.1	50.4	51.1	3	6	13	Lighthouse Ave	Cypress Ave To Lobos Ave	1,206	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
78	4814	53.2	54.9	55.6	5	12	25	Pine Ave	Park St To Congress Ave	3,346	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
79	4736	44.7	46.1	46.8	1	3	7	Congress Ave	Laurel Ave To Short St	435	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
80	4492	41.1	42.4	43.1	1	2	4	Ocean View Blvd	0 To Neptune Ave	194	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
81	4541	54.3	55.6	56.3	6	13	28	Lighthouse Ave	Chestnut St To Alder St/Del Monte Blvd	4,032	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
82	4735	52.9	54.6	55.3	5	11	24	Pine Ave	Cedar St To Locust St	3,156	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
83	4691	53.2	54.6	55.2	5	11	24	Pine Ave	Alder St To Melrose St	3,163	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
84	4714	53.2	54.5	55.2	5	11	24	Pine Ave	Walnut St To Chestnut St	3,109	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
85	4705	53.2	54.5	55.2	5	11	24	Pine Ave	Chestnut St To Alder St	3,112	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20

86	4724	52.7	54.0	54.7	5	10	22	Pine Ave	Locust St To Walnut St	2,770	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
87	4535	44.9	46.2	46.9	1	3	7	17 Mile Dr	Heacock Ave To Lighthouse Ave	464	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
88	4569	44.7	46.1	46.7	1	3	7	17 Mile Dr	Pico Ave/Short St To Heacock Ave	447	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
89	4534	54.0	55.3	56.0	6	12	27	Lighthouse Ave	Alder St/Del Monte Blvd To Bentley St	3,725	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
90	36750	52.8	54.5	55.2	5	11	24	Lighthouse Ave	0 To 17 Mile Dr	3,082	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
91	4511	53.3	55.0	55.7	6	12	26	Lighthouse Ave	Bentley St To 0	3,437	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
92	4804	34.1	35.9	36.6	0	1	1	Congress Ave	Pine Ave To Laurel Ave	42	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
93	4772	53.8	55.1	55.8	6	12	26	Pine Ave	Wood St To Granite St	3,582	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
94	4744	53.6	54.9	55.6	6	12	26	Pine Ave	Willow St To Cedar St	3,346	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
95	4755	53.3	54.7	55.4	5	11	25	Pine Ave	Granite St To Willow St	3,147	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
96	4794	54.1	55.4	56.1	6	13	28	Pine Ave	Cypress Ave To Lobos Ave	3,741	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
97	4888	34.6	35.9	36.6	0	1	1	Congress Ave	Spruce Ave To Pine Ave	42	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
98	4782	54.0	55.3	56.0	6	13	27	Pine Ave	Lobos Ave To Wood St	3,741	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
99	4805	53.6	54.9	55.6	6	12	26	Pine Ave	Congress Ave To Cypress Ave	3,346	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
100	4553	54.4	55.7	56.4	6	13	29	Lighthouse Ave	Walnut St To Chestnut St	4,029	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
101	4584	54.6	56.3	57.0	7	15	32	Lighthouse Ave	Willow St To Cedar St	4,611	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
102	4564	54.0	55.7	56.4	6	13	29	Lighthouse Ave	Locust St To Walnut St	4,022	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
103	4574	54.0	55.7	56.4	6	13	29	Lighthouse Ave	Cedar St To Locust St	4,022	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
104	4604	49.0	50.7	51.4	3	6	13	Lighthouse Ave	Wood St To Granite St	1,272	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
105	4592	54.9	56.6	57.3	7	15	33	Lighthouse Ave	Pacific Ave To Willow St	4,972	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
106	4598	49.0	50.7	51.4	3	6	13	Lighthouse Ave	Pacific Ave To Granite St	1,272	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
107	4610	49.0	50.7	51.4	3	6	13	Lighthouse Ave	Lobos Ave To Wood St	1,267	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
108	4396	45.0	46.7	47.5	2	3	7	Ocean View Blvd	Siren St To Balboa Ave	513	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
109	4439	43.9	45.2	45.9	1	3	6	Ocean View Blvd	Moss St To Siren St	366	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
110	4352	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Beach St To Esplanade St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
111	4377	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Shell Ave To Beach St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
112	4327	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Esplanade St To Esplanade St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
113	4385	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Balboa Ave To Shell Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
114	4555	44.4	45.7	46.4	1	3	6	Ocean View Blvd	16Th St To 17Th St/Jewell Ave	413	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
115	4649	49.1	50.4	51.1	3	6	13	Lighthouse Ave	Park St To Caledonia Ave/Congress Ave	1,211	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
116	4658	48.8	50.5	51.2	3	6	13	Forest Ave	Central Ave To Park Pl	1,211	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
117	4680	44.4	45.8	46.4	1	3	6	Congress Ave	Short St To Caledonia Ave/Lighthouse Ave	417	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
118	4715	55.2	56.5	57.2	7	15	33	Forest Ave	Lighthouse Ave To Central Ave	3,272	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
119	4733	60.1	61.4	62.1	15	32	69	Lighthouse Ave	Grand Ave To Forest Ave	10,021	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
120	4940	53.5	55.2	56.0	6	12	27	Pine Ave	15Th St To Fountain Ave	3,635	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
121	10960	43.8	45.2	45.8	1	3	6	Ocean View Blvd	17Th St/Jewell Ave To Monterey Coastal Bike Path	352	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
122	11163	55.4	56.7	57.4	7	15	33	Central Ave	16Th St To 17Th St	5,146	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
123	11165	55.4	56.7	57.4	7	15	33	Central Ave	Forest Ave To 16Th St	5,146	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
124	4672	53.1	54.4	55.1	5	11	24	Lighthouse Ave	18Th St To 19Th St	3,054	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
125	4806	60.6	62.3	63.0	17	37	79	Forest Ave	Laurel Ave To Lighthouse Ave	11,849	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
126	4873	54.5	55.9	56.6	6	14	29	Pine Ave	16Th St To 17Th St	4,269	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
127	4844	54.7	56.0	56.7	6	14	30	Pine Ave	18Th St To 19Th St	4,269	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
128	4857	54.7	56.0	56.7	6	14	30	Pine Ave	17Th St To 18Th St	4,269	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
129	4829	54.7	56.0	56.7	6	14	30	Pine Ave	19Th St To Park St	4,278	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
130	4660	51.5	52.8	53.5	4	9	18	Lighthouse Ave	19Th St To Park St	2,047	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
131	4890	60.4	62.1	62.8	17	36	77	Forest Ave	Pine Ave To 0	11,417	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
132	4905	52.9	54.2	54.9	5	11	23	Pine Ave	Grand Ave To Forest Ave	2,936	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
133	36770	60.4	61.7	62.4	15	33	72	Forest Ave	0 To Laurel Ave	10,392	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
134	4891	54.5	55.9	56.6	6	14	29	Pine Ave	Forest Ave To 16Th St	4,269	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
135	4926	54.0	55.3	56.0	6	13	27	Pine Ave	Fountain Ave To Grand Ave	3,635	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
136	4697	55.3	56.6	57.3	7	15	33	Lighthouse Ave	16Th St To 17Th St	4,941	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
137	4716	54.9	56.6	57.3	7	15	33	Lighthouse Ave	Forest Ave To 16Th St	4,941	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
138	4684	54.9	56.6	57.3	7	15	33	Lighthouse Ave	17Th St To 18Th St	4,965	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
139	11160	53.4	55.1	55.9	6	12	27	Central Ave	17Th St/19Th St To Caledonia Ave	3,561	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
140	4635	44.5	45.8	46.5	1	3	6	Caledonia Ave	Congress Ave/Lighthouse Ave To Central Ave/Grove St	422	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
141	4636	49.1	50.4	51.1	3	6	13	Lighthouse Ave	Caledonia Ave/Congress Ave To Cypress Ave	1,206	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
142	11159	53.4	55.2	55.9	6	12	27	Central Ave	Caledonia Ave To Caledonia Ave/Grove St	3,566	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
143	11161	55.3	56.7	57.4	7	15	33	Central Ave	18Th St To 17Th St/19Th St	5,137	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
144	11162	55.4	56.7	57.4	7	15	33	Central Ave	17Th St To 18Th St	5,144	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
145	4788	60.1	61.4	62.1	15	32	69	Lighthouse Ave	14Th St To 15Th St	10,076	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
146	4799	60.1	61.8	62.5	16	34	73	Lighthouse Ave	13Th St To 14Th St	10,523	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
147	11168	60.4	62.1	62.8	17	36	77	Central Ave	14Th St To 15Th St	11,272	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
148	4708	34.1	35.4	36.1	0	1	1	Fountain Ave	15Th St To Central Ave	38	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
149	4748	39.9	41.2	41.9	1	1	3	Fountain Ave	Lighthouse Ave To 15Th St	147	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
150	4768	60.1	61.4	62.1	15	32	69	Lighthouse Ave	15Th St To Fountain Ave	10,072	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
151	11166	58.9	60.6	61.4	13	29	62	Central Ave	Fountain Ave To Grand Ave	8,128	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
152	4749	60.0	61.4	62.1	15	32	69	Lighthouse Ave	Fountain Ave To Grand Ave	9,964	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
153	11164	58.4	60.1	60.8	12	26	57	Central Ave	Grand Ave To Forest Ave	7,207	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
154	11167	59.6	61.0	61.7	14	30	64	Central Ave	15Th St To Fountain Ave	9,089	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
155	4819	57.3	58.7	59.4	10	21	45	Lighthouse Ave	Carmel Ave To 12Th St	5,353	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
156	4837	56.9	58.6	59.4	10	21	45	Lighthouse Ave	Carmel Ave To 12Th St	5,159	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
157	4809	57.1	58.8	59.5	10	22	46	Lighthouse Ave	12Th St To 13Th St	5,353	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
158	4816	56.9	58.6	59.4	10	21	45	Lighthouse Ave	12Th St To 13Th St	5,153	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
159	4835	57.1	58.8	59.5	10	22	46	Lighthouse Ave	11Th St To Carmel Ave	5,353	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
160	4853	56.9	58.6	59.3	10	21	45	Lighthouse Ave	11Th St To Carmel Ave	5,111	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
161	11170	59.8	61.5	62.2	15	32	70	Central Ave	12Th St To 13Th St	9,895	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
162	11171	60.0	61.3	62.0	15	32	68	Central Ave	Carmel Ave To 12Th St	9,895	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
163	11169	60.7	62.0	62.7	16	35	75	Central Ave	13Th St To 14Th St	11,481	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
164	4578	42.0	43.3	44.0	1	2	4	Ocean View Blvd	Fountain Ave/Monterey Coastal Bike Path To Grand Ave/Monterey Coastal Bike Path	236	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
165	4611	33.6	34.9	35.6	0	1	1	Forest Ave	Union St To Bike Trail/Ocean View Blvd	34	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
166	10995	42.0	43.3	44.0	1	2	4	Ocean View Blvd	Grand Ave/Monterey Coastal Bike Path To Bike Trail/Forest Ave	236	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
167	4625	53.1	54.4	55.1	5	11	23	Forest Ave	Park Pl To Union St	3,037	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
168	4559	44.4	45.7	46.4	1	3	6	Ocean View Blvd	Bike Trail/Forest Ave To 16Th St	413	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
169	41380	43.7	45.0	45.7	1	3	6	Ocean View Blvd	Monterey Coastal Bike Path To Mermaid Ave	352	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
170	4517	40.7	42.0	42.7	1	2	3	Ocean View Blvd	Mermaid Ave To 0	175	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
171	4616	41.9	43.3	44.0	1	2	4	Ocean View Blvd	15Th St To Fountain Ave/Monterey Coastal Bike Path	235	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
172	4637	30.1	31.4	32.1	0	0	1	Ocean View Blvd	13Th St To 14Th St	15	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
173	4627	41.9	43.2	43.9	1	2	4	Ocean View Blvd	14Th St To 15Th St	232	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
174	4639	27.6	29.0	29.7	0	0	0	Ocean View Blvd	12Th St/Monterey Coastal Bike Path To 13Th St	9	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
175	4488	41.1	42.4	43.1	1	2	4	Ocean View Blvd	Neptune Ave To Marine St	194	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20

176	4475	41.1	42.4	43.1	1	2	4	Ocean View Blvd	Naiad St To Clyte St	194	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
177	4466	41.1	42.4	43.1	1	2	4	Ocean View Blvd	Clyte St To Moss St	194	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
178	4486	41.1	42.4	43.1	1	2	4	Ocean View Blvd	Marine St To Naiad St	194	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
179	5074	44.7	46.0	46.7	1	3	7	Eardley Ave	Evans Ave To Central Ave	444	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
180	5171	53.9	55.2	55.9	6	12	27	Pine Ave	1St St To 2Nd St	3,687	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
181	5114	54.4	55.7	56.4	6	13	29	Pine Ave	5Th St To 6Th St	4,005	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
182	5200	36.5	37.8	38.5	0	1	2	2Nd St	Alley To Pine Ave	64	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
183	5087	54.3	55.7	56.4	6	13	29	Pine Ave	7Th St To 8Th St	4,078	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
184	5066	54.0	55.3	56.0	6	13	27	Pine Ave	8Th St To 9Th St	3,662	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
185	5099	54.4	55.7	56.4	6	13	29	Pine Ave	6Th St To 7Th St	4,005	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
186	5266	48.2	49.5	50.2	2	5	11	Spruce Ave	2Nd St To Eardley Ave	951	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
187	47116	31.8	33.1	33.8	0	0	1	Spruce Ave	2Nd St To 2Nd St/Eardley Ave	23	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
188	5306	48.1	49.4	50.1	2	5	11	Spruce Ave	Line St/Pine St To 2Nd St	974	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	1	Soft	50	0.5	6
189	47117	36.3	37.7	38.3	0	1	2	2Nd St	Eardley Ave/Spruce Ave To Alley	64	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
190	5140	53.8	55.2	55.8	6	12	26	Pine Ave	3Rd St To 4Th St	3,622	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
191	5125	54.4	55.7	56.4	6	13	29	Pine Ave	4Th St To 5Th St	4,005	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
192	5158	54.0	55.3	56.0	6	12	27	Pine Ave	2Nd St To 3Rd St	3,622	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
193	5161	32.3	33.6	34.3	0	0	1	Eardley Ave	Alley To Laine St/Laurel Ave	25	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
194	5198	32.1	33.5	34.1	0	0	1	Eardley Ave	Pine Ave/Spencer St To Alley	25	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
195	5199	53.9	55.2	55.9	6	12	27	Pine Ave	Eardley Ave/Spencer St To 1St St	3,677	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
196	5109	42.7	44.1	44.7	1	2	5	Eardley Ave	Acacia Ave To Lighthouse Ave	274	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
197	5128	32.1	33.5	34.1	0	0	1	Eardley Ave	Laine St/Laurel Ave To Acacia Ave	25	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
198	5119	57.2	58.5	59.2	10	20	44	Lighthouse Ave	Line St To Eardley Ave	5,149	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
199	10881	56.8	58.5	59.2	10	21	44	Lighthouse Ave	Eardley Ave To Line St	4,992	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
200	10872	44.4	46.1	46.8	1	3	7	Eardley Ave	Lighthouse Ave To Evans Ave	444	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
201	5108	62.1	63.4	64.1	20	43	94	Central Ave	Eardley Ave To Lighthouse Ave	15,902	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
202	4661	26.2	27.6	28.2	0	0	0	Ocean View Blvd	11Th St To Carmel Ave	6	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
203	4913	57.2	58.5	59.2	9	20	44	Lighthouse Ave	3Rd St To 4Th St	5,142	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
204	4928	56.8	58.5	59.3	10	21	45	Lighthouse Ave	3Rd St To 4Th St	5,060	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
205	11180	60.8	62.5	63.2	18	38	82	Central Ave	4Th St To 5Th St	12,492	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
206	4681	26.2	27.6	28.2	0	0	0	Ocean View Blvd	9Th St To 10Th St	6	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
207	4875	57.2	58.5	59.2	10	20	44	Lighthouse Ave	7Th St To 8Th St	5,148	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
208	4892	56.8	58.5	59.3	10	21	45	Lighthouse Ave	7Th St To 8Th St	5,060	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
209	11176	60.0	61.7	62.5	16	34	73	Central Ave	8Th St To 9Th St	10,558	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
210	11178	61.1	62.5	63.1	17	38	81	Central Ave	6Th St To 7Th St	12,822	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
211	4859	57.0	58.3	59.0	9	20	43	Lighthouse Ave	9Th St To 10Th St	4,945	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
212	4866	56.9	58.6	59.3	10	21	45	Lighthouse Ave	8Th St To 9Th St	5,148	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
213	10877	56.7	58.4	59.1	9	20	44	Lighthouse Ave	9Th St To 10Th St	4,873	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
214	4867	56.7	58.4	59.1	9	20	44	Lighthouse Ave	10Th St To Monterey Ave	4,879	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
215	4852	56.9	58.6	59.4	10	21	45	Lighthouse Ave	10Th St To Monterey Ave	5,153	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
216	4883	56.8	58.5	59.3	10	21	45	Lighthouse Ave	8Th St To 9Th St	5,060	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
217	4668	25.9	27.6	28.3	0	0	0	Ocean View Blvd	Monterey Ave To 11Th St	6	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
218	11174	60.0	61.3	62.0	15	32	68	Central Ave	10Th St To Monterey Ave	9,895	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
219	11173	60.0	61.3	62.0	15	32	68	Central Ave	Monterey Ave To 11Th St	9,895	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
220	11175	60.3	61.6	62.3	15	33	71	Central Ave	9Th St To 10Th St	10,590	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
221	4678	26.2	27.6	28.2	0	0	0	Ocean View Blvd	10Th St To Monterey Ave	6	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
222	4887	57.2	58.5	59.2	10	20	44	Lighthouse Ave	5Th St To 6Th St	5,148	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
223	4901	56.8	58.5	59.3	10	21	45	Lighthouse Ave	5Th St To 6Th St	5,060	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
224	4880	56.9	58.6	59.3	10	21	45	Lighthouse Ave	6Th St To 7Th St	5,148	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
225	4895	56.8	58.5	59.3	10	21	45	Lighthouse Ave	6Th St To 7Th St	5,060	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
226	4897	56.9	58.6	59.3	10	21	45	Lighthouse Ave	4Th St To 5Th St	5,148	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
227	4916	56.8	58.5	59.3	10	21	45	Lighthouse Ave	4Th St To 5Th St	5,060	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
228	11179	60.9	62.6	63.3	18	39	83	Central Ave	5Th St To 6Th St	12,822	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
229	4730	52.7	54.1	54.7	5	10	22	Ocean View Blvd	7Th St To 8Th St	2,809	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
230	11177	60.3	61.6	62.3	15	33	71	Central Ave	7Th St To 8Th St	10,558	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
231	4701	52.7	54.1	54.7	5	10	22	Ocean View Blvd	8Th St To 9Th St	2,809	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
232	4752	45.6	46.9	47.6	2	3	7	Ocean View Blvd	0 To 7Th St	545	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
233	36818	59.2	60.5	61.2	13	28	60	Central Ave	Lighthouse Ave To 1St St	12,442	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
234	45197	-1.8	-0.4	0.2	0	0	0	1St St	Sloat Ave To 2Nd St/Ocean View Blvd	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
235	4958	57.1	58.4	59.1	9	20	44	Lighthouse Ave	1St St To 2Nd St	5,060	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
236	10879	56.9	58.6	59.3	10	21	45	Lighthouse Ave	1St St To 2Nd St	5,117	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
237	11182	60.8	62.5	63.2	18	38	81	Central Ave	2Nd St To 3Rd St/Evans Ave	12,438	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
238	4932	57.1	58.5	59.2	9	20	44	Lighthouse Ave	2Nd St To 3Rd St	5,117	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
239	4943	56.8	58.5	59.3	10	21	45	Lighthouse Ave	2Nd St To 3Rd St	5,060	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
240	11181	60.8	62.5	63.2	18	38	82	Central Ave	3Rd St/Evans Ave To 4Th St	12,498	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
241	11183	61.0	62.3	63.0	17	37	79	Central Ave	2Nd St To 1St St	12,438	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
242	4836	-1.8	-0.4	0.2	0	0	0	1St St	Central Ave To Sloat Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
243	10893	45.6	46.9	47.6	2	3	7	Ocean View Blvd	3Rd St To 4Th St	545	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
244	4757	45.6	46.9	47.6	2	3	7	Ocean View Blvd	0 To 5Th St	545	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
245	4764	45.6	46.9	47.6	2	3	7	Ocean View Blvd	1St St/2Nd St To 3Rd St	545	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
246	11193	60.9	62.2	62.9	17	36	78	Lighthouse Ave	Central Ave/Dewey St To Central Ave	12,017	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
247	11906	-2.1	-0.4	0.4	0	0	0	Ocean View Blvd	Asilomar Ave/Sunset Dr To Acropolis St	0	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
248	10944	-1.8	-0.4	0.2	0	0	0	Asilomar Ave	Surf Ave To Ocean View Blvd/Sunset Dr	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
249	4297	-1.8	-0.4	0.2	0	0	0	Asilomar Ave	Shell Ave To Surf Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
250	11899	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Acropolis St To Coral St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
251	48666	58.1	59.4	60.1	11	24	51	Sunset Dr	Cedar St To 0	9,692	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
252	48667	58.1	59.4	60.1	11	24	51	Sunset Dr	Cedar St/Congress Ave To Cedar St	9,692	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
253	48668	53.6	54.9	55.6	5	12	25	Sunset Dr	0 To Congress Ave	3,434	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
254	48669	52.0	53.3	54.0	4	9	20	Sunset Dr	Congress Ave To Congress Ave	2,361	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
255	48670	58.3	59.6	60.3	11	24	52	Sunset Dr	Congress Ave To Cedar St/Congress Ave	10,073	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
256	48917	59.3	60.6	61.3	13	28	61	Sunset Dr	0 To 0	12,758	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20

Traffic Noise Calculator: FHWA 77-108 **Project: 23-14477 (Existing)**

		Output						Inputs														Auto Inputs	
		dBA at 50 feet			Distance to Ldn Contour																		
ID	N_ID	$L_{eq\text{-}24hr}$	L_{dn}	CNEL	70 dBA	65 dBA	60 dBA	Roadway	Segment	ADT	Posted Speed Limit	Grade	% Autos	% Med Trucks	% Heavy Trucks	% Daytime	% Evening	% Night	Number of Lanes	Site Condition	Distance to Reciever	Ground Absorption	Lane Distance
1	4314	-1.8	-0.4	0.2	0	0	0	Asilomar Ave	Del Monte Blvd to Shell Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
2	10945	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Esplanade St to Coral St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
3	4622	44.3	45.6	46.3	1	3	6	17 Mile Dr	Dennett St/Pine Ave to Pico Ave/Short St	404	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
4	4685	52.5	53.8	54.5	5	10	21	Pine Ave	Melrose St to 17 Mile Dr/Dennett St	2,642	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
5	12753	64.5	65.8	66.5	29	63	136	Holman Hwy	Forest Ave to Syida Dr	13,814	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
6	36727	59.4	60.7	61.4	13	29	62	Sunset Dr	0 to Walnut St	13,090	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
7	10921	38.6	40.0	40.7	1	1	3	17 Mile Dr	Melrose St to Sinex Ave	110	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
8	12767	55.5	56.8	57.5	7	16	34	Asilomar Ave	Sinex Ave to Sunset Dr	2,403	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
9	12765	52.0	53.4	54.1	4	9	20	Sunset Dr	Grove Acre Ave to Crocker Ave	2,403	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
10	12766	52.0	53.4	54.1	4	9	20	Sunset Dr	Crocker Ave to Asilomar Ave	2,403	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
11	5054	45.8	47.2	47.8	2	4	8	17 Mile Dr	Maple St/Sunset Dr to Sinex Ave	573	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
12	12764	56.5	57.8	58.5	9	18	40	Sunset Dr	17 Mile Dr/Maple St to Grove Acre Ave	6,663	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
13	12763	59.4	60.7	61.4	13	29	62	Sunset Dr	Walnut St to 17 Mile Dr/Maple St	13,081	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
14	4531	54.8	56.1	56.8	7	14	31	Asilomar Ave	Pico Ave to Arena Ave	2,053	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
15	4840	52.2	53.5	54.2	4	9	20	Sinex Ave	Dennett St to Crocker Ave	2,462	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
16	11915	52.4	53.8	54.4	5	10	21	Asilomar Ave	Sinex Ave to Pico Ave	1,192	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
17	4824	52.2	53.5	54.2	4	9	20	Sinex Ave	Crocker Ave to Asilomar Ave	2,462	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
18	4830	52.2	53.5	54.2	4	9	20	Sinex Ave	Crocker Ave to Crocker Ave	2,462	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
19	4769	52.6	53.9	54.6	5	10	22	Dennett St	Evergreen Rd to Grove Acre Ave	2,699	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
20	4821	37.4	38.7	39.4	0	1	2	17 Mile Dr	Melrose St to Dennett St/Pine Ave	82	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
21	10924	53.0	54.3	55.0	5	11	23	Dennett St	Grove Acre Ave to 17 Mile Dr/Pine Ave	2,964	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
22	4839	49.9	51.2	51.9	3	7	14	Dennett St	Sinex Ave to Evergreen Rd	1,457	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
23	4394	51.6	52.9	53.6	4	9	19	Asilomar Ave	Jewell Ave to Lighthouse Ave	973	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
24	4455	51.8	53.1	53.8	4	9	19	Asilomar Ave	Arena Ave to Jewell Ave	1,033	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
25	10951	47.4	48.7	49.4	2	5	10	Asilomar Ave	Lighthouse Ave to 0	815	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
26	36690	34.3	35.7	36.3	0	1	1	Asilomar Ave	0 to Del Monte Blvd	41	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
27	10943	53.3	54.7	55.4	5	11	24	Asilomar Ave	Lighthouse Ave to Lighthouse Ave	1,469	35	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
28	12752	64.8	66.1	66.8	31	66	142	Holman Hwy	Syida Dr to Presidio Blvd	14,744	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
29	4648	21.7	23.0	23.7	0	0	0	Ocean View Blvd	Carmel Ave to 12Th St/Monterey Coastal Bike Path	2	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
30	4846	56.4	58.1	58.9	9	20	42	Lighthouse Ave	Monterey Ave to 11Th St	4,613	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
31	4860	56.2	57.9	58.6	9	19	40	Lighthouse Ave	Monterey Ave to 11Th St	4,328	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
32	4952	51.6	52.9	53.6	4	9	19	Pine Ave	14Th St to 15Th St	2,081	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
33	4968	38.2	39.5	40.2	1	1	2	Congress Ave	Junipero Ave to Spruce Ave	98	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
34	4971	59.0	60.3	61.0	13	27	58	Forest Ave	Spruce Ave to Pine Ave	7,805	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
35	5047	52.2	53.6	54.2	4	10	21	Pine Ave	9Th St to 10Th St	2,428	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
36	5097	56.3	58.0	58.7	9	19	41	Lighthouse Ave	Eardley Ave to 1St St	4,480	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
37	10880	56.3	58.0	58.8	9	19	41	Lighthouse Ave	1St St to Eardley Ave	4,504	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
38	11172	59.4	60.7	61.4	13	29	62	Central Ave	11Th St to Carmel Ave	8,581	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
39	11184	60.2	61.6	62.2	15	33	70	Central Ave	Eardley Ave to Dewey St/Lighthouse Ave	10,386	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
40	5445	58.5	59.8	60.5	12	25	54	Forest Ave	Alley to Hillcrest Ave	7,003	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
41	5747	54.7	56.1	56.7	7	14	30	David Ave	Devisadero St to Devisadero St	4,320	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
42	12754	64.5	65.8	66.5	29	63	136	Forest Ave	Holman Hwy to Bishop Ave	13,814	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
43	12760	62.3	63.6	64.3	21	45	97	Forest Ave	Morse Dr to Sunset Dr	16,212	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
44	36725	64.7	66.0	66.7	30	65	139	Forest Ave	Prescott Ln to Forest Hill Blvd	13,905	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
45	12759	65.0	66.3	67.0	32	68	146	Forest Ave	Forest Hill Blvd to David Ave	14,938	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
46	10843	55.2	56.5	57.2	7	15	33	David Ave	Forest Ave to Devisadero St	4,812	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
47	12772	65.2	66.5	67.2	33	70	152	Forest Ave	David Ave to Forest Lodge Rd	15,752	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
48	12771	62.3	63.6	64.3	21	45	97	Forest Ave	Forest Lodge Rd to Morse Dr	16,212	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
49	5343	41.7	43.0	43.7	1	2	4	Congress Ave	Hillcrest Ave to Rosemont Ave	220	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
50	5359	55.3	56.6	57.3	7	15	33	Congress Ave	0 to Hillcrest Ave	5,099	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
51	12761	57.9	59.2	59.9	11	23	49	Sunset Dr	19Th St to Cedar St/Congress Ave	9,209	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
52	12774	59.7	61.0	61.7	14	30	65	Sunset Dr	Cedar St/Congress Ave to 0	14,046	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
53	5392	55.3	56.6	57.3	7	15	33	Congress Ave	Cedar St/Sunset Dr to Marino Pines Rd	5,099	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
54	5615	58.5	59.8	60.5	12	25	54	Forest Ave	Sunset Dr to Beaumont Ave	7,003	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
55	12773	57.9	59.2	59.9	11	23	49	Sunset Dr	Forest Ave to 19Th St	9,209	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
56	5488	58.5	59.8	60.5	12	25	54	Forest Ave	Beaumont Ave to Alley	7,003	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
57	5144	38.7	40.0	40.7	1	1	3	Congress Ave	Sinex Ave to Gibson Ave	111	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
58	5238	41.2	42.6	43.2	1	2	4	Congress Ave	Rosemont Ave to Sinex Ave	199	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
59	5050	38.2	39.5	40.2	1	1	2	Congress Ave	Gibson Ave to Junipero Ave	98	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
60	5982	56.5	57.8	58.5	9	18	40	Prescott Ln	Devisadero St/Seaview Ave to Devisadero St/Prescott Ave	6,679	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
61	12757	64.5	65.9	66.5	29	63	136	Forest Ave	0 to Piedmont Ave/Stuart St	13,848	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
62	12755	64.5	65.9	66.5	29	63	136	Forest Ave	Bishop Ave to 0	13,848	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
63	6032	55.6	56.9	57.6	7	16	35	Prescott Ln	Devisadero St/Seaview Ave to Forest Ave	5,435	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
64	12756	64.1	65.4	66.1	27	59	127	Forest Ave	Piedmont Ave/Stuart St to Prescott Ln	12,066	40	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
65	5372	58.3	59.6	60.3	11	24	52	Forest Ave	Spazier Ave to Sinex Ave	6,658	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
66	5400	60.7	62.0	62.7	16	35	75	Forest Ave	Hillcrest Ave to Hillcrest Ave	11,516	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
67	5393	58.3	59.6	60.3	11	24	52	Forest Ave	Hillcrest Ave to Spazier Ave	6,658	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
68	5057	59.0	60.3	61.0	13	27	58	Forest Ave	Junipero Ave to Spruce Ave	7,805	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
69	5153	59.0	60.3	61.0	13	27	58	Forest Ave	Gibson Ave to Junipero Ave	7,811	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
70	5236	59.0	60.4	61.0	13	27	59	Forest Ave	Sinex Ave to Gibson Ave	7,904	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
71	4995	52.5	53.9	54.6	5	10	22	Pine Ave	Carmel Ave to 12Th St	2,618	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
72	4967	52.5	53.9	54.5	5	10	22	Pine Ave	13Th St to 14Th St	2,609	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
73	4977	52.6	53.9	54.6	5	10	22	Pine Ave	12Th St to 13Th St	2,627	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
74	5024	52.2	53.6	54.2	4	10	21	Pine Ave	Monterey Ave to 11Th St	2,428	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
75	5010	52.5	53.9	54.5	5	10	22	Pine Ave	11Th St to Carmel Ave	2,608	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
76	5035	52.2	53.6	54.2	4	10	21	Pine Ave	10Th St to Monterey Ave	2,428	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
77	4447	44.6	46.0	46.6	1	3	6	Ocean View Blvd	Moss St to Moss St	436	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
78	4620	47.7	49.4	50.2	2	5	11	Lighthouse Ave	Cypress Ave to Lobos Ave	958	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
79	4814	53.0	54.4	55.1	5	11	23	Pine Ave	Park St to Congress Ave	2,935	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
80	4736	44.9	46.3	46.9	1	3	7	Congress Ave	Laurel Ave to Short St	468	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
81	4492	41.2	42.5	43.2	1	2	4	Ocean View Blvd	0 to Neptune Ave	198	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
82	4541	53.6	55.3	56.0	6	13	27	Lighthouse Ave	Chestnut St to Alder St/Del Monte Blvd	3,694	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
83	4735	52.6	53.9	54.6	5	10	22	Pine Ave	Cedar St to Locust St	2,740	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
84	4691	52.5	53.8	54.5	5	10	21	Pine Ave	Alder St to Melrose St	2,643	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
85	4714	52.4	53.7	54.4	5	10	21	Pine Ave	Walnut St to Chestnut St	2,593	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
86	4705	52.4	53.7	54.4	5	10	21	Pine Ave	Chestnut St to Alder St	2,593	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
87	4724	52.0	53.3	54.0	4	9	20	Pine Ave	Locust St to Walnut St	2,355	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
88	4535	44.7	46.0	46.7	1	3	6	17 Mile Dr	Heacock Ave to Lighthouse Ave	441	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
89	4569	44.5	45.8	46.5	1	3	6	17 Mile Dr	Pico Ave/Short St to Heacock Ave	422	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
90	4534	53.2	54.9	55.7	6	12	26	Lighthouse Ave	Alder St/Del Monte Blvd to Bentley St	3,402	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20

91	36750	52.4	54.1	54.8	5	10	22	Lighthouse Ave	0 to 17 Mile Dr	2,782	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
92	4511	52.9	54.6	55.3	5	11	24	Lighthouse Ave	Bentley St to 0	3,128	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
93	4804	38.2	39.5	40.2	1	1	2	Congress Ave	Pine Ave to Laurel Ave	98	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
94	4772	53.3	54.7	55.3	5	11	24	Pine Ave	Wood St to Granite St	3,139	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
95	4744	52.9	54.3	54.9	5	11	23	Pine Ave	Willow St to Cedar St	2,866	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
96	4755	52.7	54.1	54.7	5	10	22	Pine Ave	Granite St to Willow St	2,732	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
97	4794	53.6	54.9	55.6	5	12	25	Pine Ave	Cypress Ave to Lobos Ave	3,306	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
98	4888	38.2	39.5	40.2	1	1	2	Congress Ave	Spruce Ave to Pine Ave	98	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
99	4782	53.6	54.9	55.6	5	12	25	Pine Ave	Lobos Ave to Wood St	3,306	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
100	4805	53.0	54.4	55.1	5	11	23	Pine Ave	Congress Ave to Cypress Ave	2,935	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
101	4553	53.6	55.3	56.0	6	13	27	Lighthouse Ave	Walnut St to Chestnut St	3,694	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
102	4584	54.2	55.9	56.6	6	14	30	Lighthouse Ave	Willow St to Cedar St	4,233	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
103	4564	53.6	55.3	56.0	6	13	27	Lighthouse Ave	Locust St to Walnut St	3,684	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
104	4574	53.6	55.3	56.0	6	13	27	Lighthouse Ave	Cedar St to Locust St	3,684	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
105	4604	48.0	49.7	50.4	2	5	12	Lighthouse Ave	Wood St to Granite St	1,020	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
106	4592	54.4	56.1	56.9	7	14	31	Lighthouse Ave	Pacific Ave to Willow St	4,476	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
107	4598	48.0	49.7	50.4	2	5	12	Lighthouse Ave	Pacific Ave to Granite St	1,020	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
108	4610	48.0	49.7	50.4	2	5	11	Lighthouse Ave	Lobos Ave to Wood St	1,015	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
109	4396	45.4	46.7	47.4	2	3	7	Ocean View Blvd	Siren St to Balboa Ave	520	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
110	4439	44.0	45.3	46.0	1	3	6	Ocean View Blvd	Moss St to Siren St	374	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
111	4352	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Beach St to Esplanade St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
112	4377	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Shell Ave to Beach St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
113	4327	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Esplanade St to Esplanade St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
114	4385	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Balboa Ave to Shell Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
115	4555	44.5	45.8	46.5	1	3	6	Ocean View Blvd	16Th St to 17Th St/Jewell Ave	419	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
116	4649	47.8	49.5	50.2	2	5	11	Lighthouse Ave	Park St to Caledonia Ave/Congress Ave	963	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
117	4658	48.6	50.0	50.6	3	6	12	Forest Ave	Central Ave to Park Pl	1,097	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
118	4680	44.4	45.7	46.4	1	3	6	Congress Ave	Short St to Caledonia Ave/Lighthouse Ave	411	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
119	4715	54.9	56.3	57.0	7	15	31	Forest Ave	Lighthouse Ave to Central Ave	3,080	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
120	4733	59.4	61.1	61.8	14	31	66	Lighthouse Ave	Grand Ave to Forest Ave	8,952	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
121	4940	51.6	52.9	53.6	4	9	19	Pine Ave	15Th St to Fountain Ave	2,081	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
122	10960	43.8	45.1	45.8	1	3	6	Ocean View Blvd	17Th St/Jewell Ave to Monterey Coastal Bike Path	359	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
123	11163	54.7	56.0	56.7	6	14	30	Central Ave	16Th St to 17Th St	4,401	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
124	11165	54.7	56.0	56.7	6	14	30	Central Ave	Forest Ave to 16Th St	4,401	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
125	4672	51.7	53.4	54.1	4	9	20	Lighthouse Ave	18Th St to 19Th St	2,365	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
126	4806	60.4	61.7	62.4	16	34	72	Forest Ave	Laurel Ave to Lighthouse Ave	10,807	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
127	4873	54.1	55.5	56.2	6	13	28	Pine Ave	16Th St to 17Th St	3,782	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
128	4844	54.1	55.5	56.2	6	13	28	Pine Ave	18Th St to 19Th St	3,782	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
129	4857	54.1	55.5	56.2	6	13	28	Pine Ave	17Th St to 18Th St	3,782	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
130	4829	54.2	55.5	56.2	6	13	28	Pine Ave	19Th St to Park St	3,790	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
131	4660	50.4	52.1	52.8	4	8	17	Lighthouse Ave	19Th St to Park St	1,751	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
132	4890	60.3	61.6	62.3	15	33	71	Forest Ave	Pine Ave to 0	10,574	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
133	4905	50.3	51.6	52.3	3	7	15	Pine Ave	Grand Ave to Forest Ave	1,549	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
134	36770	60.0	61.3	62.0	15	31	68	Forest Ave	0 to Laurel Ave	9,810	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
135	4891	54.1	55.5	56.2	6	13	28	Pine Ave	Forest Ave to 16Th St	3,782	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
136	4926	51.6	52.9	53.6	4	9	19	Pine Ave	Fountain Ave to Grand Ave	2,081	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
137	4697	53.8	55.5	56.2	6	13	28	Lighthouse Ave	16Th St to 17Th St	3,880	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
138	4716	53.8	55.5	56.2	6	13	28	Lighthouse Ave	Forest Ave to 16Th St	3,880	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
139	4684	53.8	55.5	56.3	6	13	28	Lighthouse Ave	17Th St to 18Th St	3,901	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
140	11160	53.6	54.9	55.6	6	12	26	Central Ave	17Th St/19Th St to Caledonia Ave	3,447	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
141	4635	44.4	45.8	46.4	1	3	6	Caledonia Ave	Congress Ave/Lighthouse Ave to Central Ave/Grove St	416	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
142	4636	47.7	49.4	50.2	2	5	11	Lighthouse Ave	Caledonia Ave/Congress Ave to Cypress Ave	958	25	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
143	11159	53.6	54.9	55.6	6	12	26	Central Ave	Caledonia Ave to Caledonia Ave/Grove St	3,452	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
144	11161	54.7	56.0	56.7	6	14	30	Central Ave	18Th St to 17Th St/19Th St	4,392	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
145	11162	54.7	56.0	56.7	6	14	30	Central Ave	17Th St to 18Th St	4,398	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
146	4788	59.4	61.1	61.8	14	31	66	Lighthouse Ave	14Th St to 15Th St	8,965	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
147	4799	59.5	61.2	61.9	14	31	67	Lighthouse Ave	13Th St to 14Th St	9,184	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
148	11168	60.0	61.4	62.0	15	32	68	Central Ave	14Th St to 15Th St	9,928	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
149	4708	33.6	34.9	35.6	0	1	1	Fountain Ave	15Th St to Central Ave	34	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
150	4748	39.4	40.7	41.4	1	1	3	Fountain Ave	Lighthouse Ave to 15Th St	130	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
151	4768	59.4	61.1	61.8	14	31	66	Lighthouse Ave	15Th St to Fountain Ave	8,961	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
152	11166	58.6	60.0	60.6	12	26	55	Central Ave	Fountain Ave to Grand Ave	7,211	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
153	4749	59.3	61.0	61.7	14	30	65	Lighthouse Ave	Fountain Ave to Grand Ave	8,864	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
154	11164	58.1	59.4	60.1	11	24	51	Central Ave	Grand Ave to Forest Ave	6,384	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
155	11167	59.1	60.5	61.1	13	28	60	Central Ave	15Th St to Fountain Ave	8,068	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
156	4819	56.4	58.1	58.9	9	20	42	Lighthouse Ave	Carmel Ave to 12Th St	4,613	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
157	4837	56.4	58.1	58.8	9	19	42	Lighthouse Ave	Carmel Ave to 12Th St	4,560	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
158	4809	56.4	58.1	58.9	9	20	42	Lighthouse Ave	12Th St to 13Th St	4,613	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
159	4816	56.4	58.1	58.8	9	19	42	Lighthouse Ave	12Th St to 13Th St	4,554	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
160	4835	56.4	58.1	58.9	9	20	42	Lighthouse Ave	11Th St to Carmel Ave	4,613	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
161	4853	56.4	58.1	58.8	9	19	42	Lighthouse Ave	11Th St to Carmel Ave	4,525	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
162	11170	59.4	60.7	61.4	13	29	62	Central Ave	12Th St to 13Th St	8,581	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
163	11171	59.4	60.7	61.4	13	29	62	Central Ave	Carmel Ave to 12Th St	8,581	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
164	11169	60.1	61.5	62.1	15	32	69	Central Ave	13Th St to 14Th St	10,153	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
165	4578	42.1	43.4	44.1	1	2	4	Ocean View Blvd	Fountain Ave/Monterey Coastal Bike Path to Grand Ave/Monterey Coastal Bike Path	244	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
166	4611	33.6	35.0	35.6	0	1	1	Forest Ave	Union St to Bike Trail/Ocean View Blvd	35	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
167	10995	42.1	43.4	44.1	1	2	4	Ocean View Blvd	Grand Ave/Monterey Coastal Bike Path to Bike Trail/Forest Ave	244	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
168	4625	52.6	53.9	54.6	5	10	22	Forest Ave	Park Pl to Union St	2,729	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
169	4559	44.5	45.8	46.5	1	3	6	Ocean View Blvd	Bike Trail/Forest Ave to 16Th St	419	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
170	41380	43.8	45.1	45.8	1	3	6	Ocean View Blvd	Monterey Coastal Bike Path to Mermaid Ave	359	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
171	4517	40.7	42.1	42.8	1	2	4	Ocean View Blvd	Mermaid Ave to 0	178	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
172	4616	42.1	43.4	44.1	1	2	4	Ocean View Blvd	15Th St to Fountain Ave/Monterey Coastal Bike Path	243	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
173	4637	27.6	28.9	29.6	0	0	0	Ocean View Blvd	13Th St to 14Th St	9	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
174	4627	42.0	43.4	44.0	1	2	4	Ocean View Blvd	14Th St to 15Th St	240	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
175	4639	21.7	23.0	23.7	0	0	0	Ocean View Blvd	12Th St/Monterey Coastal Bike Path to 13Th St	2	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
176	4488	41.2	42.5	43.2	1	2	4	Ocean View Blvd	Neptune Ave to Marine St	198	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
177	4475	41.2	42.5	43.2	1	2	4	Ocean View Blvd	Naiad St to Clyte St	198	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
178	4466	41.2	42.5	43.2	1	2	4	Ocean View Blvd	Clyte St to Moss St	198	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
179	4486	41.2	42.5	43.2	1	2	4	Ocean View Blvd	Marine St to Naiad St	198	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
180	5074	41.0	42.3	43.0	1	2	4	Eardley Ave	Evans Ave to Central Ave	187	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
181	5171	52.2	53.6	54.3	4	10	21	Pine Ave	1St St to 2nd St	2,440	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
182	5114	52.7	54.0	54.7	5	10	22	Pine Ave	5Th St to 6Th St	2,699	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
183	5200	35.2	36.5	37.2	0	1	2	Alley	2Nd St	49	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
184	5087	52.8	54.1	54.8	5	10	23	Pine Ave	7Th St to 8Th St	2,772	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
185	5066	52.2	53.6	54.2	4	10	21	Pine Ave	8Th St to 9Th St	2,428	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44

186	5099	52.7	54.0	54.7	5	10	22	Pine Ave	6Th St to 7Th St	2,699	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
187	5266	46.3	47.6	48.3	2	4	8	Spruce Ave	2nd St to Eardley Ave	640	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
188	47116	31.0	32.3	33.0	0	0	1	Spruce Ave	2nd St to 2nd St/Eardley Ave	19	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	1	Soft	50	0.5	6
189	5306	46.4	47.8	48.4	2	4	8	Spruce Ave	Line St/Pine St to 2nd St	659	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
190	47117	35.2	36.5	37.2	0	1	2	2Nd St	Eardley Ave/Spruce Ave to Alley	49	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
191	5140	52.2	53.5	54.2	4	9	20	Pine Ave	3Rd St to 4Th St	2,391	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
192	5125	52.7	54.0	54.7	5	10	22	Pine Ave	4Th St to 5Th St	2,699	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
193	5158	52.2	53.5	54.2	4	9	20	Pine Ave	2nd St to 3Rd St	2,391	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
194	5161	32.1	33.4	34.1	0	0	1	Eardley Ave	Alley to Laine St/Laurel Ave	24	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
195	5198	32.1	33.4	34.1	0	0	1	Eardley Ave	Pine Ave/Spencer St to Alley	24	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
196	5199	52.2	53.6	54.3	4	10	21	Pine Ave	Eardley Ave/Spencer St to 1St St	2,444	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	4	Soft	50	0.5	44
197	5109	42.0	43.3	44.0	1	2	4	Eardley Ave	Acacia Ave to Lighthouse Ave	236	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
198	5128	32.1	33.4	34.1	0	0	1	Eardley Ave	Laine St/Laurel Ave to Acacia Ave	24	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
199	5119	56.4	58.1	58.8	9	19	42	Lighthouse Ave	Line St to Eardley Ave	4,581	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
200	10881	56.3	58.0	58.7	9	19	41	Lighthouse Ave	Eardley Ave to Line St	4,451	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
201	10872	41.0	42.3	43.0	1	2	4	Eardley Ave	Lighthouse Ave to Evans Ave	187	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
202	5108	61.4	62.7	63.4	18	39	84	Central Ave	Eardley Ave to Lighthouse Ave	13,501	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
203	4661	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	11Th St to Carmel Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
204	4913	56.3	58.0	58.7	9	19	41	Lighthouse Ave	3Rd St to 4Th St	4,468	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
205	4928	56.3	58.0	58.8	9	19	41	Lighthouse Ave	3Rd St to 4Th St	4,507	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
206	11180	60.5	61.8	62.5	16	34	74	Central Ave	4Th St to 5Th St	11,081	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
207	4681	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	9Th St to 10Th St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
208	4875	56.3	58.0	58.7	9	19	41	Lighthouse Ave	7Th St to 8Th St	4,473	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
209	4892	56.3	58.0	58.8	9	19	41	Lighthouse Ave	7Th St to 8Th St	4,507	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
210	11176	59.6	61.0	61.7	14	30	64	Central Ave	8Th St to 9Th St	9,087	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
211	11178	60.5	61.8	62.5	16	34	74	Central Ave	6Th St to 7Th St	11,081	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
212	4859	56.1	57.8	58.5	9	19	40	Lighthouse Ave	9Th St to 10Th St	4,279	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
213	4866	56.3	58.0	58.7	9	19	41	Lighthouse Ave	8Th St to 9Th St	4,473	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
214	10877	56.2	57.9	58.6	9	19	40	Lighthouse Ave	9Th St to 10Th St	4,323	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
215	4867	56.2	57.9	58.6	9	19	40	Lighthouse Ave	10Th St to Monterey Ave	4,328	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
216	4852	56.3	58.0	58.7	9	19	41	Lighthouse Ave	10Th St to Monterey Ave	4,451	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
217	4883	56.3	58.0	58.8	9	19	41	Lighthouse Ave	8Th St to 9Th St	4,507	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
218	4668	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Monterey Ave to 11Th St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
219	11174	59.4	60.7	61.4	13	29	62	Central Ave	10Th St to Monterey Ave	8,581	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
220	11173	59.4	60.7	61.4	13	29	62	Central Ave	Monterey Ave to 11Th St	8,581	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
221	11175	59.7	61.0	61.7	14	30	65	Central Ave	9Th St to 10Th St	9,112	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
222	4678	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	10Th St to Monterey Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
223	4887	56.3	58.0	58.7	9	19	41	Lighthouse Ave	5Th St to 6Th St	4,473	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
224	4901	56.3	58.0	58.8	9	19	41	Lighthouse Ave	5Th St to 6Th St	4,507	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
225	4880	56.3	58.0	58.7	9	19	41	Lighthouse Ave	6Th St to 7Th St	4,473	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
226	4895	56.3	58.0	58.8	9	19	41	Lighthouse Ave	6Th St to 7Th St	4,507	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
227	4897	56.3	58.0	58.7	9	19	41	Lighthouse Ave	4Th St to 5Th St	4,473	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
228	4916	56.3	58.0	58.8	9	19	41	Lighthouse Ave	4Th St to 5Th St	4,507	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
229	11179	60.5	61.8	62.5	16	34	74	Central Ave	5Th St to 6Th St	11,081	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
230	4730	52.2	53.6	54.3	4	10	21	Ocean View Blvd	7Th St to 8Th St	2,515	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
231	11177	59.6	61.0	61.7	14	30	64	Central Ave	7Th St to 8Th St	9,087	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
232	4701	52.2	53.6	54.3	4	10	21	Ocean View Blvd	8Th St to 9Th St	2,515	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
233	4752	45.4	46.7	47.4	2	3	7	Ocean View Blvd	0 to 7Th St	520	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
234	36818	58.7	60.0	60.7	12	26	55	Central Ave	Lighthouse Ave to 1St St	11,036	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
235	45197	-1.8	-0.4	0.2	0	0	0	1St St	Sloat Ave to 2nd St/Ocean View Blvd	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
236	4958	56.3	58.0	58.8	9	19	41	Lighthouse Ave	1St St to 2nd St	4,507	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
237	10879	56.3	58.0	58.7	9	19	41	Lighthouse Ave	1St St to 2nd St	4,446	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
238	11182	60.5	61.8	62.5	16	34	73	Central Ave	2nd St to 3Rd St/Evans Ave	11,033	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
239	4932	56.3	58.0	58.7	9	19	41	Lighthouse Ave	2nd St to 3Rd St	4,446	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
240	4943	56.3	58.0	58.8	9	19	41	Lighthouse Ave	2nd St to 3Rd St	4,507	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	1	Soft	50	0.5	6
241	11181	60.5	61.8	62.5	16	34	74	Central Ave	3Rd St/Evans Ave to 4Th St	11,087	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
242	11183	60.5	61.8	62.5	16	34	73	Central Ave	2nd St to 1St St	11,033	30	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
243	4836	-1.8	-0.4	0.2	0	0	0	1St St	Central Ave to Sloat Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
244	10893	45.4	46.7	47.4	2	3	7	Ocean View Blvd	3Rd St to 4Th St	520	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
245	4757	45.4	46.7	47.4	2	3	7	Ocean View Blvd	0 to 5Th St	520	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
246	4764	45.4	46.7	47.4	2	3	7	Ocean View Blvd	1St St/2nd St to 3Rd St	520	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
247	11193	60.0	61.7	62.4	16	34	73	Lighthouse Ave	Central Ave/Dewey St to Central Ave	10,386	30	0.0%	97.66%	2.0%	0.31%	82.2%	12.4%	5.3%	2	Soft	50	0.5	20
248	11906	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Asilomar Ave/Sunset Dr to Acropolis St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
249	10944	-1.8	-0.4	0.2	0	0	0	Asilomar Ave	Surf Ave to Ocean View Blvd/Sunset Dr	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
250	4297	-1.8	-0.4	0.2	0	0	0	Asilomar Ave	Shell Ave to Surf Ave	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20
251	11899	-1.8	-0.4	0.2	0	0	0	Ocean View Blvd	Acropolis St to Coral St	0	25	0.0%	97.82%	1.6%	0.60%	85.4%	10.6%	4.0%	2	Soft	50	0.5	20