

**CITY OF ROLLING HILLS ESTATES  
LOS ANGELES COUNTY, CALIFORNIA  
RESOLUTION NO. 2538**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ROLLING HILLS ESTATES, CALIFORNIA, MAKING FINDINGS RELATED TO AND ADOPTING GENERAL PLAN AMENDMENT NO. 230003 TO THE SAFETY ELEMENT AND GENERAL PLAN AMENDMENT NO. 230004 TO THE 2021-2029 HOUSING ELEMENT OF THE ROLLING HILLS ESTATES 2040 GENERAL PLAN, AND DETERMINING THE AMENDMENTS ARE EXEMPT FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT**

The City Council of the City of Rolling Hills Estates resolves as follows:

SECTION 1. Findings. The City Council finds as follows:

- A. The City of Rolling Hills Estates, California ("City") is a municipal corporation and general law city, duly organized under the constitution and laws of the State of California.
- B. California Government Code section 65300 and following requires each city to prepare and adopt a comprehensive, long-term general plan for the physical development of the city.
- C. On April 26, 2022, the City Council held a duly noticed public hearing in-person and by teleconference on the Draft 2040 General Plan, considered all written and oral reports of staff and public testimony on the matter, and such other matters as are reflected in the record and adopted Resolution No. 2497, adopting the Rolling Hills Estates 2040 General Plan, inclusive of the Safety Element and the 2021-2029 Housing Element. Resolution No. 2497 is hereby incorporated by reference and attached as [Exhibit A](#).
- D. The Rolling Hills Estates 2040 General Plan consists of long-term planning policies and standards that will guide future development in the City and does not approve any specific developments, and was therefore appropriately covered by a program-level Environmental Impact Report ("EIR") pursuant to California Environmental Quality Act ("CEQA") and its implementing Guidelines (as set forth in Title 14, California Code of Regulations), specifically Guidelines section 15168.
- E. On April 26, 2022, the City Council held a duly noticed public hearing in person and by teleconference on the Final Environmental Impact Report (FEIR), the proposed Findings of Facts, and a Statement of Overriding Considerations for the 2040 General Plan, and considered all written and oral staff reports and public testimony on the matter, and such other matters as are reflected in the record, and adopted Resolution No. 2496, certifying the Rolling Hills Estates 2040 General Plan Final Environmental Impact Report (SCH# 2021050450), adopting the Findings of Fact and a Statement of Overriding Considerations, and a Mitigation Monitoring and Reporting Program. Resolution No. 2496 is hereby incorporated by reference and attached as [Exhibit B](#).
- F. On October 27, 2020, the City Council held a duly noticed public hearing in-person and by teleconference on the 2020 City of Rancho Palos Verdes and Rolling Hills Estates Multi-Jurisdictional Hazard Mitigation Plan, and adopted Resolution No. 2469, adopting the City of Rolling Hills Estates 2020 Multi-Jurisdictional Hazard Mitigation Plan. Resolution No. 2469 is hereby incorporated by reference and attached as [Exhibit C](#).
- G. On December 6, 2022, the Governor's Office of Emergency Services ("Cal OES") notified the City of Rolling Hills Estates that after reviewing the City's Multi-Jurisdictional Hazard Mitigation Plan, there were minor language revisions that were required in the text of the Safety Element, and specific language that must be adopted by resolution, in order for the City's Multi-Jurisdictional Hazard Mitigation Plan to be in compliance with the provisions of Assembly Bill 2140 (AB-2140). Non-compliance with AB-2140 renders the City of Rolling Hills Estates ineligible to be considered for additional California Disaster Assistant Act (CDAA) funding for certain recovery activities.

H. On April 27, 2022, the adopted 2021-2029 Rolling Hills Estates Housing Element ("Housing Element") was submitted to the California Department of Housing and Community Development ("HCD") for review pursuant to Section 65585(b) of the California Government Code.

I. On June 24, 2022, HCD issued its review of the Housing Element, which stated that the Housing Element satisfactorily addressed most statutory requirements; however, minor revisions would be necessary to receive certification of compliance with the State Housing Element Law (Article 10.6 of the Government Code).

J. City staff worked with HCD staff to address the comments contained in HCD's June 24, 2022 letter and subsequently resubmitted a revised draft of the Housing Element to HCD for its review on September 8, 2022.

K. Rather than issuing a formal response letter, HCD staff conducted a working meeting with City staff to address further minor revisions that were still requested based on HCD's review of the September 8, 2022 resubmittal. City staff again submitted a revised Housing Element, to HCD on October 26, 2022.

L. HCD staff subsequently communicated to City staff that because the revisions were minor, an informal review would be conducted; however, staff received no response from HCD as of early December 2022. Therefore, staff formally re-submitted the revised Housing Element to HCD on December 8, 2022. The revisions do not include any policy changes or programmatic changes, but rather include technical language revisions and clarification. City staff has received informal approval from HCD that the revised Housing Element is compliant with State Housing Element Law (Article 10.6 of the Government Code).

M. On January 12, 2023, the City posted the revised Housing Element on the City's website for public review and distributed it to the stakeholders list, as identified in the Housing Element.

N. The RHE Housing Element utilizes nonvacant sites to meet more than 50 percent of its lower income Regional Housing Needs Assessment (RHNA). Pursuant to State law, a finding must be made that existing uses on nonvacant sites do not constitute an impediment to additional residential development. As a result of obsolescent buildings, design, and market placement, declining uses, low existing floor area ratio, the significant impact of the COVID-19 pandemic and related shifts in the commercial and residential real estate markets and development expectations, and as further evidenced by recent site development inquiries, each as further specified on a site-by-site basis in the 2021-2029 Housing Element, the existing uses on each existing, non-vacant site identified for inclusion within the 2040 General Plan and thereby zoned to accommodate the City's projected lower income housing needs, are likely to be discontinued during the planning period.

O. Based on factors such as proximity to commercial services, parks and amenities; and access to existing public water and sewer systems, and dry utilities, the 2021-2029 Housing Element concludes that the nonvacant sites identified in the sites inventory are suitable for residential development, and that the existing uses on the nonvacant sites do not constitute an impediment to additional residential development during the planning period for the 2021-2029 Housing Element.

SECTION 3. Environmental Review. The City Council exercised its independent judgment and found that the environmental impacts presented by the adoption of the Rolling Hills Estates 2040 General Plan and the 2021-2029 Housing Element were addressed through the Final Environmental Impact Report (SCH No. 2021050450), the Findings of Fact and Statement of Overriding Considerations, and the Mitigation and Monitoring and Reporting Program, as adopted in City Council Resolution No. 2496. The minor amendments to the Safety Element and the 2021-2029 Housing Element would not result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects due to either a change in the project or a change in the circumstances under which the project is undertaken, and there is no information of substantial importance that would otherwise affect the analysis in the certified FEIR, and thus do not trigger the requirements for subsequent review pursuant to Public Resources Code section 21166

and CEQA Guidelines section 15162. Moreover, the amendments to the General Plan adopted by this resolution address minor language revisions and contain no policy or programmatic changes that were not already analyzed in the FEIR for the 2040 Rolling Hills Estates General Plan. The City Council exercises its independent judgment and finds that the enactment of this Resolution is exempt from the California Environmental Quality Act ("CEQA") under the State CEQA Guidelines (Chapter 3 of Title 14 of the California Code of Regulations beginning at Section 15000), specifically: Section 15060(c)(2), because the proposed Resolution will not result in a direct or reasonably foreseeable indirect physical change in the environment; Section 15061(b)(3), because the Resolution is covered by the common sense exemptions (formerly the "general rule") that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Any future development that has the potential to cause a significant effect on the environment will be evaluated through a separate environmental review process in accordance with CEQA. As such, it can be seen with certainty that there is no possibility that the enactment of this Resolution may have a significant adverse effect on the environment.

SECTION 4. Adoption of General Plan Amendment No. 230003 – Safety Element of the Rolling Hills Estates 2040 General Plan.

- A. The City Council finds that the minor language revisions in the Safety Element of the 2040 General Plan are required by and comply with state law, and hereby adopts the revised Safety Element of Rolling Hills Estates 2040 General Plan based on the entirety of the record of proceedings.
- B. The City of Rolling Hills Estates re-adopts the 2020 City of Rancho Palos Verdes and Rolling Hills Estates Multi-Jurisdictional Hazard Mitigation Plan as an official plan.
- C. The City of Rolling Hills Estates adopts and incorporates the 2020 City of Rancho Palos Verdes and Rolling Hills Estates Multi-Jurisdictional Hazard Mitigation Plan by reference into the revised Safety Element of the Rolling Hills Estates 2040 General Plan.
- D. The City of Rolling Hills Estates will submit this resolution to the California Office of Emergency Services and FEMA Region IX officials to enable the Multi-Jurisdictional Hazard Mitigation Plan's final approval in accordance with the requirements of the Disaster Mitigation Act of 2000 and to establish conformance with the requirements of AB-2140.

SECTION 5. Adoption of General Plan Amendment No. 230004 - 2021-2029 Housing Element.

- A. The City Council finds that the revisions to the adopted 2021-2029 Housing Element comply with state law, and address the comments from HCD, and hereby adopts the revised 2021-2029 Housing Element based on the entirety of the record of proceedings, and further directs that the revised 2021-2029 Housing Element be incorporated into the adopted Rolling Hills Estates 2040 General Plan.
- B. The City Council authorizes City staff to make any non-substantive language revisions, such as typos or minor language clarifications, to the Housing Element, administratively, should such revisions be required by HCD prior to certification, so long as the revisions do not include programmatic or policy-related changes. The respective changes would not require review and readoption by the City Council but would be transmitted to the City Council as an informational item on a regular City Council agenda and posted on the City's website for public review.

SECTION 6. Severability. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this resolution is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision will not affect the validity of the remainder of this resolution. The City Council hereby declares that it would have adopted this resolution, and each and every section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof is declared invalid or unconstitutional.

SECTION 7. Record of Proceedings. The City Clerk is directed to certify to the adoption of this Resolution and to keep a copy of same along with such other documents and records of proceedings as may be designated by the Director of Community Development.

PASSED, APPROVED AND ADOPTED on January 24, 2023.

  
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BRITT HUFF, MAYOR

ATTEST:

  
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LAUREN PETTIT, CITY CLERK

I HEREBY CERTIFY that the foregoing Resolution No. 2538 was duly and regularly passed by the City Council of the City of Rolling Hills Estates at a regular meeting thereof held on January 24, 2023 by the following vote:

AYES: BROWN SCHACHTER, HUFF, SCHMITZ, STEGURA, ZERUNYAN

NOES: NONE

ABSENT: NONE

ABSTAIN: NONE

  
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LAUREN PETTIT, CITY CLERK



**CITY OF ROLLING HILLS ESTATES  
LOS ANGELES COUNTY, CALIFORNIA  
RESOLUTION NO. 2497**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ROLLING HILLS ESTATES, CALIFORNIA, ADOPTING THE ROLLING HILLS ESTATES 2040 GENERAL PLAN AND 2021-2029 HOUSING ELEMENT**

The City Council of the City of Rolling Hills Estates resolves as follows:

**SECTION 1. Findings.** The City Council finds as follows:

- A. The City of Rolling Hills Estates, California (“City”) is a municipal corporation, duly organized under the constitution and laws of the State of California.
- B. California Government Code section 65300 and following requires each city to prepare and adopt a comprehensive, long-term general plan for the physical development of the city.
- C. The City’s General Plan was last comprehensively updated in 1992.
- D. In March, 2017, the City initiated a multi-year process to comprehensively update the 1992 General Plan by approving a work plan and schedule, hiring consultants, and conducting public workshops, collectively known as the General Plan Update (“Project” or “2040 General Plan”).
- E. The Project consists of long-term planning policies and standards that will guide future development in the City and does not approve any specific developments, and is therefore appropriately covered by a program-level Environmental Impact Report (“EIR”) pursuant to California Environmental Quality Act (“CEQA”) Guidelines (as set forth in Title 14, California Code of Regulations) Section 15168.
- F. The City Council appointed a General Plan Advisory Committee (“GPAC”) comprised of residents, homeowners association representatives, business leaders, and representatives from various stakeholder groups, to collaborate with city staff and the consultant team throughout development of the General Plan.
- G. The GPAC held a total of 24 public meetings between October 2017 and February 2021 to identify key issues and challenges that Rolling Hills Estates may face over the next 20 years, refine the City’s Land Use Map, and to develop a comprehensive set of goals and policies contained in the General Plan.
- H. On September 30, 2020, the Southern California Association of Governments (“SCAG”) issued a Notice to Proceed to the consulting team to begin work on the Sustainability Element of the Rolling Hills Estates 2040 General Plan, an optional Element that was made possible through a grant award under SCAG’s 2016 Focused Purpose Sustainability Planning Grants program.
- I. The City’s Environmental Advisory Committee (“EAC”) was designated as the primary stakeholder group to collaborate with City staff and the consultant team throughout the development of the Sustainability Element. The EAC held four meetings between December 2020 and April 2021 to identify key issues and challenges that Rolling Hills Estates may face over the next 20 years, and to develop a comprehensive set of goals and policies contained in the Sustainability Element.
- J. The City Council and Planning Commission received periodic briefings from City staff and the consultant team to review input and receive information relevant to the specific topics addressed at the GPAC and EAC meetings, and to provide direction and guidance to staff and the consultant team regarding land use opportunity areas and development of the preferred land use map.

K. In accordance with Government Code section 65302, a comprehensive update to the City's General Plan has been prepared to address the mandatory elements required by state law, and includes an optional element for Sustainability.

L. The 2040 General Plan includes goals, policies, and actions regarding each of these General Plan elements.

M. The 2040 General Plan carries forward some of the major goals of the 1992 General Plan but has been substantially updated to address current local conditions and community priorities.

N. The "Planning Area" for the 2040 General Plan is defined as the entire area with the City's Sphere of Influence ("SOI"), which includes the City limits and the Urban Growth Boundary/Urban Service Area ("UGB/USA").

O. The 2040 General Plan is a citywide document that provides an integrated and internally consistent statement of the official land use policy for the City.

P. Pursuant to Government Code Section 65103(a), the City is required to periodically review, and revise as necessary, the General Plan including the Housing Element.

Q. On March 4, 2021, the Regional Council of the Southern California Association of Governments (SCAG) adopted the 6<sup>th</sup> Cycle Final Regional Housing Needs Allocation (RHNA) Plan.

R. In February 2020, the City of Rolling Hills Estates initiated the process to update its Housing Element for the 6<sup>th</sup> cycle planning period as part of the Project.

S. On March 23, 2021, the City held a duly noticed public workshop by teleconference, whereby all interested persons had the opportunity to appear and comment, on the Housing Element update process, including the Housing Element update requirements, citywide housing needs, and strategies for meeting those needs.

T. On May 20, 2021, the City posted the Draft 2021-2029 Housing Element ("Draft Housing Element") on the City's website for public review.

U. On May 24, 2021, the City held a duly noticed Special Planning Commission meeting by teleconference, whereby all interested persons had the opportunity to appear and comment on the Draft Housing Element. In compliance with Government Code section 65302(c), the Draft Housing Element consists of an identification and analysis of existing and projected housing needs, and a statement of goals, policies, quantified objectives and scheduled programs for the preservation, improvement and development of housing. The Draft Housing Element also identifies adequate sites for housing and makes adequate provision for the existing and projected needs of all economic segments of the community, per Government Code section 65583.

V. On June 8, 2021, the City Council held a duly noticed meeting by teleconference, whereby all interested persons had the opportunity to appear and comment on the Draft Housing Element. The City Council directed staff to transmit the Draft Housing Element to The State Department of Housing and Community Development ("HCD") for review. Upon completion of the Affirmatively Furthering Fair Housing analysis, the Draft Housing Element was transmitted to HCD in July 2021 for a 60-day review period.

W. On September 24, 2021, HCD, after a thorough review of the Draft Housing Element, issued a comment letter, indicating that the Draft Housing Element will comply with the state's Housing Element Law, with amendment, when adopted by the City.

X. The City released the Draft 2040 General Plan in its entirety, in October 2021. The City invited comments by the public from October 22, 2021 through January 10, 2022.

Y. The City sent the Draft 2040 General Plan to affected public entities and agencies in compliance with state law (Government Code sections 65302(g)(7), 65302.5, 65302.7, 65352, 65352(a)(9) and Public Utilities Code Section 21676), and in accordance with Government Code Section 65352.2, contacted California Native American tribes that are on the contact list maintained by the Native America Heritage Commission to invite those tribes to consult on the proposed Draft 2040 General Plan.

Z. On November 9, 2021, the City Council and Planning Commission held a duly noticed joint special meeting to review the Draft 2040 General Plan, take public comment and testimony, and provide input on the respective documents.

AA. The City has received comments on the Draft 2040 General Plan.

BB. The comments on the Draft 2040 General Plan received from the public were presented and revisions proposed for the Planning Commission's consideration in the January 10, 2022 Planning Commission staff report and recommended for incorporation into the document presented.

CC. On December 6, 2021, and January 10, 2022, the Planning Commission held a duly noticed public hearing by teleconference on the Draft 2040 General Plan, considered all written and oral reports of staff and public testimony on the matter, and such other matters as are reflected in the record.

DD. On January 10, 2022, the Planning Commission adopted Resolution No. PA-210363, which recommends that the City Council adopt the 2040 General Plan. The Planning Commission also considered HCD's findings on the Draft Housing Element as part of the Project and recommended revising the Draft Housing Element in response to the findings of HCD (as revised, 2021-2029 Housing Element).

EE. On January 26, 2022, the City Council held a duly noticed public hearing by teleconference on the Draft 2040 General Plan, considered all written and oral reports of staff and public testimony on the matter, and such other matters as are reflected in the record, and directed staff to schedule two duly noticed public workshops, to review the chapters of the Draft 2040 General Plan in detail.

FF. On March 8, 2022, and March 15, 2022, the City Council held two duly noticed public workshops, focused on the individual elements of the Draft 2040 General Plan, considered all written and oral reports of staff and public testimony on the matter, and such other matters as are reflected in the record, and directed staff to implement minor changes to the document.

GG. On April 7, 2022, a redlined copy of the Draft 2040 General Plan that reflected the changes to the document as a result of the workshops was posted on the City's website for public review and distributed to the City Council.

HH. On April 12, 2022, the City Council held a duly noticed public meeting, considered the redlined changes to the Draft 2040 General Plan, received and filed all written and oral reports of staff and public testimony, and such other matters as are reflected in the record.

II. On April 26, 2022, the City Council held a duly noticed public hearing in-person and by teleconference on the Draft 2040 General Plan, considered all written and oral reports of staff and public testimony on the matter, and such other matters as are reflected in the record.

JJ. The 2021-2029 Housing Element meets all applicable requirements of state law. As result of obsolescent buildings, design, and market placement, declining uses, low existing floor area ratio, the significant impact of the COVID-19 pandemic and related shifts in the commercial and residential real estate markets and development expectations, and as further evidenced by recent site development inquiries, each as further specified on a site-by-site basis in the 2021-2029 Housing Element, that the existing uses on each existing, non-vacant site identified for inclusion within the 2040 General Plan, and thereby zoned to accommodate the City's needed lower income housing needs, are likely to be discontinued during the planning period, and thereby the fact that these sites are not currently vacant is not an impediment to additional residential development during the planning period for the 2021-2029 Housing Element.



KK. Based on factors such as proximity to commercial services, parks and amenities; and access to existing public water and sewer systems, and dry utilities, the 2021-2029 Housing Element concludes that the nonvacant sites identified in the sites inventory are suitable for residential development, and that the existing uses on the nonvacant sites do not constitute an impediment to additional residential development during the planning period.

SECTION 3. Environmental Review. The City Council has exercised its independent judgment and has found that the environmental impacts presented by the adoption of the 2040 General Plan and the 2021-2029 Housing Element have been addressed through the Final Environmental Impact Report (SCH No. 2021050450), the Findings of Fact and Statement of Overriding Considerations, and the Mitigation and Monitoring and Reporting Program, as adopted in City Council Resolution No. 2496.


SECTION 4. Adoption of the Rolling Hills Estates 2040 General Plan. The City Council finds that the 2040 General Plan complies with state law, and hereby adopts the Rolling Hills Estates 2040 General Plan based on the entirety of the record of proceedings.

SECTION 5. Adoption of the 2021-2029 Housing Element. The City Council finds that the 2021-2029 Housing Element complies with state law, and addresses the comments from HCD, and hereby adopts the 2021-2029 Housing Element based on the entirety of the record of proceedings, and further directs that the 2021-2029 Housing Element be incorporated into the adopted 2040 General Plan.

SECTION 6. Severability. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this resolution is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision will not affect the validity of the remainder of this resolution. The City Council hereby declares that it would have adopted this resolution, and each and every section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof is declared invalid or unconstitutional.

SECTION 7. Record of Proceedings. The City Clerk is directed to certify to the adoption of this Resolution and to keep a copy of same along with such other documents and records of proceedings as may be designated by the Director of Community Development.

PASSED, APPROVED AND ADOPTED on April 26, 2022.

  
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FRANK V. ZERUNYAN, MAYOR

ATTEST:

  
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LAUREN PETTIT, CITY CLERK

I HEREBY CERTIFY that the foregoing Resolution No. 2497 was duly and regularly passed by the City Council of the City of Rolling Hills Estates at a regular meeting thereof held on April 26, 2022 by the following vote:

AYES: HUFF, SCHMITZ, STEGURA, ZERUNYAN, ZUCKERMAN

NOES: NONE

ABSENT: NONE

ABSTAIN: NONE



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LAUREN PETTIT, CITY CLERK

EXHIBIT B

CITY OF ROLLING HILLS ESTATES

LOS ANGELES COUNTY, CALIFORNIA

RESOLUTION NO. 2496

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ROLLING HILLS ESTATES, CALIFORNIA, CERTIFYING THE ROLLING HILLS ESTATES 2040 GENERAL PLAN FINAL ENVIRONMENTAL IMPACT REPORT (SCH# 2021050450), ADOPTING THE FINDINGS OF FACT AND A STATEMENT OF OVERRIDING CONSIDERATIONS, AND A MITIGATION MONITORING AND REPORTING PROGRAM**

The City Council of the City of Rolling Hills Estates resolves as follows:

SECTION 1. General Findings. The City Council finds as follows:

A. The City of Rolling Hills Estates, California ("City") is a municipal corporation, duly organized under the constitution and laws of the State of California.

B. California Government Code section 65300 and following requires each city to prepare and adopt a comprehensive, long-term general plan for the physical development of the city.

C. In March, 2017, the City initiated a multi-year process to comprehensively update the 1992 General Plan by approving a work plan and schedule, hiring consultants, and conducting public workshops, collectively known as the General Plan Update ("Project" or "2040 General Plan").

D. The Project consists of long-term planning policies and standards that will guide future development in the City and does not approve any specific developments, and is therefore appropriately covered by a program-level Environmental Impact Report ("EIR") pursuant to Section 15168 of the California Environmental Quality Act ("CEQA") Guidelines (as set forth in Title 14, California Code of Regulations).

E. In accordance with Section 15082 of the CEQA Guidelines, the City released a Notice of Preparation ("NOP") for the Project to the Office of Planning and Research ("OPR") State Clearinghouse and interested agencies and persons on May 21, 2021 for a 30-day review period, during which interested agencies and the public could submit comments about the Project. On June 3, 2021, the City held a scoping meeting via teleconference, serving as a public forum to discuss the environmental issues identified for the EIR and any other issues identified by the public that should be included for further analysis within the EIR for the proposed Project. The public comment period for the NOP and Initial Study began on May 21, 2021 and ended on June 21, 2021. Comments on the NOP were received and considered during preparation of the Draft EIR.

F. Pursuant to CEQA Guidelines Section 15087(a), a Notice of Availability ("NOA") was issued on October 22, 2021, and the Draft EIR for the Project was available for public review for a 45-day period, through December 6, 2021.

G. On November 9, 2021, the City Council and Planning Commission held a duly noticed joint special meeting to review the Draft EIR, take public comment and testimony, and provide input on the Draft EIR.

H. The City sent the Draft 2040 General Plan to affected public entities and agencies in compliance with state law (Government Code sections 65302(g)(7), 65302.5, 65302.7, 65352, 65352(a)(9) and Public Utilities Code section 21676, and in accordance with Government Code sections 65352.2 contacted California Native American tribes that are on the contact list maintained by the Native America Heritage Commission to invite those tribes to consult on the proposed Draft 2040 General Plan.

I. The City released the Public Review Draft 2021-2029 Housing Element in July 2021 and released the Public Review Draft 2040 General Plan, in its entirety in October 2021 and invited comments by the public from October 22, 2021 through January 10, 2022.

J. On December 6, 2021 the City's Planning Commission held a duly noticed public hearing by teleconference on the Draft EIR and the Draft 2040 General Plan, considered all written and oral reports of staff and public testimony on the matter, and such other matters are reflected in the record of this matter and continued the public hearing to January 10, 2022.

K. The comments on the Draft EIR have been considered and analyzed, the comments and responses to comments on the Draft EIR have been incorporated in the Final EIR ("FEIR") in



accordance with CEQA and the CEQA Guidelines.

L. On January 7, 2022, the City published the FEIR.

M. The comments on the Draft 2040 General Plan received from the public were presented and revisions proposed, for the Planning Commission's consideration as described in the January 10, 2022 Planning Commission staff report and recommended for incorporation into the document presented.

N. All required public notices and public hearings were duly given and held according to law. After notice having been lawfully given, a duly noticed public hearing was held before the Planning Commission on January 10, 2022, by teleconference, at which all persons interested had the opportunity to appear and comment and at which the Planning Commission considered and made recommendations to the City Council regarding the FEIR and the merits of the Project.

O. On January 10, 2022, after closing the public hearing, the Planning Commission, acting on its independent judgement and analysis, voted affirmatively to recommend certification of the FEIR (SCH # 2021050450) by the City Council pursuant to CEQA, and adopt the 2040 General Plan, by adopting Resolution No. PA-210363.

P. On January 25, 2022, the City Council held a duly noticed public hearing by teleconference on the FEIR, the proposed Findings of Facts, and a Statement of Overriding Considerations for the Project, and considered all written and oral staff reports and public testimony on the matter, and such other matters as are reflected in the record.

Q. On March 8, 2022, and March 15, 2022, the City Council held duly noticed public workshops to discuss in detail the Draft 2040 General Plan and directed staff to make minor changes in several chapters of the document. The changes did not constitute significant new information or otherwise affect the analysis in the FEIR, and thus did not trigger the need to recirculate the document under Public Resources Code section 21092.1 and CEQA Guidelines section 15088.5.

R. On April 26, 2022, the City Council held a duly noticed public hearing in person and by teleconference on the FEIR, the proposed Findings of Facts, and a Statement of Overriding Considerations for the Project, and considered all written and oral staff reports and public testimony on the matter, and such other matters as are reflected in the record.

SECTION 2. CEQA Findings. The City Council finds as follows:

A. Pursuant to CEQA Guidelines section 15132, the FEIR includes the Draft EIR (SCH No. 2021050450) dated October 2021, the Draft EIR Appendices, and the document entitled "Final EIR" dated April 2022, including all related appendices and attachments.

B. The environmental impacts identified in the Draft EIR that the Council finds are of no impact or constitute a less than significant impact and do not require mitigation are described in the Findings of Fact attached as Exhibit A.

C. The environmental impacts identified in the Draft EIR as potentially significant but which the City finds cannot be mitigated to a level of less than significant, despite the imposition of feasible mitigation measures identified in the Draft EIR are described in the Findings of Fact.

D. The significant and irreversible environmental changes that would result from the proposed Project, but would be largely mitigated, are described in the Findings of Fact.

E. The environmental impacts identified in the Draft EIR as potentially significant but which the City finds cannot be mitigated to a level of less than significant, despite the imposition of feasible mitigation measures identified in the FEIR are also described in the Findings of Fact.

F. The existence of any growth-inducing impacts resulting from the proposed Project identified in the EIR are described in the Findings of Fact.

G. Alternatives to the proposed Project that might eliminate or reduce significant environmental impacts are described in the Findings of Fact.

H. Certain potential significant impacts identified in the FEIR cannot be lessened to a level of less than significant; therefore, approval of the Project must include a Statement of Overriding Considerations as set forth in the attached Exhibit A.

I. The City Council specifically finds that where more than one reason for approving the Project and rejecting alternatives is given in its findings or in the record, and where more than

one reason is given for adopting the Statement of Overriding Considerations it would have made its decision on the basis of any one of those reasons.

J. The Mitigation Monitoring and Reporting Program (“MMRP”) set forth in Exhibit B to this Resolution, has been prepared to ensure that all mitigation measures described in the MMRP are fully implemented. The City Council finds all of the mitigation measures proposed in the MMRP are feasible.

K. Prior to taking action, the City Council has heard, been presented with, reviewed and considered all of the information and data in the administrative record, including the FEIR, and all oral and written evidence presented to it during all meetings and hearings.

L. All the requirements of CEQA and the State CEQA Guidelines have all been satisfied by the City in the Draft EIR and FEIR, which is sufficiently detailed so that all of the potentially significant environmental effects of the proposed Project have been adequately evaluated.

M. Pursuant to Public Resources Code section 21082.1(c)(3), the City Council finds that the FEIR reflects the City’s independent judgment as the lead agency for the Project and is supported by substantial evidence.

N. The City has not received any comments or additional information that would constitute substantial new information requiring recirculation of the FEIR under Public Resources Code section 21092.1 and CEQA Guidelines section 15088.5.

SECTION 3. Adoption of the Findings of Fact and Statement of Overriding Considerations, and the Mitigation Monitoring and Reporting Program.

A. The City Council, in its independent judgment, based on the whole of the administrative record, adopts all of the findings in the Findings of Fact set forth in Exhibit A to this Resolution. In adopting the Findings of Fact, the City Council ratifies, adopts, and incorporates the analysis and explanation in the FEIR, and ratifies, adopts, and incorporates in these findings the determinations and conclusions in the FEIR relating to the environmental impacts and mitigation measures.

B. The City Council adopts the Statement of Overriding Considerations attached as Exhibit A to this Resolution. The City Council finds that each Project benefit identified in the Statement of Overriding Considerations provides a separate and independent ground for its approval of the Project and overrides all of the identified significant and unavoidable impacts of the Project.

C. The City Council adopts the Mitigation Monitoring and Reporting Program (“MMRP”) attached as Exhibit B to this Resolution. The City Council finds all of the mitigation measures in the MMRP are feasible and that adoption of the MMRP will ensure that all mitigation measures described in the MMRP are fully implemented.

SECTION 4. EIR Certification. The City Council has independently reviewed and analyzed the facts and findings set forth in this Resolution, the FEIR, and the entirety of the record of the proceedings. Based upon the foregoing, the City Council exercises its independent judgment and finds that this FEIR complies with CEQA and hereby certifies the FEIR.

SECTION 5. Notice of Determination. The Director of Community Development is directed to cause to be filed a Notice of Determination as required by CEQA and the CEQA Guidelines.

SECTION 6. Severability. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this resolution is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision will not affect the validity of the remainder of this resolution. The City Council hereby declares that it would have adopted this resolution, and each and every section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof is declared invalid or unconstitutional.

SECTION 7. Record of Proceedings. The City Clerk is directed to certify to the adoption of this Resolution and to keep a copy of same along with such other documents and records of proceedings as may be designated by the Director of Community Development.

PASSED, APPROVED, CERTIFIED, AND ADOPTED on April 26, 2022.

  
FRANK V. ZERUNYAN, MAYOR

ATTEST:



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LAUREN PETTIT, CITY CLERK

I HEREBY CERTIFY that the foregoing Resolution No. 2496 was duly and regularly passed by the City Council of the City of Rolling Hills Estates at a regular meeting thereof held on April 26, 2022 by the following vote:

AYES: HUFF, SCHMITZ, STEGURA, ZERUNYAN, ZUCKERMAN

NOES: NONE

ABSENT: NONE

ABSTAIN: NONE



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LAUREN PETTIT, CITY CLERK

# CITY OF ROLLING HILLS ESTATES

## GENERAL PLAN UPDATE

PROGRAM ENVIRONMENTAL IMPACT REPORT  
SCH No. 2021050450

FINDINGS OF FACT/STATEMENT OF OVERRIDING CONSIDERATIONS

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**CITY OF ROLLING HILLS ESTATES**  
COMMUNITY DEVELOPMENT DEPARTMENT  
4045 PALOS VERDES DRIVE NORTH  
ROLLING HILLS ESTATES, CA 90274

*Prepared by:*

**Michael Baker**  
**INTERNATIONAL**

3760 KILROY AIRPORT WAY, SUITE 270  
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**APRIL 2022**





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## **1.1 ORGANIZATION OF CEQA FINDINGS OF FACT**

The Final Program Environmental Impact Report (PEIR) for the proposed Rolling Hills Estates General Plan Update (proposed GPU) identified potential significant environmental impacts that would result from the implementation of the proposed GPU. However, the City of Rolling Hills Estates (City) finds that the inclusion of certain mitigation measures, as part of project approval, would reduce most potentially significant impacts to a less-than-significant level. Those impacts that are not reduced to a less-than-significant level are identified and overridden due to specific economic, legal, social, technological, or other feasibility considerations. As required by the California Environmental Quality Act (CEQA), the City, in adopting these Findings of Fact and Statement of Overriding Considerations (findings), also adopts a Mitigation Monitoring and Reporting Program (MMRP) for the proposed GPU. The City finds that the MMRP, which is incorporated by reference and made a part of these findings, meets the requirements of Public Resources Code (PRC) Section 21081.6 by providing for the implementation and monitoring of measures intended to mitigate potentially significant effects of the proposed GPU. In accordance with CEQA and the CEQA Guidelines, the City adopts these findings as part of the certification of the Final PEIR for the proposed GPU. Pursuant to PRC Section 21082.1(c)(3), the City Council also finds that the Final PEIR reflects the City's independent judgment as the Lead Agency for the proposed GPU.

The content and format of these Findings of Fact are designed to meet the requirements of CEQA and the CEQA Guidelines.<sup>1,2</sup> The Findings of Fact is organized into the following chapters:

- **Chapter 1: Introduction**—This chapter outlines the organization of this document and identifies the location and custodian of the record of proceedings.
- **Chapter 2: Environmental Setting and Project Description**—This chapter describes the location and characteristics of the Planning Area, proposed GPU overview, proposed objectives, vision, and guiding principles of the proposed GPU, and the required discretionary approvals related to the proposed GPU.
- **Chapter 3: CEQA Review and Public Participation**—This chapter describes the steps the City has undertaken to comply with the CEQA and the CEQA Guidelines as they relate to public input, review, and participation during the preparation of the Draft and Final PEIRs.
- **Chapter 4: No Environmental Effects and Less-Than-Significant Environmental Effects without Mitigation Measures**—This chapter presents a summary of those environmental issue areas where no impacts or less-than-significant impacts would occur and a corresponding finding adopting the Initial Study and PEIR's conclusions of no impact or less-than-significant impacts.
- **Chapter 5: Less-Than-Significant Environmental Effects with Mitigation Incorporated**—This chapter presents a summary of potentially significant environmental effects for which implementation of identified feasible mitigation measures would avoid or substantially reduce the environmental effects to less-than-significant levels and provides a corresponding finding for each effect.
- **Chapter 6: Significant and Unavoidable Environmental Effects**—This chapter presents a summary of significant and unavoidable effects for which there are no known feasible

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<sup>1</sup> Public Resources Code (PRC), §§ 21000 et seq., 2019.

<sup>2</sup> CEQA Guidelines, CCR, Title 14, Division 6, Chapter 3, §§ 15000 et seq., 2019.

## 1.0 INTRODUCTION

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mitigation measures that would avoid or substantially reduce the environmental effects to less-than-significant levels and provides a corresponding finding for each effect.

- **Chapter 7: Findings Regarding Project Alternatives**—This chapter presents a summary of the alternatives considered for the proposed GPU.
- **Chapter 8: Findings Regarding Changes to the Draft PEIR and Recirculation**—This chapter presents a summary of the changes to the Draft PEIR in response to public comments received and finding that changes to the Draft PEIR did not require recirculation for public review.
- **Chapter 9: Findings Regarding Certification of the Final PEIR**—This chapter presents the City Council's findings and independent judgment of the City to adequately assess the environmental impacts resulting from implementation of the proposed GPU for certification of the PEIR.
- **Chapter 10: Statement of Overriding Considerations**—This chapter presents a summary of all of the significant unavoidable adverse impacts associated with the implementation of the proposed GPU. In addition, this chapter identifies the proposed GPU's substantial benefits that outweigh and override the proposed GPU's significant unavoidable impacts, such that the impacts are considered acceptable.

### 1.2 STATUTORY REQUIREMENTS

CEQA (PRC Sections 21081 *et seq.*), and particularly the CEQA Guidelines (Sections 15091 *et seq.*), require that:

- (a) *No public agency shall approve or carry out a project for which a [PEIR] has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:*
1. *Changes or alterations have been required in, or incorporated into, the project, which avoid or substantially lessen the significant environmental effect as identified in the final [PEIR].*
  2. *Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.*
  3. *Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final [PEIR].*

In short, pursuant to CEQA Guidelines Sections 15091(a) and (b), CEQA requires that the lead agency adopt mitigation measures or alternatives, where feasible, to avoid or mitigate significant environmental impacts that would otherwise occur with implementation of a proposed project. Project mitigation or alternatives are not required, however, where they are infeasible or where the responsibility for modifying a proposed project lies with another agency.

**1.0 INTRODUCTION**

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Pursuant to PRC Section 21081(b), when a lead agency approves a project with significant effects that cannot be mitigated to a less-than-significant level, the public agency is required to find that specific overriding economic, legal, social, technological, or other benefits of the Proposed Project outweigh the significant effects on the environment. CEQA Guidelines Section 15093(a) states that:

*If the specific economic, legal, social, technological, or other benefits... of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."*

**1.3 LOCATION AND CUSTODIAN OF RECORD OF PROCEEDINGS**

The documents and other materials that constitute the record of proceedings upon which the City's project approval is based are located at the City's Community Development Department (custodian's) offices at 4045 Palos Verdes Drive North, Rolling Hills Estates, CA 90274. The record of proceedings is provided in compliance with PRC Section 21081.6(a)(2) and CEQA Guidelines Section 15091(e).



## 1.0 INTRODUCTION

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**2.0 ENVIRONMENTAL SETTING AND PROJECT DESCRIPTION**

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**2.1 ENVIRONMENTAL SETTING****2.1.1 LOCATION**

The City of Rolling Hills Estates is located in the center of the Palos Verdes Peninsula in the southwestern portion of the County of Los Angeles. The General Plan Planning Area (Planning Area) is the land area addressed by the proposed GPU, which encompasses approximately 2,378 acres, including all of the land within City limits (84 percent) and the unincorporated Sphere of Influence (SOI) (16 percent). The boundaries of the Planning Area generally follow the borders of the City. The City is bounded by the City of Rancho Palos Verdes on the west and south, the City of Rolling Hills on the south, the City of Palos Verdes Estates on the north, the City of Torrance on the north and northeast, the City of Lomita on the north and east, and unincorporated Los Angeles County on the south and southeast.

**2.1.2 EXISTING GENERAL PLAN**

State law (California Government Code Section 65300) requires that each city and county adopt a comprehensive, long-term general plan for its physical development. Seven elements are required for every general plan: land use, circulation, housing, conservation, open space, noise, and safety. The City of Rolling Hills Estates adopted its current General Plan in 1992, with amendments having occurred as needed. Consistent with State requirements, the current (1992) General Plan includes the following elements: Land Use, Transportation, Housing (comprehensively updated in 2014), Conservation, Open Space and Recreation, Noise, and Public Safety, as described in the following paragraphs:

The Land Use Element establishes a land use plan for the City that identifies land use designations for all parcels in the Planning Area, along with goals and policies for the types and forms of land uses in the City. The land use plan both regulates land uses and provides guidance for the City's land use related decisions. The City's current (1992) General Plan land use designations include Very Low Density Residential and Estate Density, Low Density Residential, Medium Density Residential, High Density Residential, Commercial General, Commercial Office, Neighborhood Commercial, Commercial Recreation, Open Space, and Institutional. Additionally, the City's current (1992) General Plan includes Overlay Designations, which identify additional development standards that must be considered in future planning and development.

The Transportation Element establishes the City's master plan of roads, which is intended to create a roadway system that is able to accommodate existing and future traffic in the City. The Transportation Element contains goals and policies that emphasize the need for providing an efficient circulation system to handle traffic increases due to both regional and local growth. The Transportation Element designates each roadway in the City as a Major Arterial, Secondary Arterial, Collector, or Local Street.

The Housing Element consists of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing. It also identifies

## **2.0 ENVIRONMENTAL SETTING AND PROJECT DESCRIPTION**

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adequate sites for housing and makes adequate provision for the existing and projected needs of all economic segments of the community.

The Conservation Element considers natural and cultural resources within the City's jurisdiction. This element serves as a management guide for the use of water, land, and earth resources; protection of native plant and animal life; preservation of cultural resources; maintenance of healthy air quality; and preservation of aesthetic and scenic resources within the jurisdictional area.

The Open Space and Recreation Element considers open space and recreational facilities within the City's jurisdiction, both of which help exemplify the unique Rolling Hills Estates rural character and way of life. This element also includes a plan for the City's Equestrian Trails. This element serves as a management guide for preserving, maintaining, and expanding both open space and recreational facilities.

The Noise Element considers existing and potential noise sources and identifies noise exposure associated with major transportation systems within the City's jurisdiction. This information serves as a guide for establishing land use patterns, site design, and development standards and addressing existing or potential noise problems within the jurisdictional area.

The Public Safety Element focuses on the safety and security of Rolling Hills Estates residents and businesses. The City strives to provide a safe and enjoyable environment for citizens, and properly addressing and reducing risks associated with natural and human-induced hazards further this goal. The information in the Public Safety Element serves as a guide for hazard mitigation, emergency planning, and preparedness throughout the City's jurisdiction.

### **2.2 PROJECT OVERVIEW**

The proposed GPU involves updates to the City's seven General Plan Elements and the addition of an eighth element (Sustainability Element). The subsections below describe the proposed changes to Land Use, Mobility (formerly Transportation), Housing, Conservation, Open Space and Recreation, Noise, and Safety (formerly Public Safety) Elements and the proposed new Sustainability Element.

#### **2.2.1 LAND USE ELEMENT**

The proposed GPU includes a revised General Plan Land Use Map. Since land use patterns in the City are well-established and the City's developable parcels are largely built out, proposed changes in the Land Use Plan are targeted to the Commercial District and select parcels. The intentions of such changes include (1) guiding and spurring redevelopment in the Commercial District to aid the City in fostering a walkable mixed-use district, (2) providing additional housing opportunities to aid the City in meeting its housing obligations, (3) guiding redevelopment of select parcels that have garnered development interest, and (4) changing land use designations to reflect existing uses that are not expected or desired to change. No new land use designations are proposed, although one new overlay, CD Mixed-Use Overlay, is proposed.

## 2.0 ENVIRONMENTAL SETTING AND PROJECT DESCRIPTION

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In addition to the proposed changes to the General Plan Land Use Map described above, the proposed GPU includes modifying the Overlay Zones included in the current (1992) General Plan.

There are eight overlays identified in the 1992 General Plan Land Use Element. Six of the eight overlays are included in principle in the General Plan Update, while two are excluded since they are now obsolete. The General Plan Update also clarifies the remaining overlays. Generally, the term “overlay” is used for Zoning districts (rather than in a General Plan) and can create confusion when both the City’s General Plan and Zoning code/map contain disparate overlays.

### 2.2.2 MOBILITY ELEMENT

Previously known as the Transportation Element, the Mobility Element defines the City’s transportation network, including streets, transit routes, equestrian trails, bikeways, and sidewalks and describes how people move throughout the City. Pursuant to Senate Bill 743, this element considers approaches to improve the performance of the local transportation system to reduce vehicle miles traveled (VMT). No changes to the City’s master plan of roads are proposed except (1) a change of Silver Spur Road through the Commercial District from a four-lane street to a two-lane street, narrowing it to a “main street” scale street, and with the Commercial District Area Vision Plan reimagining Silver Spur Road as a two-sided commercial street with streetscape design elements, such as banners, landscaping, benches, bike parking, outdoor dining spaces, and other amenities; (2) the removal of Bart Earle Way to allow for full realization of the two-sided commercial street vision of Silver Spur Road; and (3) the reconnection of Deep Valley Drive if and when redevelopment of the Promenade Mall site occurs.

### 2.2.3 HOUSING ELEMENT

As required, the proposed Housing Element update includes identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing. It is also required to identify adequate sites for housing and to make adequate provision for the existing and projected needs of all economic segments of the community. A new requirement in the current (6<sup>th</sup>) cycle<sup>3</sup> is the inclusion of an analysis of how existing and future policies, plans, programs, rules, practices, and related activities affirmatively further fair housing (AFFH) in the City. The City’s Regional Housing Needs Assessment (RHNA) allocation that the proposed Housing Element update satisfies includes 82 Very Low Income units, 42 Low Income units, 38 Moderate Income units, and 29 Above Moderate Income units for a total allocation of 191 units for the City.

### 2.2.4 CONSERVATION ELEMENT

The proposed Conservation Element update would continue to serve as a management guide for the use of water, land, and earth resources; protection of native plant and animal life; preservation of cultural resources; maintenance of healthy air quality; and preservation of aesthetic and scenic resources within the jurisdictional area.

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<sup>3</sup> To date, there have been five previous housing element update “cycles.” California is now in its sixth “housing element update cycle.” (California Department of Housing and Community Development, Housing Elements, <https://www.hcd.ca.gov/community-development/housing-element/index.shtml>, accessed June 25, 2021.)

## **2.0 ENVIRONMENTAL SETTING AND PROJECT DESCRIPTION**

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### **2.2.5 OPEN SPACE AND RECREATION ELEMENT**

The proposed updated Open Space and Recreation Element describes how open spaces and parks in the City would continue to be defined, managed, used, and preserved. This element designates open spaces in the City by purpose and establishes standards related to the availability of public parks and open space.

Generally, the City Planning Area is well served by parks and recreation facilities. However, the proposed updated Open Space and Recreation Element identifies three planned mini-parks, including Butcher Park at the northeastern corner of Palos Verdes Drive North and Palos Verdes Drive East, Tabor Grove on the west side of Palos Verdes Drive East just north of Harbor Sight Drive, and unnamed park on the south side of Palos Verdes Drive North just east of Ranchview Road, to expand the percent of residences within the Planning Area that are within a 10-minute walkshed. In addition, the Commercial District Vision Plan, as described in the Land Use Element, envisions plaza spaces/gathering areas and green spaces in various locations in the Commercial District, including plazas on the Promenade Mall and Peninsula Center sites, a green space on the Brick Walk Property, and a potential interim greenway/park space along the Bart Earle Way right-of-way.

### **2.2.6 NOISE ELEMENT**

The proposed updated Noise Element describes the existing noise environment in the City; identifies noise sources and issues affecting community health and safety; and establishes standards, goals, and policy objectives that limit community exposure to excessive noise levels. This element would continue to establish guidance for acceptable noise levels for various land uses and provides guidance on how to balance the noise created by an active and economically healthy community with residents' desire for peace and quiet.

### **2.2.7 SAFETY ELEMENT**

Previously referred to as the Public Safety Element, the proposed Safety Element would continue to set forth long-range City policies and programs to protect people and property from harm resulting from natural and human-caused hazards and criminal activity. Priority issues in this element include fire hazards, geologic and seismic hazards, human-caused and other hazards, emergency readiness, and crime prevention. The element fully integrates the Local Hazard Mitigation Plan.

### **2.2.8 SUSTAINABILITY ELEMENT**

The proposed GPU includes a Sustainability Element, which would be a new element of the Rolling Hills Estates General Plan. The purpose of the Sustainability Element is to identify potential opportunities for the City to engage the community in establishing a blueprint for steady, responsible action in addressing the effects of climate change, so we leave a cleaner, more resilient environment for future generations in terms of air quality, greenhouse gas emissions, energy use, water resources, quality of life, land use, mobility, and waste management and recycling. The Sustainability Element would also integrate the City's 2017 Climate Action Plan and the South Bay City Council of Governments' 2019 Sub-Regional Climate Adaptation Plan.

## 2.0 ENVIRONMENTAL SETTING AND PROJECT DESCRIPTION

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### 2.2.9 COMMERCIAL DISTRICT AREA VISION PLAN

In addition to the elements described above, the proposed GPU includes a Vision Plan for the Commercial District Area. The Vision Plan is not a blueprint for the development of the area but rather provides direction and inspiration for future development based on community aspirations and needs, with the intent of realizing the following GPU's Guiding Principle for the Commercial District. The primary elements of the proposed Commercial District Area Vision Plan include (1) Desired Urban Form; (2) Circulation and Connectivity; and Opportunity Areas, consisting of the following five areas: Promenade Mall, Roxcove and Town and Country, Bart Earle Way, Brick Walk Property, and Peninsula Center.

### 2.3 PROJECT OBJECTIVES

Consistent with CEQA Guidelines Section 15124(b), a clear statement of objectives and the underlying purpose of the project are to be discussed. The proposed GPU is intended to reflect the City's Vision of tomorrow, while complying with changes in State law and improving the usefulness of the plan. The proposed GPU is organized around Guiding Principles that are intended to preserve the unique character and identity of Rolling Hills Estates and the neighborhoods that make up the community. The Vision and Guiding Principles of the proposed GPU, along with the City's required housing goals, together constitute the Project objectives, and are as follows:

#### VISION

Rolling Hills Estates in 2040 has maintained a rural feel and equestrian identity, while becoming a more vibrant and connected community. The commercial district is an attractive and thriving destination for residents and visitors from the Palos Verdes Peninsula, providing ample opportunities for shopping, outdoor dining, entertainment, and living. Rolling Hills Estates is a model for sustainable practices and is admired for its quality local environment, natural semi-rural setting, and recreational amenities, including trails, parks, and open spaces. Residents and visitors can conveniently walk, ride horses, bike, and take transit to and within the community. Rolling Hills Estates is a family-, youth-, and senior-friendly City, with safe places for people of all ages to gather, play, and learn.

#### GUIDING PRINCIPLES

1. Preserve the community's distinctive rural character and high quality of life.
2. Improve mobility and emphasize a spectrum of transportation choices.
3. Promote a vibrant commercial district.
4. Maintain equestrian character.
5. Provide quality parks, trails, open spaces, and community facilities.
6. Enhance the public realm and promote quality design.
7. Become a more sustainable city.



## 2.0 ENVIRONMENTAL SETTING AND PROJECT DESCRIPTION

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### HOUSING

The proposed Housing Element states:

*Meeting the housing needs established by the State of California is an important goal for the City of Rolling Hills Estates. As the population of the State continues to grow and scarce resources decline, it becomes more difficult for local agencies to create adequate housing opportunities while maintaining a high standard of living for all citizens in the community. State law recognizes that housing needs may exceed available resources and, therefore, does not require that the City's quantified objectives be identical to the identified housing needs. This recognition of limitations is critical, especially during this period of financial uncertainties in both the public and private sectors.*

### 2.4 LIST OF DISCRETIONARY ACTIONS

The City, as lead agency pursuant to CEQA Guidelines Section 15367, has the principal responsibility for approving the proposed GPU. There are no responsible or trustee agencies with any approval authority for the Proposed Project. In order to adopt the proposed GPU, the City would have to take the following actions:

- Certification of the Final PEIR
- Amend the General Plan and adopt the GPU

Additionally, while not required for approval of the proposed GPU, but associated with the actions to be taken as part of this Project, the City's Zoning Code would need to be updated for consistency with the proposed GPU and to implement certain components of the proposed GPU.

### 3.0 CEQA REVIEW AND PUBLIC PARTICIPATION

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#### 3.0 CEQA REVIEW AND PUBLIC PARTICIPATION

The City has complied with the CEQA Guidelines during the preparation of the Draft PEIR for the GPU. The Draft PEIR, dated October 2021, was prepared following input from the public and affected agencies through the Draft PEIR scoping process. The “scoping” of the PEIR was conducted utilizing several of the tools available under CEQA. In accordance with CEQA Guidelines Section 15063, a Notice of Preparation (NOP) and Initial Study were prepared and distributed to the State Clearinghouse, affected agencies, and other interested parties from May 21, 2021 to June 21, 2021. A scoping meeting was held on June 3, 2021. The NOP was posted in the Los Angeles County Clerk's office for 30 days. Information requested and input provided during the 30-day NOP comment period regarding the scope of the PEIR are included in the Draft PEIR as Appendix A.

On October 22, 2021, the City issued a Notice of Availability for the proposed GPU's Draft PEIR for a 45-day public review and comment period. On November 9, 2021, the City held a Special Joint City Council and Planning Commission meeting to share information regarding the proposed GPU and the impact determination presented in the Draft PEIR and to receive public comments on the Draft PEIR. The Notice of Availability was also published on the City's website, in a local newspaper, and directly mailed to each commenter on the Initial Study and affected public agencies. In all, 39 notices were distributed.

The Draft PEIR was distributed directly to numerous agencies, organizations, and interested groups and persons for comment for a 45-day review period from October 22, 2021 to December 6, 2021. During the review period, copies of the Draft PEIR were made available to the public on the City's website (<https://www.ci.rolling-hills-estates.ca.us/departments/administration/city-clerk/public-notices>) and electronically at the Peninsula Center Library, located at 701 Silver Spur Road, Rolling Hills Estates, CA 90274.

A Final PEIR has been completed and includes written comments received by mail and electronic-mail on the Draft PEIR, written responses to the written comments, and changes to the Draft PEIR.

### **3.0 CEQA REVIEW AND PUBLIC PARTICIPATION**

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## **4.0 NO ENVIRONMENTAL EFFECTS AND LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITHOUT MITIGATION MEASURES**

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### **4.0 NO ENVIRONMENTAL EFFECTS AND LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITHOUT MITIGATIONS**

Based on the Initial Study, Draft PEIR, and Final PEIR (collectively the "PEIR") and the referenced documents, the proposed GPU would have no or less-than-significant environmental effects for the specific areas associated with the topics identified below.

#### **4.1 AESTHETICS**

Threshold (a): The proposed GPU would not have a substantial adverse effect on a scenic vista.

Threshold (b): The proposed GPU would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

Threshold (c): The proposed GPU would not substantially degrade the existing visual character or quality of public views of the site and its surroundings and would not conflict with applicable zoning and other regulations governing scenic quality.

Threshold (d): The proposed GPU would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Cumulative Impacts: The proposed GPU's contribution to aesthetic impacts would not be cumulatively considerable, and, as such, cumulative aesthetic impacts would be less than significant.

#### **FINDINGS**

The City finds, based on the Initial Study, PEIR, the referenced documents, and the whole of the record, that the proposed GPU would result in no impact to aesthetics related to scenic resources within a State scenic highway and a less-than-significant impact related to scenic vistas, visual character and quality, the creation of new sources of substantial light or glare, and cumulative impacts.

#### **4.2 AGRICULTURAL RESOURCES**

Threshold (a): The proposed GPU would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural uses.

Threshold (b): The proposed GPU would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

Threshold (c): The proposed GPU would not conflict with existing zoning for, or cause rezoning of, forestland, timberland, or timberland zoned Timberland Production.

Threshold (d): The proposed GPU would not result in the loss of forestland or conversion of forest land to non-forest use.

## **4.0 NO ENVIRONMENTAL EFFECTS AND LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITHOUT MITIGATION MEASURES**

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Threshold (e): The proposed GPU would not involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forestland to non-forest use.

### **FINDINGS**

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in no impacts to agricultural and forestry resources.

### **4.3 AIR QUALITY**

Threshold (d): The proposed GPU would not result in other emissions, such as those leading to odors, adversely affecting a substantial number of people.

Cumulative Impacts: The proposed GPU would not result in cumulative impacts due to carbon monoxide hotspots or localized air quality impacts.

### **FINDINGS**

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in no impact related to other emissions, such as odors, and less-than-significant cumulative impacts related to carbon monoxide hotspots or localized air emissions.

### **4.4 BIOLOGICAL RESOURCES**

Threshold (e): The proposed GPU would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Threshold (f): The proposed GPU would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

Cumulative Impacts: The proposed GPU would not result in cumulative impacts concerning biological resources.

### **FINDINGS**

The City finds, based on the PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in less-than-significant impacts to biological resources related to conflict with local policies or ordinances protecting biological resources, conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or State habitat conservation plan ,and cumulative biological resources impacts.

## **4.0 NO ENVIRONMENTAL EFFECTS AND LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITHOUT MITIGATION MEASURES**

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### **4.5 CULTURAL RESOURCES**

Threshold (c): The proposed GPU would not disturb human remains, including those interred outside of formal cemeteries.

#### **FINDINGS**

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in a less-than-significant impact to cultural resources related to the disturbance of human remains, including those interred outside of formal cemeteries.

### **4.6 ENERGY**

Threshold (a): The proposed GPU would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Threshold (b): The proposed GPU would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Cumulative Impacts: The proposed GPU would not result in cumulative impacts related to energy consumption and energy plans.

#### **FINDINGS**

The City finds, based on the PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in less-than-significant impacts to energy related to wasteful, inefficient, or unnecessary consumption of energy resources, conflict with or obstruct a State or local plan for renewable energy or energy efficiency, and cumulative energy impacts.

### **4.7 GEOLOGY AND SOILS**

Threshold (a): The proposed GPU would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map.
- ii. Strong seismic ground shaking.
- iii. Seismic-related ground failure, including liquefaction, as discussed on page.
- iv. Landslides.

Threshold (b): The proposed GPU would not result in substantial soil erosion or the loss of topsoil.

## 4.0 NO ENVIRONMENTAL EFFECTS AND LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITHOUT MITIGATION MEASURES

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Threshold (c): The Planning Area is not located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project, and potentially result in on- or off-site landslides.

Threshold (d): The Planning Area is not located on expansive.

Threshold (e): The Planning Area is connected to a public sewer system and would not require the use of septic tanks on soils incapable of adequately supporting them.

Cumulative Impacts: The proposed GPU would not result in cumulative impacts related to geology and soils.

### FINDINGS

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in no impacts to geology and soils related to rupture of a known earthquake fault and seismic-related ground failure. The proposed GPU would have less-than-significant impacts to geology and soils related to strong seismic ground shaking, landslides, unstable soils erosion, loss of top soil, expansive soils, septic tanks or alternative wastewater disposal systems, and cumulative geology and soils impacts.

### 4.8 GREENHOUSE GASES

Threshold (a): The proposed GPU would not generate greenhouse gas emissions that may have a significant impact on the environment.

Threshold (b): The proposed GPU would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Cumulative Impacts: The proposed GPU would not cause cumulative impacts related to greenhouse gases.

### FINDINGS

The City finds, based on the PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in less-than-significant impacts related to greenhouse gas emissions.

### 4.9 HAZARDS AND HAZARDOUS MATERIALS

Threshold (a): The proposed GPU would not create a significant hazard to the public or the environment through the routine transport.

Threshold (b): The proposed GPU would not create a significant hazard to the public or the environment through reasonable, foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Threshold (c): The proposed GPU would not cause hazardous emissions or induce the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

## **4.0 NO ENVIRONMENTAL EFFECTS AND LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITHOUT MITIGATION MEASURES**

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- Threshold (d): The proposed GPU would not designate for potential future development sites which are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.
- Threshold (e): Implementation of the proposed GPU would not result in a safety hazard or excessive noise for people residing or working in the Planning Area.
- Threshold (f): The proposed GPU would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Threshold (g): The proposed GPU would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

### **FINDINGS**

The City finds, based on the Initial Study, PEIR, all referenced documents, response to comments regarding wildfire, and the whole of the record, that the proposed GPU would result in no impacts related to hazards and hazardous materials regarding risks associated with close proximity to airports. Further, the proposed GPU would result in less-than-significant impacts related to hazards and hazardous materials regarding the routine transport, use, or disposal of hazardous materials; release of hazardous materials into the environment through reasonable, foreseeable upset and accident conditions; hazardous material emissions within one-quarter mile of an existing or proposed school; proximity to listed hazardous materials sites; impairment of or physical interference with adopted emergency response and evacuations plans; and the exposure of people or structures to risks involving wildland fires.

### **4.10 HYDROLOGY AND WATER QUALITY**

- Threshold (a): The proposed GPU would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
- Threshold (b): The proposed GPU would not cause a substantial decrease in groundwater supplies or interfere substantially with groundwater recharge.
- Threshold (c): The proposed GPU would not substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation, substantial increase in the rate or amount of surface runoff, create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems; or impede or redirect flood flows.
- Threshold (d): The proposed GPU would no result in flood hazard, tsunami, or seiche zones, which would risk release of pollutants due to project inundation.
- Threshold (e): The proposed GPU would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.



## 4.0 NO ENVIRONMENTAL EFFECTS AND LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITHOUT MITIGATION MEASURES

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### FINDINGS

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in no impacts to hydrology and water quality related to impeding or redirecting flood flows, and the release of pollutants in flood hazard, tsunami, or seiche zones. Further, the proposed GPU would result in less-than-significant impacts to hydrology and water quality related to water quality standards or waste discharge requirements; groundwater; alteration of drainage patterns resulting in erosion or siltation, increased rate or amount of runoff, or creation of runoff water, which would exceed the capacity of existing or planned stormwater drainage systems; and conflict with or obstruction of implementation of a water quality control plan or sustainable groundwater management plan.

#### 4.11 LAND USE AND PLANNING

Threshold (a): The proposed GPU would not physically divide an established community.

Threshold (b): The proposed GPU would not cause a significant impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Cumulative Impacts: The proposed GPU would not result in cumulative impacts related to land use and planning.

### FINDINGS

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in no impact to land use related to the physical division of an established community and a less-than-significant impact related to conflict with applicable land use plans, policies, or regulations adopted for the purpose of mitigating an environmental effect and cumulative land use impacts.

#### 4.12 MINERAL RESOURCES

Threshold (a): The proposed GPU would not result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state.

Threshold (b): The proposed GPU would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

### FINDINGS

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in no impact to mineral resources.

#### 4.13 NOISE

Threshold (a): The proposed GPU would not result in the generation of a substantial temporary or permanent increase in ambient noise level in the vicinity of the project in excess of standards established in the General Plan or Noise Ordinance.

## **4.0 NO ENVIRONMENTAL EFFECTS AND LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITHOUT MITIGATION MEASURES**

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Threshold (c): The proposed GPU would not result in the exposure of people residing or working in the Planning Area to excessive noise levels due to the proximity of a private airstrip or airport.

### **FINDINGS**

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record that the proposed GPU would result in a less-than-significant impact to temporary or permanent increases in ambient noise levels in the vicinity of the Planning Area in excess of applicable standards and no impact related to exposure of people residing or working in the Planning Area to excessive noise levels caused by proximity to a private airport.

### **4.14 POPULATION AND HOUSING**

Threshold (a): The proposed GPU would not induce substantial unplanned population growth in an area, either directly or indirectly.

Threshold (b): The proposed GPU would not displace substantial numbers of existing people or housing.

Cumulative Impacts: The proposed GPU would not result in cumulative impacts related to population and housing.

### **FINDINGS**

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in less-than-significant impacts to population and housing.

### **4.15 PUBLIC SERVICES**

Threshold (a): The proposed GPU would not result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios or other performance objectives for:

- i. Fire protection services
- ii. Police protection
- iii. Schools
- iv. Parks
- v. Libraries, as discussed on page 4.15-3 of the Draft PEIR.

Cumulative Impacts: The proposed GPU would not result in cumulative impacts related to public services (i.e., fire protection, police protection, schools, parks, and libraries).

### **FINDINGS**

The City finds, based on the Initial Study, PEIR, all referenced documents, responses to the Los Angeles County Fire Department's comments, and the whole of the record, that the proposed

## 4.0 NO ENVIRONMENTAL EFFECTS AND LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITHOUT MITIGATION MEASURES

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GPU would result in less-than-significant impacts to public services (i.e., fire protection, police protection, schools, parks, and libraries).

### 4.16 RECREATION

Threshold (a): The proposed GPU would not increase the use of existing neighborhood and regional parks or other recreational facilities.

Threshold (b): The proposed GPU would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Cumulative Impacts: The proposed GPU would have a less-than-significant cumulative impact related to recreation.

### FINDINGS

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in less-than-significant impacts to recreation.

### 4.17 TRANSPORTATION

Threshold (a): The proposed GPU would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Threshold (c): The proposed GPU would not substantially increase hazards due to a geometric design feature or incompatible uses.

Threshold (d): The proposed GPU would not result in inadequate emergency access.

Cumulative Impacts: Cumulative impacts related to transportation and conflict with plans, inadequate emergency access, and geometric designs would be less than significant.

### Findings

The City finds, based on the PEIR, all referenced documents, and the whole of the record, that the proposed GPU would result in less-than-significant impacts related to conflicts with a program, plan, ordinance, or policy addressing the circulation system; hazards due to a design feature or incompatible use, and emergency access.

### 4.18 UTILITIES AND SERVICE SYSTEMS

#### 4.18.1 WATER SUPPLY

Threshold (a): The proposed GPU would not require or result in the relocation or construction of new or expanded water facilities.

Threshold (b): The proposed GPU would not have insufficient water supplies.

Cumulative Impacts: The proposed GPU would have less-than-significant impacts on water supply and water infrastructure.

## **4.0 NO ENVIRONMENTAL EFFECTS AND LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITHOUT MITIGATION MEASURES**

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### **Findings**

The City finds, based on the Initial Study, PEIR, all referenced documents, responses to comments, and the whole of the record that the proposed GPU would result in less-than-significant impacts to water supply and water infrastructure.

#### **4.18.2 WASTEWATER**

Threshold (a): The proposed GPU would not require or result in the relocation or construction of new or expanded wastewater treatment facilities.

Threshold (b): The proposed GPU would not result in a determination by the wastewater treatment provider which serves the Planning Area that it does not have adequate capacity to serve the proposed GPU's projected demand in addition to the provider's existing commitments.

Cumulative Impacts: The proposed GPU would have less-than-significant impacts to wastewater and wastewater infrastructure.

### **FINDINGS**

The City finds, based on the Initial Study, PEIR, all referenced documents, responses to comments, and the whole of the record that the proposed GPU would result in less than significant impacts to wastewater and wastewater infrastructure.

#### **4.18.3 SOLID WASTE**

Threshold (a): The proposed GPU would not generate solid waste in excess of State or local standards.

Threshold (b): The proposed GPU would comply with federal, state, local management, and reduction statutes and regulations related to solid waste.

Cumulative Impacts: The proposed GPU would not have any cumulative impacts related to solid waste.

### **FINDINGS**

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record that the proposed GPU would result in less-than-significant impacts to solid waste.

#### **4.18.4 ENERGY AND TELECOMMUNICATIONS INFRASTRUCTURE**

Threshold (a): The proposed GPU would not require or result in the relocation or construction of new or expanded electrical power, natural gas, or telecommunications facilities.

Cumulative Impacts: The proposed GPU would have less-than-significant cumulative impacts related to energy and telecommunications.

### **FINDINGS**

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record that the proposed GPU would result in less-than-significant impacts to energy and telecommunications infrastructure.

## 4.0 NO ENVIRONMENTAL EFFECTS AND LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITHOUT MITIGATION MEASURES

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### 4.19 WILDFIRE

Threshold (a): The proposed GPU would not substantially impair an adopted emergency response plan or emergency evacuation plan.

Threshold (b): The proposed GPU would not exacerbate wildfire risks due to slope, prevailing winds, and/or other factors.

Threshold (c): The proposed GPU would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk.

Threshold (d): The proposed GPU would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.

Cumulative Impacts: The proposed GPU would have less-than-significant cumulative impacts related to Wildfire.

### FINDINGS

The City finds, based on the Initial Study, PEIR, all referenced documents, and the whole of the record that the proposed GPU would result in less-than-significant impacts to wildfire.

## 5.0 LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITH MITIGATION INCORPORATED

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### 5.0 LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITH MITIGATION INCORPORATED

#### 5.1 BIOLOGICAL RESOURCES

Threshold (a): The proposed GPU would have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species.

#### FINDINGS

The City finds that changes or alterations have been required in, or incorporated into, the proposed GPU, which avoid or substantially lessen the significant environmental effect as identified in the Draft PEIR. Specifically, the City finds that the following mitigation measures shall be implemented to reduce potentially significant biological resource impacts, particularly to special status species and habitats resulting from the buildout of the proposed GPU:

**MM-BIO-1:** The City of Rolling Hills Estates shall require applicants of future development projects that require discretionary grading approval by the Planning Commission within portions of the City that are included within USFWS-designated critical habitat for coastal California Gnatcatcher, or are within close proximity to known occurrences of protected species, such as those identified in Figure 4.3-1 on page 4.3-6 of the Draft PEIR, to prepare a biological resources survey. The survey shall be conducted by a qualified biologist and shall minimally include a reconnaissance level field survey of the project site for the presence and quality of biological resources potentially affected by project development. These resources include, but are not limited to, protected/special-status species or their habitat, sensitive habitats, such as wetlands or riparian areas, and jurisdictional waters. If sensitive or protected biological resources are absent from the project site and adjacent lands potentially affected by the project, the biologist shall submit a written report substantiating such to the City of Rolling Hills Estates before issuance of a grading permit by the City, and the project may proceed without any further biological investigation.

If sensitive or protected biological resources are present on the project site or may be potentially affected by the project, then a qualified biologist shall evaluate impacts to sensitive or protected biological resources from development and produce a biological resources impact assessment. The impact assessment may include focused plant and animal surveys or jurisdictional delineations to determine a future development project's impact to biological resources, along with corresponding project-specific mitigation measures, as necessary. To minimize impacts, the City of Rolling Hills Estates shall require applicants to design projects to avoid impacts to sensitive or protected biological resources to the greatest extent feasible. Further, if sensitive or protected species are present on the project site, then the applicant shall consult with the appropriate oversight agency, such as CDFW or USFWS, as necessary.

**MM-BIO-2:** If future development projects that involve vegetation removal, and are not otherwise categorically exempt from CEQA or subject to the emergency project statutory exemption from CEQA, are unable to avoid construction activities within nesting bird season (January 1st through July 31st for raptors and February 1st

## 5.0 LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITH MITIGATION INCORPORATED

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through August 31st for other avian species), a qualified biologist shall conduct a pre-construction nesting bird survey for avian species to determine the presence/absence, location, and status of any active nests on or adjacent to the area proposed development area. The survey shall be conducted for active nests, eggs, and young of any bird species protected by the state or federal Endangered Species Acts, Migratory Bird Treaty Act (MBTA), and/or the California Fish and Game Code (CFGC) Sections 3503, 3503.5, or 3511, within 200 feet of the disturbance zone for songbirds, or within 500 feet of the disturbance zone for raptors and special-status bird species. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the MBTA and the CFGC, a nesting bird survey shall be conducted no more than three (3) days prior to the commencement of project construction if construction occurs between January 1st and August 31st. In the event that active nests are discovered, a suitable buffer (distance to be determined by the biologist) shall be established around such active nests, and no construction activities within the buffer shall be allowed, until the biologist has determined that the nest(s) is no longer active (i.e., the nestlings have fledged and are no longer dependent on the nest).

**MM-BIO-3:** The City of Rolling Hills Estates shall require applicants of future development projects that require discretionary grading approval by the Planning Commission and are not categorically exempt from CEQA or subject to the emergency project statutory exemption from CEQA to retain a qualified bat biologist to conduct a clearance survey for bats within suitable structures and trees within a project's impact area within 30 days of construction. If bats roosts are found within the project impact area, the qualified bat biologist shall identify the bats to the species level and evaluate the colony to determine its size and significance. If any structures house an active maternity colony of bats, construction activities shall not occur during the recognized bat breeding season (March 1 to October 1). Any proposed work in areas with no suitable roosting or foraging habitat shall not require a bat survey. If a bat roost is present within the vicinity of a proposed project impact area that does not need to be removed, a qualified bat biologist shall establish a species-specific no-disturbance buffer that must be maintained throughout the duration of the project's construction. If a maternity roost is identified, a no disturbance buffer shall be established and maintained until a qualified bat biologist determines that the roost is no longer active.

If project activities must occur during non-daylight hours or during the bat breeding season (March 1 to October 1), a qualified bat biologist shall establish monitoring measures, including frequency and duration, based on species, individual behavior, and type of construction activities. Night lighting shall be used only within the portion of the project actively being worked on and focused directly on the work area. This measure would minimize visual disturbance and allow bats to continue to utilize the remainder of the area for foraging and night roosting. If bats are showing signs of distress, work activities shall be modified to prevent bats from abandoning their roost or altering their feeding behavior. At any time, the qualified biologist shall have the authority to halt work if there are any signs of distress or disturbance that may lead to roost abandonment. Work shall not resume until corrective measures have been taken or it is determined that continued activity would not adversely affect roost success.

## 5.0 LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITH MITIGATION INCORPORATED

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Any roosting habitat loss shall be sequenced, and roosting habitat shall be restored or replaced in-kind and on-site to prevent temporal or permanent loss based on the bat species roosting requirements.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.3, Biological Resources, pages 4.3-14 through 4.3-18 of the Draft PEIR. The following presents a summary of that rationale:

With implementation of Mitigation Measures MM-BIO-1 through MM-BIO-3 (i.e., preparation of a biological resources assessment and nesting bird and bat surveys conducted on a project-by-project basis), buildout of the proposed GPU would not result in a significant impact to special status species or habitats, as designated by the CDFW or USFWS. As such, impacts would be less than significant after mitigation.

Thresholds (b)-(c):       The proposed GPU would have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service and on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

### Findings

The City finds that changes or alterations have been required in, or incorporated into, the proposed GPU, which avoid or substantially lessen the significant environmental effect as identified in the Draft PEIR. Specifically, the City finds that the following mitigation measure shall be implemented to reduce potentially significant biological resource impacts, particularly to riparian habitat, sensitive natural communities, and federally protected wetlands:

**MM-BIO-4:**       The City of Rolling Hills Estates shall require applicants of future development projects that that require discretionary grading approval by the Planning Commission within portions of the Planning Area that are located within 100-feet of a riverine or wetland feature, as identified in Figure 4.3-4 on page 4.3-11 of the Draft PEIR, to prepare a biological resources survey. The survey shall be conducted by a qualified biologist and shall minimally include a site survey for the presence and quality of riverine or wetland features potentially affected by project development, as well as a stream delineation of the potentially impacted riparian or wetland feature. If such features are present and may be impacted by the future development, then the City shall require appropriate vegetative buffers and/or setbacks adjoining the stream or wetland feature to reduce impacts of future development on these riparian or wetland features. If avoidance of riparian habitat, wetlands, or other drainage features within the jurisdiction of the CDFW or Army Corps is not possible, permits/approvals from the jurisdictional agency/agencies shall be necessary and impacted acreage shall be replaced at a ratio acceptable to the jurisdictional agency/agencies. In no case shall the replacement ratio be less than 1:1.



## 5.0 LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITH MITIGATION INCORPORATED

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### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.3, Biological Resources, pages 4.3-18 through 4.3-20 of the Draft PEIR. The following presents a summary of that rationale:

Because the proposed GPU would not concentrate development in close proximity to existing wetland or riparian habitats, and because any direct or indirect impacts to riparian and wetland habitat would be evaluated on a project-by-project basis and would be required to comply with existing local, State, and federal regulations, the proposed GPU would not likely have a substantial effect on federally protected wetlands, riparian habitat, or other sensitive natural community. With implementation of Mitigation Measure MM-BIO-4, impacts on riparian habitat, sensitive natural communities, and federally protected wetlands as defined by Section 404 of the Clean Water Act would be less than significant. As such, impacts would be less than significant after mitigation.

Threshold (d):                   The proposed GPU would interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

### Findings

The City finds that changes or alterations have been required in, or incorporated into, the proposed GPU, which avoid or substantially lessen the significant environmental effect as identified in the Draft PEIR. Specifically, the City finds that Mitigation Measures MM-BIO-1 through MM-BIO-3 shall be implemented to reduce potentially significant biological resource impacts, particularly to the movement of native resident migratory wildlife species.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.3, Biological Resources, pages 4.3-20 through 4.3-21 of the Draft PEIR. The following presents a summary of that rationale:

Development associated with the buildout of the proposed GPU could result in limited vegetation removal, intrusion by humans and pets, or increases in nuisance noise, affecting wildlife movement and nesting sites in areas with known occurrences of wildlife species and habitats. As such, impacts related to interference with the movement of native resident migratory wildlife species would be potentially significant. With implementation of Mitigation Measures MM-BIO-1 through MM-BIO-3, impacts on the movement of any native resident or migratory fish or wildlife species, established native resident or migratory wildlife corridors, and native wildlife nursery sites from adoption of the proposed GPU, would be less than significant. As such, impacts to sensitive biological resources are less than significant after mitigation.

Cumulative Impacts: The proposed GPU would have less-than-significant cumulative impacts related to Wildfire.

### Findings

The City finds that changes or alterations have been required in, or incorporated into, the proposed GPU, which avoid or substantially lessen the significant environmental effect as

## 5.0 LESS-THAN-SIGNIFICANT ENVIRONMENTAL EFFECTS WITH MITIGATION INCORPORATED

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identified in the Draft PEIR. Specifically, the City finds that Mitigation Measures MM-BIO-1 through MM-BIO-3 shall be implemented to reduce potentially significant cumulative biological resource impacts, particularly to special status species and habitats; riparian habitat, sensitive natural communities, and federally protected wetlands; and the movement of native resident migratory wildlife species resulting from the buildout of the proposed GPU.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.3, Biological Resources, pages 4.3-23 through 4.3-24 of the Draft PEIR. The following presents a summary of that rationale:

Biologically sensitive areas are located within the Planning Area, as well as within adjacent cities on the Palos Verdes Peninsula, including the cities of Rolling Hills, Palos Verdes Estates, Rancho Palos Verdes, and Los Angeles [San Pedro community]]. These areas support coastal California gnatcatcher critical habitat and the Palos Verdes blue butterfly in the cities of Rancho Palos Verdes and Palos Verdes Estates. In general, impacts on biological resources are typically limited to an individual future development site and possibly the immediate surroundings and would not be substantially compounded by the construction or operation impacts of other, more distant projects. An important exception to this is when a future development project eliminates a significant portion of a regional wildlife corridor or eliminates one of the few remaining pockets of habitat supporting a sensitive species in the same region, which may potentially result in significant cumulative impacts. With implementation of Mitigation Measures MM-BIO-1 through MM-BIO-4, consistency with the goals and policies to protect open spaces and the existing biological resources within Planning Area, and ongoing enforcement of existing General Plan goals and policies protecting sensitive biological resources by the other jurisdictions on the peninsula and preservation activities conducted by the Palos Verdes Land Conservancy, which has preserved approximately 1,600 acres of open space on the peninsula, the proposed GPU's contribution to impacts on biological resources within the Planning Area would not be cumulatively considerable, and, as such, cumulative impacts would be less than significant after mitigation.

### 5.2 GEOLOGY AND SOILS

Threshold (f):                   The proposed GPU would have the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Cumulative Impacts:

#### Findings

The City finds that changes or alterations have been required in, or incorporated into, the proposed GPU, which avoid or substantially lessen the significant environmental effect as identified in the Draft PEIR. Specifically, the City finds that Mitigation Measures MM-GEO-1 and MM-GEO-2 shall be implemented to reduce potentially significant impacts to paleontological resources:

**MM-GEO-1:** To ensure identification and preservation of significant paleontological resources and avoid significant impacts to those resources, prior to the issuance of a grading approval by the City of Rolling Hills Estates Planning Commission, each project

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requiring such approval shall be screened to determine whether a full paleontological resources assessment is required. Screening shall consider whether the proposed grading activity will extend into known undisturbed fossil-bearing strata (i.e., those of the Monterey Formation, including Lomita Marl Member, Valmonte Diatomite Member, and Altamira Shale Member). If so, the City shall require a paleontological resources assessment be conducted by a paleontologist that meets Bureau of Land Management or Society of Vertebrate Paleontology standards (i.e., a qualified paleontologist) prior to the issuance of a grading approval. If the paleontological resources assessment identifies the potential for destruction of significant paleontological resources, an avoidance and/or recovery plan shall be developed and implemented under the supervision of a qualified paleontologist to the satisfaction of the City of Rolling Hills Estates.

**MM-GEO-2:** In the event that any prehistoric subsurface paleontological resources are encountered during future construction or the course of any ground disturbance activities, all such activities shall halt immediately, at which time the applicant shall notify the City and consult with a qualified paleontologist to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined to be unnecessary or infeasible by the City. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.6, Geology and Soils, pages 4.6-13 through 4.6-14 of the Draft PEIR. The following presents a summary of that rationale:

The Planning Area encompasses areas that may contain fossil-bearing units and are, therefore, considered sensitive for paleontological resources. Ground-disturbing activities associated with future development and redevelopment projects allowed under the proposed GPU would have the potential to unearth, damage, and/or destroy known or unknown paleontological resources and have the potential to result in adverse impacts. Impacts related to paleontological resources, however, would be reduced to less than significant with implementation of Mitigation Measures MM-GEO-1 and MM-GEO-2.

### 5.3 NOISE

Threshold (b): The proposed GPU would not result in the generation of excessive groundborne vibration or groundborne noise levels.

### Findings

The City finds that changes or alterations have been required in, or incorporated into, the GPU, which avoid or substantially lessen the significant environmental effect as identified in the Draft PEIR. Specifically, the City finds that Mitigation Measures MM-NOI-1 and MM-NOI-2 shall be

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implemented to reduce potentially significant impacts cause by excessive groundborne vibrations:

**MM-NOI-1:** Projects with construction activities that use equipment with high vibration levels, including, but not limited to, pile drivers, vibratory rollers, large bulldozers, and loaded trucks, within 25 feet of an occupied sensitive use (i.e., historical buildings, residential, senior care facilities, hospitals, and schools/day care centers) shall be required to prepare a project-specific vibration impact analysis to identify the potential project-specific construction vibration impacts associated with the project, and to determine any specific vibration control mechanisms that shall be incorporated into the project's construction bid documents to reduce such impacts. Contract specifications shall be included in construction documents, which shall be reviewed and approved by the City Engineer prior to issuance of a grading permit.

**MM-NOI-2:** Projects within 100 feet of a historic structure(s) shall implement the following measures to reduce the potential for architectural/structural damage resulting from elevated groundborne noise and vibration levels:

- Pile driving within 50 feet of any historic structure(s) shall utilize alternative installation methods, such as pile cushioning, jetting, predrilling, cast-in-place systems, and resonance-free vibratory pile drivers.
- As accessible, a preconstruction survey of all eligible for listing or listed historic buildings under the National Register of Historic Places, California Register of Historic Resources, and/or local historic database(s) within 50 feet of proposed construction activities shall be conducted. Fixtures and finishes within 50 feet of construction activities susceptible to damage shall be documented photographically and in writing. The preconstruction survey shall determine conditions that exist before construction begins for use in evaluating any damage caused by construction activities. Construction vibration monitoring shall be conducted at the edges of these historic properties and construction activities shall be reduced, as needed, to ensure no damage occurs.
- Vibration monitoring shall be conducted prior to and during pile driving operations occurring within 100 feet of the historic structure(s). Contractors shall limit construction vibration levels during pile driving and impact activities in the vicinity of the historic structure(s) in accordance with the California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual, dated April 2020, or subsequent updates of this Manual.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.9, Noise, pages 4.9-30 through 4.9-32 of the Draft PEIR. The following presents a summary of that rationale:

For sensitive uses that are located at or within 25 feet of potential project construction sites, sensitive receptors at these locations may experience vibration levels during construction activities

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that exceed the FTA vibration impact threshold of 80 VdB for human annoyance. However, pursuant to Mitigation Measure MM-NOI-1, should certain construction activities take place within 25 feet of an occupied structure, a project-specific vibration impact analysis shall be conducted. In addition, Mitigation Measure MM-NOI-2 would prohibit pile driving within 50 feet of historic structures and instead utilize alternative installation methods; require a preconstruction survey of all designated historic buildings within 50 feet of proposed construction activities; and require vibration monitoring prior to and during pile driving operations occurring within 100 feet of historic structures. Therefore, implementation of Mitigation Measures MM-NOI-1 and MM-NOI-2 would reduce short-term vibration impacts to a less-than-significant level.

Cumulative Impacts: The proposed GPU would not result in cumulative impacts due to groundborne vibrations.

### **Findings**

The City finds that changes or alterations have been required in, or incorporated into, the proposed GPU, which avoid or substantially lessen the significant environmental effect as identified in the Draft PEIR. Specifically, the City finds that Mitigation Measures MM-NOI-1 and MM-NOI-2, described above, shall be implemented to reduce potentially significant cumulative impacts cause by excessive groundborne vibrations to less-than-significant levels.

### **Explanation of the Rationale**

The rationale and facts supporting the above finding are fully developed in Section 4.9, Noise, pages 4.9-33 through 4.9-34 of the Draft PEIR. The following presents a summary of that rationale:

Potential cumulative impacts of short-term and long-term noise would be less than significant. Operational activities under the implementation of proposed GPU would not generate substantial groundborne vibration and construction activities associated with developments under the proposed GPU would cause less-than-significant vibration impacts with implementation of Mitigation Measures MM-NOI-1 and MM-NOI-2. Groundborne vibration generated from cumulative development projects would be required to implement any required mitigation measures on a project-by-project basis, as applicable, pursuant to CEQA provisions. Moreover, vibration generation is limited to areas within the immediate vicinity of the source (e.g., primarily within 25 feet of most construction activities); thus, vibration impacts are almost exclusively project-level impacts rather than cumulative. Therefore, implementation of the proposed GPU would result in a less-than-significant cumulative vibration impact.

## 6.0 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

### 6.0 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

The Final EIR determined that the proposed GPU has potentially significant environmental effects that cannot be feasibly mitigated to less-than-significant levels, and such impacts would be significant and unavoidable. These impacts and the corresponding findings are identified in the sections below.

#### 6.1 AIR QUALITY

Threshold (a): The proposed GPU would have the potential to conflict with or obstruct implementation of the applicable air quality plan.

#### Findings

The City finds that specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final PEIR. While changes or alterations have been required in, or incorporated into, the proposed GPU to address this significant effect on the environment, no feasible mitigation measures exist to reduce emissions below the thresholds of significance. The following Mitigation Measures MM-AQ-1 and MM-AQ-2 would be required to reduce emissions but would not be sufficient to reduce this impact to a less-than-significant level:

**MM-AQ-1:** The City of Rolling Hills Estates shall require applicants of future development projects that require discretionary grading approval by the Planning Commission to control ozone precursor emissions from construction equipment vehicles by maintaining equipment engines in good condition and in proper tune per manufacturer's specifications. The equipment maintenance records and equipment design specifications data sheets shall be kept on site by the project contractor during construction activities.

**MM-AQ-2:** To identify potential long-term operational-related air quality impacts from future development projects that are larger than the representative projects considered in this analysis, project-specific air emissions impacts shall be determined in compliance with the latest version of the SCAQMD CEQA Guidelines. To address potential localized impacts, the air quality analysis shall be completed pursuant to the latest version of SCAQMD's *Final Localized Significance Threshold Methodology* document or other appropriate methodology as determined in conjunction with SCAQMD. The results of the operational-related and localized air quality impacts analyses shall be included in the future development project's CEQA documentation. If such analyses identify potentially significant regional or localized air quality impacts, the City shall require the incorporation of appropriate mitigation to reduce such impacts as required by CEQA. In such cases, appropriate mitigation could include, but would not be limited to:

- Use of Tier 4 equipment during project construction;
- Incorporation of energy-efficient design features beyond those required by Title 24 and the CALGreen Code; and

## 6.0 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

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- Application of transportation demand measures (TDM) beyond those required by code.

The City finds that there are no other feasible mitigation measures that would further lessen the impact; thus, the impact is unavoidable. The City finds that specific economic, social, or other considerations make infeasible additional mitigation. However, pursuant to PRC Section 21081(a)(3), as described in the Statement of Overriding Considerations, the City has determined that this impact is acceptable based on specific overriding considerations found in Chapter 10 below.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.2, Air Quality, pages 4.2-15 through 4.2-18 of the Draft PEIR. The following presents a summary of that rationale:

The proposed GPU would be inconsistent with the SCAQMD AQMP as buildout of the proposed GPU could exceed current SCAG population and employment estimates and would cumulatively contribute to the nonattainment designations of the South Coast Air Basin. Incorporation of Mitigation Measures MM-AQ-1 and MM-AQ-2 into future development projects during construction and operation would contribute to reduced criteria air pollutant emissions associated with buildout of the proposed GPU. In addition, goals and policies included in the proposed GPU would promote increased capacity for alternative transportation modes and implementation of transportation demand management strategies. However, since implementation of the proposed GPU would introduce land use intensification in certain portions of the Planning Area, no mitigation measures are available that would reduce total air quality emissions from buildout of the proposed GPU to a less-than-significant level. In addition, the population and employment assumptions of the AQMP would still be exceeded until such time the AQMP is revised and incorporates updated projections that consider the proposed GPU. Therefore, air quality impacts related to the implementation of the AQMP would remain significant and unavoidable.

Threshold (b): The proposed GPU would have the potential to result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment.

### Findings

The City finds that specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final PEIR. While changes or alterations have been required in, or incorporated into, the proposed GPU to address this significant effect on the environment, no feasible mitigation measures exist to reduce emissions below the threshold of significance. Mitigation Measures MM-AQ-1 and MM-AQ-2 would be required to reduce emissions but would not be sufficient to reduce this impact to a less-than-significant level.

The City finds that there are no other feasible mitigation measures that would further lessen the impact; thus, the impact is unavoidable. The City finds that specific economic, social, or other considerations make infeasible additional mitigation. However, pursuant to PRC Section 21081(a)(3), as described in the Statement of Overriding Considerations, the City has determined

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that this impact is acceptable based on specific overriding considerations found in Chapter 10 below.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.2, Air Quality, pages 4.2-21 through 4.2-27 of the Draft PEIR. The following presents a summary of that rationale:

Construction activities associated with future development under the proposed GPU could generate short-term emissions that could lead to the violation of an applicable air quality standard or contribute substantially to an existing or projected air quality violation or exceed the SCAQMD's significance thresholds and would cumulatively contribute to the nonattainment designations of the Basin. Implementation of Mitigation Measures MM-AQ-1 and MM-AQ-2 would reduce criteria air pollutant emissions from construction-related activities. However, since implementation of the proposed GPU would introduce land use intensification and possibly large future development projects in certain portions of the Planning Area, it cannot be determined with certainty that Mitigation Measures MM-AQ-1 and MM-AQ-2 would reduce impacts below SCAQMD's thresholds in all cases. Therefore, construction impacts related to the increase of criteria pollutants for which the Basin is non-attainment are conservatively considered significant and unavoidable.

Threshold (c): The proposed GPU would have the potential to expose sensitive receptors to substantial pollutant concentrations.

### Findings

The City finds that specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final PEIR. While changes or alterations have been required in, or incorporated into, the proposed GPU to address this significant effect on the environment, no feasible mitigation measures exist to reduce emissions below the threshold of significance. Mitigation Measures MM-AQ-1 and MM-AQ-2 would be required to reduce emissions but would not be sufficient to reduce this impact to a less-than-significant level.

The City finds that there are no other feasible mitigation measures that would further lessen the impact; thus, the impact is unavoidable. The City finds that specific economic, social, or other considerations make infeasible additional mitigation. However, pursuant to PRC Section 21081(a)(3), as described in the Statement of Overriding Considerations, the City has determined that this impact is acceptable based on specific overriding considerations found in Chapter 10 below.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.2, Air Quality, pages 4.2-27 through 4.2-31 of the Draft PEIR. The following presents a summary of that rationale:

Construction activities associated with future development under the proposed GPU could generate short-term emissions that may cause localized air quality impacts. Implementation of Mitigation Measures MM-AQ-1 through MM-AQ-3 would reduce criteria air pollutant emissions from construction-related activities and the associated localized impacts. However, since construction activities could occur close to existing sensitive receptors, construction emissions generated by future development projects that are larger than the representative projects considered in this



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analysis have the potential to exceed SCAQMD LSTs and it cannot be determined with certainty that Mitigation Measures MM-AQ-1 and MM-AQ-2 would reduce impacts below SCAQMD's thresholds in all cases. Therefore, the impacts are conservatively considered significant and unavoidable.

Cumulative Impacts: The proposed GPU's cumulative air quality impacts are significant and cannot be mitigated to a less-than-significant level.

### Findings

The City finds that specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final PEIR. While changes or alterations have been required in, or incorporated into, the proposed GPU to address this significant effect on the environment, no feasible mitigation measures exist to reduce emissions below the threshold of significance. Mitigation Measures MM-AQ-1 and MM-AQ-2 would be required to reduce emissions but would not be sufficient to reduce this impact to a less-than-significant level.

The City finds that there are no other feasible mitigation measures that would further lessen the impact; thus, the impact is unavoidable. The City finds that specific economic, social, or other considerations make infeasible additional mitigation. However, pursuant to PRC Section 21081(a)(3), as described in the Statement of Overriding Considerations, the City has determined that this impact is acceptable based on specific overriding considerations found in Chapter 10 below.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.2, Air Quality, pages 4.2-31 through 4.2-32 of the Draft PEIR. The following presents a summary of that rationale:

Air emissions generated during construction of future potential development projects in the Planning Area and surrounding cities may be cumulatively considerable. Emissions from operations of future development associated with implementation of the proposed GPU would potentially exceed the South Coast Air Quality Management District (SCAQMD) thresholds for criteria pollutants, resulting in a significant impact. In accordance with SCAQMD methodology, any project emissions that cannot be mitigated to less-than-significant levels are also significant on a cumulative basis. Therefore, air quality impacts associated with the buildout of the proposed GPU could be cumulatively considerable, and, thus, are considered to be significant and unavoidable.

## 6.2 CULTURAL RESOURCES

Threshold (a): The proposed GPU would have the potential to cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5

### Findings

The City finds that specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final PEIR. While changes or alterations have been required in, or incorporated into, the proposed GPU to address this significant effect on the environment, impacts are considered significant and unavoidable since demolition or other material impairment of a historical resource over the course of the buildout of

## 6.0 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

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the proposed GPU cannot be precluded. The following Mitigation Measures MM-CUL-1 through MM-CUL-3 would be required to reduce impacts of the buildout of the proposed GPU on historical resources to the maximum extent feasible but would not be sufficient to reduce these impacts to less-than-significant levels:

- MM-CUL-1:** Prior to the issuance of a demolition permit for projects that propose to relocate, demolish, or alter a building or structure that is over 45 years old, possesses a distinctive architectural style, and was built during and representative of the period of significance for that architectural style (e.g., California Ranch of the 1940s and 1950s, Midcentury Modern of the 1940s-1960s, etc.), the City of Rolling Hills Estates shall require the applicant to submit a historical resources assessment report, if the building or structure has not been previously evaluated for potential historical significance. For single-family residential properties, a historical resources assessment report shall only be required if the involved building/structure is characteristic of the surrounding neighborhood and the demolition/alteration involves a façade or building volume that is/would be visible from the street or other publicly accessible vantage point. If the building or structure is determined to be a historical resource, the report shall include an assessment of the project's impacts to the resource. The report shall be prepared by a qualified Architectural Historian or Historian who meets the Secretary of the Interior's Professional Qualifications Standards, and shall satisfy federal and State guidelines for the identification, evaluation, and recordation of historical resources. Should the City conduct and/or approve a citywide or neighborhood/district historic resources inventory, within the bounds of that survey this mitigation measure shall only apply to potentially significant historic resources identified by the inventory. Similarly, should a historic context statement be prepared for any historical themes in Rolling Hills Estates, the guidance and recommendations of the historic context statement shall supersede the requirements of this mitigation measure for potentially significant historic resources within that theme.
- MM-CUL-2:** The Secretary of the Interior's Standards for the Treatment of Historic Properties shall be used to the maximum extent possible to ensure that projects involving the relocation, conversion, rehabilitation, or alteration of a historical resource and its setting, or related new construction, will not impair the significance of the historical resource. Use of the Secretary's Standards shall be overseen by an architectural historian or historic architect meeting the Secretary of the Interior's Professional Qualification Standards. Evidence of compliance with the Secretary's Standards shall be provided to the City in the form of a report identifying and photographing character-defining features and spaces and specifying how the proposed treatment of character-defining features and spaces and related construction activities will conform to the Secretary's Standards.
- MM-CUL-3:** If the City determines that significant impacts to historical resources cannot be avoided, the City shall require, at a minimum, that the affected historical resources be thoroughly documented before issuance of any permits, and may also require additional public education efforts and/or memorialization of the historical resource. Such recordation shall be prepared under the supervision of an architectural historian, historian, or historic architect meeting the Secretary of

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the Interior's Professional Qualification Standards, and should take the form of Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscape Survey (HALS) documentation. At a minimum, this recordation shall include an architectural and historical narrative; archival photographic documentation; and any supplementary information available, such as building plans and elevations and/or historic photographs. The documentation package shall be produced on archival paper and made available to researchers and the public through accession by appropriate institutions, such as the Local History Center at the Peninsula Center Library, the South Central Coastal Information Center at California State University, Fullerton, and/or the HABS/HAER/HALS collection housed in the Library of Congress. Depending on the significance of the historical resource, the City, at its discretion, may also require public education about the historical resource in the form of an exhibit, web page, brochure, or other format and/or memorialization of the historical resource on or near the proposed project site. If memorialized, such memorialization shall be a permanent installation, such as a mural, display, or other vehicle that recalls the location, appearance, and historical significance of the affected historical resource, and shall be designed in conjunction with a qualified architectural historian, historian, or historic architect.

The City finds that there are no other feasible mitigation measures that would further lessen the impact; thus, the impact is unavoidable. The City finds that specific economic, social, or other considerations make infeasible additional mitigation. However, pursuant to PRC Section 21081(a)(3), as described in the Statement of Overriding Considerations, the City has determined that this impact is acceptable based on specific overriding considerations found in Chapter 10 below.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.4, Cultural Resources, pages 4.4-15 through 4.4-18 of the Draft PEIR. The following presents a summary of that rationale:

Generally, compliance with City General Plan policies, provisions of the RHEMC, and State and federal regulations pertaining to the alteration, demolition, and relocation of historical resources, in addition to Mitigation Measures MM-CUL-1 and MM-CUL-2, would reduce impacts to historical resources to a less-than-significant level. However, in the event that one or more future projects cannot avoid demolition of a historical resource or alteration of a historical resource in a manner that would materially impair the resource, a significant impact would occur even with the implementation of Mitigation Measure MM-CUL-3. While implementation of the mitigation measures, in addition to compliance with City General Plan policies, provisions of the RHEMC, and State and federal regulations pertaining to historical resources, would reduce impacts of the buildout of the proposed GPU on historical resources to the maximum extent feasible, since demolition or other material impairment of a historical resource over the course of buildout of the proposed GPU cannot be precluded, impacts are considered significant and unavoidable.

Threshold (b): The proposed GPU would have the potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5

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### Findings

The City finds that specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final PEIR. While changes or alterations have been required in, or incorporated into, the proposed GPU to address this significant effect on the environment, impacts are considered significant and unavoidable since destruction of an archaeological resource over the course of the buildout of the proposed GPU cannot be precluded. The following Mitigation Measures MM-CUL-4 through MM-CUL-7 would be required to reduce impacts of the buildout of the proposed GPU on archaeological resources to the maximum extent feasible but would not be sufficient to reduce these impacts to less-than-significant levels:

**MM-CUL-4:** To ensure identification and preservation of archaeological resources and avoid significant impacts to those resources, prior to grading approval by the Rolling Hills Estates Planning Commission, each project requiring such approval shall be screened to determine whether an Archaeological Resources Assessment report is required. Screening shall consider the type of project and whether ground disturbance will occur in native soils (i.e., previously undisturbed soils). If so, prior to grading approval by the Rolling Hills Estates Planning Commission, the City shall require an Archaeological Resources Assessment be conducted under the supervision of an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards.

Archaeological Resources Assessments shall include a California Historical Resources Information System records search at the South Central Coastal Information Center and a Sacred Lands File search through the Native American Heritage Commission. The records searches will determine if the proposed development area has been previously surveyed for archaeological resources, identify and characterize the results of previous cultural resource surveys, and disclose any cultural resources that have been recorded and/or evaluated. If unpaved surfaces are present within the development area, and the entire development area has not been previously surveyed within the past 10 years, a Phase I pedestrian survey shall be undertaken in proposed development areas to locate any surface cultural materials that may be present.

**MM-CUL-5:** If the Archaeological Resources Assessment identifies potentially significant archaeological resources and impacts cannot be avoided, a Phase II Testing and Evaluation investigation shall be performed by an archaeologist who meets the Secretary of the Interior's Standards to determine significance prior to any ground-disturbing activities. If resources are determined significant or unique through Phase II testing and site avoidance is not possible, appropriate site-specific mitigation measures shall be undertaken. These may include a Phase III data recovery program implemented by a qualified archaeologist and performed in accordance with the California Office of Historic Preservation's "Archaeological Resource Management Reports (ARMR): Recommended Contents and Format" (1990) and "Guidelines for Archaeological Research Designs" (1991).

**MM-CUL-6:** If the Archaeological Resources Assessment did not identify archaeological resources but found the area to be highly sensitive for archaeological resources, a qualified archaeologist shall monitor all ground-disturbing construction and pre-construction activities in areas with previously undisturbed soil. The archaeologist shall inform all construction personnel prior to construction activities of the proper

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procedures in the event of an archaeological discovery. The training shall be held in conjunction with the project's initial on-site safety meeting and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the resources are evaluated for significance by an archaeologist who meets the Secretary's Standards, and tribal consultation shall be conducted in the case of a tribal resource. If the discovery proves to be significant, the long-term disposition of any collected materials shall be determined in consultation with the affiliated tribe(s), where relevant; this could include curation with a recognized scientific or educational repository, transfer to the tribe, or respectful reinternment in an area designated by the tribe.

**MM-CUL-7:** If an Archaeological Resources Assessment does not identify potentially significant archaeological resources but the site has moderate sensitivity for archaeological resources, an archaeologist who meets the Secretary's Standards shall be retained on call. The archaeologist shall inform all construction personnel prior to construction activities about the proper procedures in the event of an archaeological discovery. The pre-construction training shall be held in conjunction with a future development project's initial on-site safety meeting and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the on-call archaeologist is contacted. The resource shall be evaluated for significance and tribal consultation shall be conducted, in the case of a tribal resource. If the discovery proves to be significant, the long-term disposition of any collected materials should be determined in consultation with the affiliated tribe(s), where relevant.

The City finds that there are no other feasible mitigation measures that would further lessen the impact; thus, the impact is unavoidable. The City finds that specific economic, social, or other considerations make infeasible additional mitigation. However, pursuant to PRC Section 21081(a)(3), as described in the Statement of Overriding Considerations, the City has determined that this impact is acceptable based on specific overriding considerations found in Chapter 10 below.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.4, Cultural Resources, pages 4.4-19 through 4.4-21 of the Draft PEIR. The following presents a summary of that rationale:

Mitigation Measures MM-CUL-4 through MM-CUL-7 were developed to reduce potential impacts associated with future development and redevelopment under the proposed GPU. Mitigation Measure MM-CUL-4 requires an archaeological resources assessment be conducted for future development projects to identify any known archaeological resources and the sensitivity of the site. Mitigation Measures MM-CUL-5 through MM-CUL-7 detail the next steps required should the archaeological resources assessment identify known resources or determine the site to have high or moderate resource sensitivity. Implementation of Mitigation Measures MM-CUL-4 through MM-CUL-7, in addition to compliance with the City's General Plan policies and State and federal

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regulations pertaining to archaeological resources, would reduce impacts of the buildout of the proposed GPU on archaeological resources to the maximum extent feasible; however, since destruction of an archaeological resource over the course of buildout of the proposed GPU cannot be precluded, impacts are considered significant and unavoidable.

Cumulative Impacts: The proposed GPU's cumulative impacts on cultural resources, specifically historical and archaeological resources, are significant and cannot be mitigated to a less-than-significant level.

### Findings

The City finds that specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final PEIR. While changes or alterations have been required in, or incorporated into, the proposed GPU to address this significant effect on the environment, no feasible mitigation measures exist to reduce impacts to cultural resources to less-than-significant levels. Mitigation Measures MM-CUL-1 through MM-CUL-7 would be required to reduce impacts to cultural resources but would not be sufficient to reduce these impacts to less-than-significant levels.

The City finds that there are no other feasible mitigation measures that would further lessen the impact; thus, the impact is unavoidable. The City finds that specific economic, social, or other considerations make infeasible additional mitigation. However, pursuant to PRC Section 21081(a)(3), as described in the Statement of Overriding Considerations, the City has determined that this impact is acceptable based on specific overriding considerations found in Chapter 10 below.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.4, Cultural Resources, pages 4.2-21 through 4.2-22 of the Draft PEIR. The following presents a summary of that rationale:

Future development and redevelopment projects in the Palos Verdes Peninsula have the potential to result in cumulative impacts related to the physical demolition, destruction, relocation, or alteration of historical resources or their immediate surroundings. Significant cultural resources, including archaeological resources, are non-renewable components of finite classes of resources. Therefore, all adverse effects contribute to the erosion of a shrinking base of resources. As a result, the potential for cumulative impacts to cultural resources is cumulatively significant.

Mitigation Measures MM-CUL-1 through MM-CUL-3 would require a historical resources assessment be prepared to evaluate potential historical resources for significance, require conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties to reduce a project's impact on historical resources to less than significant, or if impacts cannot be avoided, require the recordation and memorialization of the affected historical resource. Mitigation Measures MM-CUL-4 through MM-CUL-7 require an archaeological resources assessment and detail the next steps required should the assessment identify archaeological resources or determine the site to have high or moderate archaeological resource sensitivity. Implementation of these measures would reduce the potential for adverse impacts on cultural resources both individually and cumulatively; however, there is the potential for significant impacts because documentation, memorialization, and data recovery do not mitigate impacts to a less-than-

## 6.0 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

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significant level. Therefore, cumulative impacts to cultural resources, including built environment and archaeological resources, are considered significant and unavoidable.

### 6.3 TRANSPORTATION

Threshold (b): Buildout of the proposed GPU would conflict or be inconsistent with CEQA Guidelines Section 15064.3(b)

#### Findings

The City finds that specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final PEIR. While changes or alterations have been required in, or incorporated into, the proposed GPU, which avoid or substantially lessen the significant environmental effect as identified in the Draft PEIR. Specifically, the City finds that the following Mitigation Measures MM-TRAN-1 through MM-TRAN-3 shall be implemented to reduce significant impacts related to vehicle miles traveled (VMT) but would not be sufficient to reduce these impacts to less-than-significant levels:

**MM-TRAN-1:** The City shall work with future developers of multi-family housing, commercial projects, and mixed-use projects to ensure they provide the following as TDM measures for mitigating VMT:

- **Provision of Pedestrian Network Improvements:** Create a connected pedestrian network within the development and connect to nearby destinations.
- **Construction or Improvements to Bike Facility or Expand Bikeway Network:** Enhance bicycle network Citywide (or at similar scale), such that a building entrance or bicycle parking is within 200 yards walking or bicycling distance from a bicycle network that connects to at least one of the following: at least 10 diverse uses; a school or employment center, if the project total floor area is 50 percent or more residential; or a bus rapid transit stop, light or heavy rail station, commuter rail station, or ferry terminal.

**MM-TRAN-2:** For future projects that exceed the VMT significance thresholds shown in Table 4.16-2, or the VMT significance thresholds in place at the time of the application, the City shall require conditions of approval to reduce the project's VMT. In developing such conditions of approval, the City shall minimally consider the following:

- **Expansion of Car Share Program:** Implement a car-sharing program to (1) lower vehicle ownership rates to encourage a general shift to non-driving modes and (2) allow people to have on-demand access to a shared fleet of vehicles on an as-needed basis as a supplement to trips made by non-single-occupancy vehicle (SOV) modes.
- **Provision of Ridesharing Program:** Provide ride-sharing programs through a multi-faceted approach, such as designating a certain percentage of parking spaces for ride-sharing vehicles or designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles.

## 6.0 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

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- **Implementation of Commute Trip Reduction Program:** Implement a commute trip reduction (CTR) program, which shall include all of the following to be effective:
  - Carpooling encouragement
  - Ride-matching assistance
  - Preferential carpool parking
  - Flexible work schedules for carpools
  - Half-time transportation coordinator
  - Vanpool assistance
  - Bicycle end-trip facilities (e.g., parking, showers, and lockers)

**MM-TRAN-3:** The City of Rolling Hills Estates shall coordinate with neighboring cities and LA Metro to seek additional transit opportunities and resources in the Planning Area and on the Palos Verdes Peninsula. Should a transit station or similar facility be sought on the Peninsula, the Peninsula Center Commercial District shall be a target location for such a facility to align the City's highest density development with transit opportunities.

The City finds that there are no other feasible mitigation measures that would further lessen the impact; thus, the impact is unavoidable. The City finds that specific economic, social, or other considerations make infeasible additional mitigation. However, pursuant to PRC Section 21081(a)(3), as described in the Statement of Overriding Considerations, the City has determined that this impact is acceptable based on specific overriding considerations found in Chapter 10 below.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.16, Transportation, pages 4.16-15 through 4.16-18 of the Draft PEIR. The following presents a summary of that rationale:

The proposed GPU was analyzed considering both a low-range buildout scenario and a high-range buildout scenario. Neither scenario meets the City's significance threshold for the residential VMT per capita metric, and the low-range buildout scenario does not meet the City's significance threshold for the work VMT per employee metric. As such, the proposed GPU would be inconsistent with CEQA Guidelines Section 15064.3(b).

The combination of the strategies identified in Mitigation Measure MM-TRAN-1 would yield approximately a 1-2 percent VMT reduction for the buildout scenarios. The TDM measures identified in Mitigation Measure MM-TRAN-2 are primarily targeted at reducing the work VMT per employee metric (or home-based work attraction trips), whereas the VMT impact for both buildout scenarios is for the residential VMT per capita efficiency metric.

The location of the proposed housing and commercial uses would be mainly concentrated in the Commercial District, which is the most efficient location in the City with respect to VMT. To enhance this efficiency, Mitigation Measure MM-TRAN-3 aims to target transit investments in the



## 6.0 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

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Commercial District to align the highest density development in the City with transit opportunities. However, requiring a substantial level of TDM measures for future projects would create a financial impediment for developers to build the number housing units outlined in the buildout scenarios, including the City's required Regional Housing Needs Assessment (RHNA) numbers. After considering all viable TDM strategies to reduce the VMT impact of the proposed GPU under both buildout scenarios, the proposed GPU would still result in a significant and unavoidable VMT impact.

Cumulative Impacts: A significant cumulative impact related to transportation, specifically on VMT, would result from implementation of the proposed GPU.

### Findings

The City finds that specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final PEIR. While changes or alterations have been required in, or incorporated into, the proposed GPU, which avoid or substantially lessen the significant environmental effect as identified in the Draft PEIR. Specifically, the City finds that Mitigation Measures MM-TRAN-1 through MM-TRAN-3 shall be implemented to reduce potentially significant impacts related to VMT but would not be sufficient to reduce these impacts to less-than-significant levels.

The City finds that there are no other feasible mitigation measures that would further lessen the impact; thus, the impact is unavoidable. The City finds that specific economic, social, or other considerations make infeasible additional mitigation. However, pursuant to PRC Section 21081(a)(3), as described in the Statement of Overriding Considerations, the City has determined that this impact is acceptable based on specific overriding considerations found in Chapter 10 below.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.16, Transportation, pages 4.16-20 through 4.16-21 of the Draft PEIR. The following presents a summary of that rationale:

Although both the low-range and high-range buildout scenarios would reduce daily VMT in 2040 compared to existing conditions, both buildout scenarios do not meet the City's significance threshold for the residential VMT per capita metric, and the low-range buildout scenario does not meet the City's significance threshold for the work VMT per employee metric. Accordingly, the proposed GPU has been determined to be inconsistent with CEQA Guidelines Section 15064.3(b), and impacts related to VMT would be significant. Although the proposed GPU includes numerous goals and policies related to (1) integrating transportation and land use planning to provide mobility options and comfort for pedestrians, bicyclists, equestrians, transit users, and personal vehicles, and (2) providing a balance of high-quality active and passive public open spaces, a regional trail system, and recreation facilities based on community needs, VMT reductions at buildout conditions for the residential VMT per capita metric are substantially lower than the 15-percent minimum threshold. As such, the proposed GPU's contribution to VMT generation in the region would be cumulatively considerable, and cumulative impacts would be considered significant. Implementation of Mitigation Measure MM-TRAN-1 would yield approximately a 1-2 percent VMT reduction for the buildout scenarios, which would not be sufficient to reduce the residential VMT per capita by 15 percent. Therefore, the residual VMT impacts associated with the

## 6.0 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

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buildout of the proposed GPU would remain cumulatively considerable and, thus, are considered to be significant and unavoidable.

### 6.4 TRIBAL CULTURAL RESOURCES

Threshold (a) The proposed GPU would have the potential to cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or a resource determined by the lead agency to be significant pursuant to criteria from Public Resources Code Section 5024.1(c).

#### Findings

The City finds that specific economic, legal, social, technological, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final PEIR. While changes or alterations have been required in, or incorporated into, the proposed GPU, which avoid or substantially lessen the significant environmental effect as identified in the Draft PEIR. Specifically, the City finds that Mitigation Measures MM-CUL-4 through MM-CUL-7, described above, shall be implemented to reduce potentially significant impacts to tribal cultural resources but would not be sufficient to reduce such impacts to less-than-significant levels.

The City finds that there are no other feasible mitigation measures that would further lessen the impact; thus, the impact is unavoidable. The City finds that specific economic, social, or other considerations make infeasible additional mitigation. However, pursuant to PRC Section 21081(a)(3), as described in the Statement of Overriding Considerations, the City has determined that this impact is acceptable based on specific overriding considerations found in Chapter 10 below.

#### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.17, Tribal Cultural Resources, pages 4.17-7 through 4.17-9 of the Draft PEIR. The following presents a summary of that rationale:

The proposed GPU does not propose any development in and of itself but is a regulatory document that sets the framework for future development and redevelopment in the Planning Area. Because various prehistoric archaeological sites have been identified in the Planning Area, the area is considered potentially sensitive for tribal cultural resources, which could be identified during analysis and CEQA review of future projects. Future development and redevelopment projects must be analyzed on a project-specific basis for conformance with the proposed GPU and other local, State, and federal requirements. Ground-disturbing activities would have the potential to unearth, damage, and/or destroy known or unknown tribal cultural resources and have the potential to result in adverse impacts. Therefore, impacts to tribal cultural resources would potentially be significant.

Future projects proposed in accordance with the proposed GPU would be required to conduct an archaeological resources assessment and archaeological survey to determine whether the development site has high, moderate, or low sensitivity for archaeological resources, including tribal cultural resources (Mitigation Measure MM-CUL-4). If archaeological resources are discovered, Mitigation Measure MM-CUL-5 details additional archaeological testing that shall be

## 6.0 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

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conducted to determine significance, and Mitigation Measures MM-CUL-6 and MM-CUL-7 require pre-construction training and monitoring if the development site is determined to have high and moderate sensitivity, respectively. Implementation of the recommended mitigation measures and adherence to applicable federal, State, and local regulations would reduce potential impacts of the buildout of the proposed GPU on tribal cultural resources; however, the potential loss of tribal cultural resources may not be adequately mitigated through data recovery and collection methods, as the value of a tribal cultural resource lies in cultural values and religious beliefs of associated tribes. Since significant impacts to tribal cultural resources from future projects building out the Planning Area under the proposed GPU cannot be precluded, impacts are considered significant and unavoidable.

Cumulative Impacts: The proposed GPU would have potentially cumulative impacts on tribal cultural resources.

### Findings

The City finds that changes or alterations have been required in, or incorporated into, the GPU, which avoid or substantially lessen the significant environmental effect as identified in the Draft PEIR. Specifically, the City finds that Mitigation Measures MM-CUL-4 through MM-CUL-7, described above, shall be implemented to reduce potentially significant impacts, but would not be sufficient to reduce impacts to less-than-significant.

The City finds that specific economic, legal, social, technological, or other considerations, including the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the EIR. While changes or alterations have been required in, or incorporated into, the Project to address this significant effect on the environment, no feasible mitigation measures exist to reduce impacts to tribal cultural resources to a less-than-significant level due such resources being unique and non-renewable. The City finds that specific economic, social, or other considerations make infeasible additional mitigation. However, pursuant to PRC § 21081(a)(3), as described in the Statement of Overriding Considerations, the Board has determined that this impact is acceptable based on specific overriding considerations found herein in Chapter 10 below.

### Explanation of the Rationale

The rationale and facts supporting the above finding are fully developed in Section 4.17, Tribal Cultural Resources, page 4.17-9 of the Draft PEIR. The following presents a summary of that rationale:

While there are no known tribal cultural resources within the Planning Area, it is possible that unknown tribal cultural resources could exist within the Planning Area. Future development and redevelopment projects allowed by the proposed GPU would have the potential to result in a cumulative impact associated with the loss of unknown tribal cultural resources through ground-disturbing activities that could cause substantial adverse change in the significance of tribal cultural resources.

Implementation of Mitigation Measures MM-CUL-4 through MM-CUL-7 would reduce the potential for adverse impacts on tribal cultural resources both individually and cumulatively; however, there is the potential for significant impacts because data recovery and collection methods specified as mitigation may not reduce the impact to resources to a less-than-significant level. Potential

## **6.0 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS**

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impacts and mitigation would need to be evaluated on a project-by-project basis. Future development projects allowed under the proposed GPU, in combination with cumulative development projects in the surrounding cities in the Palos Verdes Peninsula, would have the potential to result in a significant cumulative impact to tribal cultural resources. Therefore, cumulative impacts to tribal cultural resources are considered significant and unavoidable.

## **6.0 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS**

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## 7.0 FINDINGS REGARDING PROJECT ALTERNATIVES

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### 7.0 FINDINGS REGARDING PROJECT ALTERNATIVES

An EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are potentially feasible and, therefore, merit in-depth consideration, and which are infeasible. To identify reasonable alternatives to the proposed GPU, the City considered the objectives of the proposed GPU, those alternatives that are feasible to accomplish, and those alternatives that could reduce one or more of the significant impacts of the proposed GPU. The PEIR discussed several alternatives to the proposed GPU in order to present a reasonable range of alternatives. Alternatives analyzed in the Chapter 5 of the Draft PEIR include the following:

- No Project/No Development (Alternative 1)
- Project without Local Density Bonus Alternative (Alternative 2)
- Project without Mixed-Use Overlay on Commercial Office Alternative (Alternative 3)

### 7.1 ALTERNATIVE 1: NO PROJECT/NO DEVELOPMENT ALTERNATIVE (ALTERNATIVE 1)

CEQA Guidelines Section 15126.6(e) requires that an EIR evaluate and analyze the impacts of a No Project Alternative. When the project is the revision of an existing land use or regulatory plan, policy, or ongoing operation, the No Project Alternative is the continuation of the existing plan, policy, or operation into the future. Accordingly, under Alternative 1, no changes to the current General Plan would occur, including no changes to the land use designations or circulation plan. Alternative 1 would continue to allow future development within the Planning Area of what would be reasonably expected under the current (1992) General Plan based on existing land use designations and their corresponding allowable uses and densities.

#### 7.1.1 ENVIRONMENTAL EFFECTS

Alternative 1 would result in the continuation of existing conditions in the Planning Area. While Alternative 1 would reduce the proposed GPU's significant operational air quality impact to a less-than-significant level, it would cause new significant impacts related to biological impacts and vibrations.

#### 7.1.2 FINDINGS

While Alternative 1 would reduce the proposed GPU's significant operational air quality impact to a less-than-significant level, impacts to special status species or habitats, riparian habitat, sensitive communities, federally protected wetlands, and vibration under Alternative 1 may be potentially significant and unavoidable and greater than the proposed GPU without the benefit of implementing Mitigation Measures MM-BIO-1 through MM-BIO-4 to reduce impacts related to biological resources and MM-NOI-1 and MM-NOI-2 to reduce impacts related to construction vibration. As such these impacts may be potentially significant and unavoidable and would be greater than the proposed GPU. Therefore, the City finds this alternative infeasible and less desirable than the proposed GPU and rejected it because it would fail to meet any of the basic Project objectives, including the City's Vision and Guiding Principles of (1) preserving the City's distinctive rural character and high quality of life; (2) improving mobility and emphasizing a spectrum of transportation choices; (3) promoting a vibrant commercial district that provides ample opportunities for shopping, outdoor dining, entertainment, and living; (4) maintaining

## **7.0 FINDINGS REGARDING PROJECT ALTERNATIVES**

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equestrian character; (5) providing quality parks, trails, open spaces, and community facilities, where residents and visitors can conveniently walk, ride horses, bike, and take transit to and within the community and where people of all ages can gather, play, and learn safely; (6) enhancing the public realm and promoting quality design; (7) becoming a more sustainable city that is a model for sustainable practices and admired for its quality local environment, natural semi-rural setting, and recreational amenities; and (8) meeting the housing needs established by the State of California.

### **7.2 ALTERNATIVE 2: PROJECT WITHOUT LOCAL DENSITY BONUS ALTERNATIVE**

Under Alternative 2, no local density bonus would be included for the Commercial General land use designation. As a result, the base residential density in the Commercial District would be 30 dwelling units per acre, which with the State's affordable housing density bonus opportunity would provide for a maximum density of 45 dwelling units per acre. Because no local density bonus would be allowed, certain community benefits would not be incentivized.

Alternative 2 would not include the proposed GPU's local density bonus program and, as such, would not allow the same maximum level of buildout as the proposed GPU. Since the Planning Area is predominantly built out, as with the proposed GPU, future new development under Alternative 2 is likely to occur as infill or redevelopment. Accordingly, the majority of future development associated with buildout of Alternative 2 would be located within the Commercial District.

#### **7.2.1 ENVIRONMENTAL EFFECTS**

Compared to the proposed GPU, Alternative 2 would result in similar impacts to the proposed GPU. Alternative 2 would not reduce the significant and unavoidable project-level impacts and would not reduce the proposed GPU's contribution to the significant cumulative impacts related to air quality, cultural resources, transportation, and tribal cultural resources identified in the Draft PEIR.

#### **7.2.2 FINDINGS**

The City finds this alternative infeasible and less desirable than the proposed GPU and rejected it because it would have similar impacts to the proposed GPU and would not avoid or reduce any of the proposed GPU's impacts to a less-than-significant level. In addition, Alternative 2 would not promote ample housing opportunities for housing to the same extent as the proposed GPU.

### **7.3 ALTERNATIVE 3: PROJECT WITHOUT MIXED-USE OVERLAY ON COMMERCIAL OFFICE ALTERNATIVE**

Under Alternative 3, the Mixed-Use Overlay would not be applied to parcels that are designated as Commercial Office. As a result, 52 dwelling units (under the low range scenario) and 78 dwelling units (under the high range scenario) would not be allowed to be developed on the parcel designated Commercial Office (Academy Center development at the southwest corner of Palos Verdes Drive North and Crenshaw Boulevard).

Alternative 3 would not allow the same maximum level of buildout as the proposed GPU on the parcels that are designated as Commercial Office but would be the same as the proposed GPU on the level of development expected in the Commercial District.

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**7.0 FINDINGS REGARDING PROJECT ALTERNATIVES**

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**7.3.1 ENVIRONMENTAL EFFECTS**

Compared to the Proposed Project, Alternative 3 would result in similar impacts to the proposed GPU. Alternative 3 would not reduce the significant and unavoidable project-level impacts and would not reduce the proposed GPU's contribution to the significant cumulative impacts related to air quality, cultural resources, transportation, and tribal cultural resources identified in the Draft PEIR.

**7.3.2 Findings**

The City finds this alternative infeasible and less desirable than the proposed GPU. Alternative 3 was rejected because it would have similar impacts to the proposed GPU and would not avoid or reduce any of the proposed GPU's impacts to a less-than-significant level. In addition, Alternative 3 would not promote a vibrant commercial district or meet the City's Vision of providing ample opportunities for shopping, outdoor dining, entertainment, and living to the same extent as the proposed GPU.



## **7.0 FINDINGS REGARDING PROJECT ALTERNATIVES**

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## **8.0 FINDINGS REGARDING CHANGES TO THE DRAFT PEIR AND RECIRCULATION**

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### **8.1 CHANGES TO THE DRAFT PEIR**

In response to comments from the public and other public agencies, the Final PEIR has incorporated changes subsequent to publication of the Draft PEIR, as set forth in Section 3 of the Final PEIR. In addition, mitigation measures proposed in the Draft PEIR were incorporated into a Mitigation Monitoring and Reporting Program (MMRP).

### **8.2 REFINEMENT OF THE PROPOSED PROJECT**

Through the public hearing and public workshop process, the City Council made refinements to the proposed GPU, which, in addition to correcting typographical errors and formatting changes, generally consist of the following:

- Chapter 1: Vision and Guiding Principles
  - Added City's Mission Statement to previously blank page.
  - Re-ordered and removed numbering of Guiding Principles.
- Chapter 2: Land Use
  - Existing Mixed-Use Overlay District: currently allows 22 dwelling units/acre; would remain in place for properties with Neighborhood Commercial land use designation and be extended to properties with the Commercial Office designation. Academy Hill (southwest corner of Crenshaw Blvd. and Palos Verdes Drive North) was removed from the Mixed-Use Overlay District.
  - Allowance for workforce housing (affordable staff housing) at 2 dwelling units/acre on properties with Institutional land use designation. All properties with the Institutional land use designation were removed from this overlay, except Dapplegray School, Rolling Hills Covenant Church, and Peninsula High School.
  - All discussion of the reconfiguration and redevelopment of Bart Earle Way was removed.
  - New language was added regarding the future development of a linear park/promenade between Silver Spur Road and Bart Earle Way.
  - Seahorse Riding Club parcel redesignation from Commercial Recreation to Neighborhood Commercial with Mixed-Use Overlay District was removed.
  - Noted calculation error on Existing Residential Development Pro Forma in Appendix A.
  - No changes to Appendix B.
- Chapter 3: Mobility: No modifications were made.
- Chapter 4: Housing: No modifications were made.
- Chapter 5: Conservation
  - Added Hawthorne Boulevard as "Scenic Corridor".
  - Modified language in Goal 5-2 from "local" to "native" regarding the preservation of plant and animal life and their habitats.
- Chapter 6: Open Space and Recreation
  - Noted that Taber Grove is now completed and modified all references to it being a proposed park.
  - Updated status of Butcher Park
- Chapter 7: Safety

## 8.0 FINDINGS REGARDING CHANGES TO THE DRAFT PEIR AND RECIRCULATION

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- Added language that the policies that ensure both natural and human-made hazards are considered while making land use decisions, particularly given State-mandated requirements to provide additional housing.
- Added language regarding collaboration with Peninsula Cities, on the Peninsula Public Safety Committee and Regional Law Contract Committee.
- Minor clarification language in implementation measures related to the Palos Verdes Landfill
- Chapter 8: Noise
  - Minor language additions to implementation measure regarding excessive motorcycle and altered exhaust vehicles.
- Chapter 9: Sustainability
  - Removed all references to the Home Energy Renovation Opportunity (HERO) and Property Assessed Clean Energy (PACE) programs.
  - Minor language clarification in implementation measures related to organics collection and used oil and filter recycling.

These refinements to the proposed GPU do not affect the evaluation of environmental impacts in the EIR; no new significant environmental impacts would result from these refinements, nor would there be a substantial increase in the severity of any environmental impact. Given the limited scope and nature of the refinements to the proposed GPU that occurred through the public hearing and public workshop process, buildout of the proposed GPU would remain within the range identified and evaluated within the EIR. In addition, the refinements to the Conservation, Safety, Noise, and Sustainability Elements would serve to further reduce potential environmental impacts.

### 8.3 FINDINGS

Pursuant to CEQA, on the basis of the review and consideration of the Final PEIR, the City finds:

1. None of the comments raise any significant new information that would have to be added to the Draft PEIR.
2. Minor clarifications and updates set forth as revisions to the Draft PEIR have been made that merely make insignificant modifications to the information provided in the Draft PEIR.
3. Neither the minor revisions to the Draft PEIR nor the refinements to the proposed GPU that occurred through the public hearing and public workshop process are substantial changes that would deprive the public of a meaningful opportunity to comment on a substantial adverse environmental effect of the proposed GPU, a feasible way to mitigate or avoid such an effect, or a feasible project alternative.
4. Neither the minor revisions to the Draft PEIR nor the refinements to the proposed GPU that occurred through the public hearing and public workshop process result in new significant environmental effects or substantially increase the severity of the previously identified significant effects disclosed in the Draft PEIR.
5. Neither the minor revisions to the Draft PEIR nor the refinements to the proposed GPU that occurred through the public hearing and public workshop process involve mitigation

## 7.0 FINDINGS REGARDING PROJECT ALTERNATIVES

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measures or alternatives that are considerably different from those analyzed in the Draft PEIR that would substantially reduce one or more significant effects on the environment.

6. Neither the minor revisions to the Draft PEIR nor the refinements to the proposed GPU that occurred through the public hearing and public workshop process render the Draft PEIR so fundamentally inadequate and conclusory in nature that meaningful public review and comment would be precluded.

Thus, none of the conditions set forth in CEQA requiring recirculation of a Draft EIR have been met. Neither incorporation of the revisions to the Draft PEIR into the Final PEIR nor the refinements to the proposed GPU that occurred through the public hearing and public workshop process require the Final PEIR to be circulated for public comments.

## **8.0 FINDINGS REGARDING CHANGES TO THE DRAFT PEIR AND RECIRCULATION**

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## 9.0 FINDINGS REGARDING CERTIFICATION OF THE FINAL PEIR

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The City of Rolling Hills Estates (City), the CEQA Lead Agency, finds and declares that the General Plan Update Final PEIR has been completed in compliance with CEQA and the CEQA Guidelines. The City Council finds and certifies that the PEIR was reviewed, and information contained in the PEIR was considered prior to approving the proposed GPU.

Based upon its review of the PEIR, the City Council finds that the PEIR is an adequate assessment of the potentially significant environmental impacts of the proposed GPU, represents the independent judgment of the City, and sets forth an adequate range of alternatives to this project.

The Final PEIR (April 2022) is comprised of the following elements:

- General Plan Update Initial Study (May 2021)
- General Plan Update Draft Program Environmental Impact Report (October 2021)
- Final PEIR (April 2022)
- Mitigation Monitoring and Reporting Program (January 2022)

Prior to taking action, the City Council reviewed and considered the Final PEIR, all of the information and data in the administrative record, and all oral and written testimony presented to it during meetings and hearings. The City Council finds that the Final PEIR has been completed in compliance with CEQA; the Final PEIR was presented to the City Council, and the City Council reviewed and considered the information contained in the Final PEIR prior to its certification; and the Final PEIR reflects the City's independent judgment and analysis. No changes to the proposed GPU, changes to the environment, comments on the proposed GPU, or any additional information submitted to the City have produced any substantial new information requiring additional environmental review or documentation of the proposed GPU under CEQA.

The City of Rolling Hills Estates City Council hereby declares that no new significant information as defined by the CEQA Guidelines Section 15088.5 has been received by the City Council after circulation of the PEIR that would require recirculation.

## **9.0 FINDINGS REGARDING CERTIFICATION OF THE FINAL PEIR**

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**10.0 STATEMENT OF OVERRIDING CONSIDERATIONS**

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**10.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS**

Section 15093 of the CEQA Guidelines requires lead agencies to adopt a Statement of Overriding Considerations if they elect to approve a project that has significant and unavoidable environmental impacts. As described above in Chapter 6 and based on the information and analysis set forth in the Initial Study, EIR, and the record of proceedings, implementation of the proposed GPU would result in significant and unavoidable impacts related to air quality, cultural resources, transportation, and tribal cultural resources, as detailed in the following sections.

**10.1.1 AIR QUALITY (CONSISTENCY WITH THE AIR QUALITY MANAGEMENT PLAN)**

The proposed GPU would be inconsistent with the SCAQMD AQMP as buildout of the proposed GPU could exceed current SCAG population and employment estimates and would cumulatively contribute to the nonattainment designations of the Basin. Incorporation of Mitigation Measures MM-AQ-1 and MM-AQ-2 identified in Section 4.2, Air Quality, of the Draft PEIR, into future development projects during construction and operation would contribute to reduced criteria air pollutant emissions associated with buildout of the proposed GPU. In addition, goals and policies included in the proposed GPU would promote increased capacity for alternative transportation modes and implementation of transportation demand management strategies, thereby reducing mobile source emissions. However, since implementation of the proposed GPU would introduce land use intensification in certain portions of the Planning Area, no mitigation measures are available that would reduce total air quality emissions from buildout of the proposed GPU to a less-than-significant level. Furthermore, the population and employment assumptions of the AQMP would still be exceeded until such time the AQMP is revised and incorporates updated projections that consider the proposed GPU. Therefore, air quality impacts, both individually and cumulatively, related to the implementation of the AQMP are considered significant and unavoidable.

**10.1.2 AIR QUALITY (EXCEEDANCE OF REGIONAL THRESHOLDS DURING CONSTRUCTION AND OPERATION)**

Construction activities and long-term emissions associated with future development under the proposed GPU could generate air pollutant emissions that exceed the SCAQMD's significance thresholds and would cumulatively contribute to the nonattainment designations of the Basin. Implementation of Mitigation Measures MM-AQ-1 and MM-AQ-2 identified in Section 4.2, Air Quality, of the Draft PEIR, would reduce criteria air pollutant emissions from construction-related activities and future development project operations. However, since implementation of the proposed GPU would introduce land use intensification in certain portions of the Planning Area, it cannot be determined with certainty that Mitigation Measures MM-AQ-1 and MM-AQ-2 would reduce impacts below SCAQMD's thresholds in all cases. Therefore, construction and operational impacts, both individually and cumulatively, related to the increase of criteria pollutants for which the Basin is non-attainment are conservatively considered significant and unavoidable.

**10.1.3 AIR QUALITY (SENSITIVE RECEPTORS)**

Construction activities associated with future development under the proposed GPU could generate short-term emissions that may cause localized air quality impacts. Implementation of Mitigation Measures MM-AQ-1 and MM-AQ-2 identified in Section 4.2, Air Quality, of the Draft PEIR, would reduce criteria air pollutant emissions from construction-related activities and the associated localized impacts. However, since construction activities could occur close to existing sensitive receptors, construction emissions generated by future development projects have the



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potential to exceed SCAQMD LSTs and it cannot be determined with certainty that Mitigation Measures MM-AQ-1 and MM-AQ-2 would reduce impacts below SCAQMD's thresholds in all cases. Therefore, localized impacts to sensitive receptors are conservatively considered significant and unavoidable.

### 10.1.4 CULTURAL RESOURCES (HISTORICAL AND ARCHAEOLOGICAL RESOURCES)

Generally, compliance with City General Plan policies, provisions of the Rolling Hills Estates Municipal Code (RHEMC), and State and federal regulations pertaining to the alteration, demolition, and relocation of historical resources, in addition to Mitigation Measures MM-CUL-1 through MM-CUL-3 identified in Section 4.4, Cultural Resources, of the Draft PEIR, would reduce impacts to historical resources to a less-than-significant level. However, in the event that one or more future projects cannot avoid demolition of a historical resource or alteration of a historical resource in a manner that would materially impair the resource and because documentation, memorialization, and data recovery do not mitigate impacts to a less-than-significant level, a significant impact would occur even with the implementation of mitigation measures. While implementation of the mitigation measures, as well as compliance with all applicable regulations pertaining to historical resources, would reduce impacts of the buildout of the proposed GPU on historical resources to the maximum extent feasible, since demolition or other material impairment of a historical resource over the course of buildout of the proposed GPU cannot be precluded, impacts, both individually and cumulatively, are considered significant and unavoidable.

Similarly, implementation of Mitigation Measures MM-CUL-4 through MM-CUL-7 identified in Section 4.4, Cultural Resources, of the Draft PEIR, as well as compliance with all applicable regulations pertaining to archaeological resources, would reduce impacts of the buildout of the proposed GPU on archaeological resources to the maximum extent feasible; however, since destruction of an archaeological resource over the course of buildout of the proposed GPU cannot be precluded and because documentation, memorialization, and data recovery do not mitigate impacts to a less-than-significant level, impacts, both individually and cumulatively, are considered significant and unavoidable.

### 10.1.5 TRANSPORTATION (VMT IMPACTS)

Both the low-range and high-range buildout scenarios do not meet the City's significance threshold for the residential VMT per capita metric, and the low-range buildout scenario does not meet the City's significance threshold for the work VMT per employee metric. As a result, the proposed GPU would be inconsistent with CEQA Guidelines Section 15064.3(b), and impacts related to VMT would be significant. After considering all viable TDM strategies (Mitigation Measures MM-TRAN-1 through MM-TRAN-3 identified in Section 4.16, Transportation, of the Draft PEIR, to reduce the VMT impact of the proposed GPU under both buildout scenarios, the proposed GPU would still result in a significant and unavoidable VMT impact.

### 10.1.6 TRIBAL CULTURAL RESOURCES

Implementation of Mitigation Measures MM-CUL-4 through MM-CUL-7 identified in Section 4.4, Cultural Resources, of the Draft PEIR, and adherence to all applicable regulations pertaining to tribal cultural resources would reduce potential impacts of the buildout of the proposed GPU on tribal cultural resources; however, the potential loss of tribal cultural resources may not be adequately mitigated through data recovery and collection methods, as the value of a tribal cultural resource lies in cultural values and religious beliefs of associated tribes. Since significant

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impacts to tribal cultural resources from future projects building out the Planning Area under the proposed GPU cannot be precluded, impacts, both individually and cumulatively, are considered significant and unavoidable.

### 10.2 PROJECT BENEFITS

For projects that would result in significant unavoidable impacts, CEQA requires that the lead agency balance the benefits of these projects against the unavoidable environmental risks in determining whether to approve the projects. If the benefits of these projects outweigh the unavoidable impacts, those impacts may be considered acceptable (CEQA Guidelines Section 15093[a]). CEQA requires that, before adopting such projects, the lead agency adopt a Statement of Overriding Considerations setting forth the reasons why the lead agency finds that the benefits of the project outweigh the significant environmental effects caused by the project. The City has balanced the proposed GPU's economic, legal, social, technological and other benefits against the proposed GPU's significant and unavoidable air quality, cultural resources, transportation, and tribal cultural resources impacts. The City Council finds that the proposed GPU's benefits outweigh those significant unavoidable impacts, and those impacts, therefore, are considered acceptable in light of the proposed GPU's benefits. The City Council finds that each of the following benefits is an overriding consideration, independent of the other benefits, that warrants approval of the proposed GPU notwithstanding the proposed GPU's significant unavoidable impacts. The proposed GPU would provide the following public benefits:

- The proposed GPU recognizes economic trends and includes programs to proactively address them, including a specific vision and guiding principles to address retail and office vacancies, while envisioning a more vibrant Commercial District to make Rolling Hills Estates a more attractive place to live, work, gather, dine, shop, and play.
- The proposed GPU would provide for greater zoning flexibility in the Commercial District to create greater opportunities for mixed-use development, thereby providing for more housing than the current (1992) General Plan, particularly higher density housing that has a greater likelihood of being affordable, in response to State housing requirements.
- The proposed GPU would allow certain affordable workforce housing to be built on Institutional parcels to provide more housing choices for those who work in Rolling Hills Estates.
- The proposed GPU incentivizes private development projects that provide community benefits and affordable housing to create a thriving Commercial District that is the cultural, entertainment, and economic hub of Rolling Hills Estates.
- The proposed GPU supports economically productive use of land, including revitalization of underutilized and vacant properties.
- The proposed GPU includes a Sustainability Element that establishes a blueprint for steady, responsible action in addressing the effects of climate change for a cleaner, more resilient environment for future generations. The proposed GPU's Sustainability Element includes new policies and programs to (1) reduce greenhouse gas emissions, (2) reduce air pollutant emissions, (3) prepare the City for long-term adaptability to climate change, (4) reduce energy consumption, (5) protect fresh water availability and reduce potable water consumption, (6) manage and harvest stormwater, (7) stimulate sustainable growth, (8)

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expand dark skies standards in the City's Zoning to minimize light pollution, and (9) reduce solid waste disposal, promote composting and recycling, and encourage more sustainable living.

- The proposed GPU would primarily concentrate growth in the Commercial District, thereby (1) resulting in fewer impacts from the expansion of infrastructure into undeveloped open space areas, (2) minimizing the expansion of impervious surfaces, and (3) encouraging low impact development and on-site retention of stormwater.
- The proposed GPU's Conservation Element Update includes updated policies and programs to protect hillsides; preserve the natural environment and resources of the City; prioritize restoration of habitats for sensitive and/or endangered species; maintain wetlands and surface water functions; ensure the protection of sites of paleontological, archaeological, historical, and culturally valuable significance; and establish an Urban Forestry program to maintain a resilient and healthy tree canopy in the City.
- Given that approximately 26 percent of the City's population is 65 years old or older, the proposed GPU's Sustainability Element acknowledges and addresses the unique needs of this vulnerable group through goals, policies, and implementation measures in all seven pillars of sustainability (i.e., Air Quality and Greenhouse Gas Emissions, Energy, Water Resources, Quality of Life, Land Use, Mobility, and Waste Management and Recycling), such as ensuring that home-bound populations receive the resources they need during extreme heat events and identifying potential partnerships with health care providers and local nonprofit organizations, such as the Palos Verdes Peninsula Village and Palos Verdes Peninsula Seniors, as established in the proposed GPU's Safety Element Update.
- Given that there are no high quality transit areas existing within the City or any planned in SCAG's 2020-2045 RTP/SCS for the Palos Verdes Peninsula, the proposed GPU's Sustainability Element developed innovative goals, policies, and implementation measures for reducing greenhouse gas emissions in this context, including the implementation of "carbon sinks," such as urban forests and soil amendments, and the pursuit of lobbying strategies to encourage transit agencies to provide increased high-quality transit opportunities to the Palos Verdes Peninsula. The Sustainability Element also identifies ways to increase the use of alternate modes of transit within the City by improving pedestrian, bike, and equestrian connectivity to reduce jurisdictional vehicle miles traveled (VMT).
- The proposed GPU promotes a stronger sense of community through additional public spaces, particularly in the Commercial District, that foster placemaking.
- The proposed GPU's Open Space and Recreation Element includes updated policies and programs to (1) preserve natural open space areas to protect the local natural environment for present and future generations; (2) strive to create contiguous open space and multi-trail networks; (3) preserve and promote the use of and access to equestrian trails in the City; (4) promote a cooperative, neighborly, and cultural community by encouraging recreational programs that stimulate, educate, and enrich the lives of residents.
- The proposed GPU's Safety Element Update includes updated policies and programs supporting emergency preparedness and resiliency to climate change impacts, including programs engaging lower income residents.

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**10.3 CONCLUSION**

The City Council, after balancing the specific economic, legal, social, technological, and other benefits of the proposed GPU, has determined that the unavoidable adverse environmental impacts identified may be considered "acceptable" due to the specific considerations listed above, which outweigh the unavoidable, adverse environmental impacts of the proposed GPU.

Accordingly, City Council adopts this Statement of Overriding Considerations, recognizing that unavoidable significant air quality, cultural resources, transportation, and tribal cultural resources impacts would result from implementation of the proposed GPU. Having (1) adopted all feasible mitigation measures, (2) rejected alternatives to the proposed GPU as discussed in Chapter 7 above, and (3) recognized all unavoidable significant impacts, the City Council hereby finds that each of the separate benefits of the proposed GPU, as stated herein, is determined to be unto itself an overriding consideration, independent of other benefits, that warrants approval of the proposed GPU and outweighs and overrides the proposed GPU's unavoidable significant adverse environmental effects, and thereby justifies the approval of the City's proposed GPU.

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# CITY OF ROLLING HILLS ESTATES

## GENERAL PLAN UPDATE

PROGRAM ENVIRONMENTAL IMPACT REPORT  
SCH No. 2021050450

### MITIGATION MONITORING AND REPORTING PROGRAM

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**CITY OF ROLLING HILLS ESTATES**  
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**APRIL 2022**



City of Rolling Hill Estates Rolling Hills Estates General Plan Update Mitigation Monitoring and Reporting Program						
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<b>Mitigation Measure MM-AQ-1:</b> The City of Rolling Hills Estates shall require applicants of future development projects that require discretionary grading approval by the Planning Commission to control ozone precursor emissions from construction equipment vehicles by maintaining equipment engines in good condition and in proper tune per manufacturer's specifications. The equipment maintenance records and equipment design specifications data sheets shall be kept on site by the project contractor during construction activities.	During construction	City of Rolling Hills Estates Community Development Department	The Community Development Department shall ensure equipment maintenance records and equipment design specifications data sheets are maintained on-site and verify that engines of construction equipment vehicles are maintained in good condition and in proper tune per manufacturer's specifications.			
<b>Mitigation Measure MM-AQ-2:</b> To identify potential long-term operational-related air quality impacts from future development projects that are larger than the representative projects considered in the Draft PEIR, project-specific air emissions impacts shall be determined in compliance with the latest version of the SCAQMD CEQA Guidelines. To address potential localized impacts, the air quality analysis shall be completed pursuant to the latest version of SCAQMD's Final Localized Significance Threshold Methodology document or other appropriate methodology as determined in conjunction with SCAQMD. The results of the operational-related and localized air quality impacts analyses shall be included in the future development project's CEQA documentation. If such analyses identify potentially significant regional or localized air quality impacts, the City shall require the incorporation of appropriate mitigation to reduce such impacts as required by CEQA. In such cases, appropriate mitigation could include, but would not be limited to: <ul style="list-style-type: none"> <li>• Use of Tier 4 equipment during project construction;</li> <li>• Incorporation of energy-efficient design features beyond those required by Title 24 and the CALGreen Code; and</li> <li>• Application of transportation demand measures (TDM) beyond those required by code.</li> </ul>	During development of project-specific CEQA documentation	City of Rolling Hills Estates Community Development Department	The Community Development Department shall ensure project-specific CEQA documentation contains project-specific air emissions impacts analysis and a determination if the project is in compliance with the latest version of the SCAQMD CEQA Guidelines.			



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<p><b>Mitigation Measure MM-BIO-1:</b> The City of Rolling Hills Estates shall require applicants of future development projects that require discretionary grading approval by the Planning Commission within portions of the City that are included within USFWS-designated critical habitat for coastal California Gnatcatcher, or are within close proximity to known occurrences of protected species, such as those identified on Figure 4.3-1, found in Section 4.3, Biological Resources, of the Draft PEIR, to prepare a biological resources survey. The survey shall be conducted by a qualified biologist and shall minimally include a reconnaissance level field survey of the project site for the presence and quality of biological resources potentially affected by project development. These resources include, but are not limited to, protected/special-status species or their habitat, sensitive habitats such as wetlands or riparian areas, and jurisdictional waters. If sensitive or protected biological resources are absent from the project site and adjacent lands potentially affected by the project, the biologist shall submit a written report substantiating such to the City of Rolling Hills Estates before issuance of a grading permit by the City, and the project may proceed without any further biological investigation.</p> <p>If sensitive or protected biological resources are present on the project site or may be potentially affected by the project, then a qualified biologist shall evaluate impacts to sensitive or protected biological resources from development and produce a biological resources impact assessment. The impact assessment may include focused plant and animal surveys or jurisdictional delineations to determine a future development project's impact to biological resources, along with corresponding project-specific mitigation measures, as necessary. To minimize impacts, the City of Rolling Hills Estates will require applicants to design projects to avoid impacts to sensitive or protected biological resources to the greatest extent feasible. Further, if sensitive or protected species are present on the project site, then the applicant shall consult with the appropriate oversight agency, such as CDFW or USFWS, as necessary.</p>	Prior to issuance of a grading permit	City of Rolling Hills Estates Community Development Department	The Community Development Department shall ensure that future development projects that require discretionary grading approval that are within USFWS-designated critical habitat for coastal California Gnatcatcher, or other protected species, have a qualified biologist prepare a biological resources survey. The Community Development Department shall review the survey and ensure compliance with the any suggested measures.			

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<p><b>Mitigation Measure MM-BIO-2:</b> If future development projects that involve vegetation removal, and are not otherwise categorically exempt from CEQA or subject to the emergency project statutory exemption from CEQA, are unable to avoid construction activities within nesting bird season (January 1st through July 31st for raptors and February 1st through August 31<sup>st</sup> for other avian species), a qualified biologist shall conduct a pre-construction nesting bird survey for avian species to determine the presence/absence, location, and status of any active nests on or adjacent to the area proposed development area. The survey shall be conducted for active nests, eggs, and young of any bird species protected by the state or federal Endangered Species Acts, Migratory Bird Treaty Act (MBTA), and/or the California Fish and Game Code (CFGF) Sections 3503, 3503.5, or 3511, within 200 feet of the disturbance zone for songbirds, or within 500 feet of the disturbance zone for raptors and special-status bird species. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the MBTA and the CFGF, a nesting bird survey should be conducted no more than three (3) days prior to the commencement of project construction if construction occurs between January 1st and August 31st. In the event that active nests are discovered, a suitable buffer (distance to be determined by the biologist) shall be established around such active nests, and no construction activities within the buffer will be allowed, until the biologist has determined that the nest(s) is no longer active (i.e., the nestlings have fledged and are no longer dependent on the nest).</p>	<p>Prior to issuance of a grading permit and during construction</p>	<p>City of Rolling Hills Estates Community Development Department</p>	<p>The Community Development Department shall ensure that future development projects that involve vegetation removal, are not categorically exempt from CEQA or subject to the emergency project statutory exemption from CEQA, and are unable to avoid construction activities within nesting bird season, have a qualified biologist prepare a pre-construction nesting bird survey. The Community Development Department shall review the survey and ensure compliance with any suggested measures, which may include establishing suitable buffer distances around active nests.</p>			
<p><b>Mitigation Measure MM-BIO-3:</b> The City of Rolling Hills Estates shall require applicants of future development projects that require discretionary grading approval by the Planning Commission and are not categorically exempt from CEQA or subject to the emergency project statutory exemption from CEQA to retain a qualified bat biologist to conduct a clearance survey for bats within suitable structures and trees within a project's impact area within 30 days of construction. If bats roosts are found within the project impact area, the qualified bat biologist shall identify the bats to the species level and evaluate the colony to determine its size and significance. If any structures house an active maternity colony of bats, construction activities shall not occur during the recognized bat breeding season (March 1 to October 1). Any proposed work in areas with no suitable roosting or</p>	<p>Prior to issuance of a grading permit and during construction</p>	<p>City of Rolling Hills Estates Community Development Department</p>	<p>The Community Development Department shall ensure that future development projects that require discretionary grading approval and are not categorically exempt from CEQA or subject to the emergency project statutory exemption retain a qualified bat biologist to conduct a clearance survey for bats. The Community Development Department shall review the survey and ensure compliance with any suggested measures,</p>			

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<p>foraging habitat shall not require a bat survey. If a bat roost is present within the vicinity of a proposed project impact area that does not need to be removed, a qualified bat biologist shall establish a species-specific no-disturbance buffer that must be maintained throughout the duration of the project's construction. If a maternity roost is identified, a no disturbance buffer shall be established and maintained until a qualified bat biologist determines that the roost is no longer active.</p> <p>If project activities must occur during non-daylight hours or during the bat breeding season (March 1 to October 1), a qualified bat biologist shall establish monitoring measures, including frequency and duration, based on species, individual behavior, and type of construction activities. Night lighting shall be used only within the portion of the project actively being worked on and focused directly on the work area. This measure would minimize visual disturbance and allow bats to continue to utilize the remainder of the area for foraging and night roosting. If bats are showing signs of distress, work activities shall be modified to prevent bats from abandoning their roost or altering their feeding behavior. At any time, the qualified biologist shall have the authority to halt work if there are any signs of distress or disturbance that may lead to roost abandonment. Work shall not resume until corrective measures have been taken or it is determined that continued activity would not adversely affect roost success. Any roosting habitat loss shall be sequenced, and roosting habitat shall be restored or replaced in-kind and on-site to prevent temporal or permanent loss based on the bat species roosting requirements.</p>			<p>which may include a species-specific no-disturbance buffer, limiting night lighting, and other techniques as suggested by the biologist.</p>			
<p><b>Mitigation Measure MM-BIO-4:</b> The City of Rolling Hills Estates shall require applicants of future development projects that that require discretionary grading approval by the Planning Commission within portions of the Planning Area that are located within 100-feet of a riverine or wetland feature, as identified in Figure 4.3-4, found in Section 4.3, Biological Resources, of the Draft PEIR, to prepare a biological resources survey. The survey shall be conducted by a qualified biologist and shall minimally include a site survey for the presence and quality of riverine or wetland features potentially affected by project development, as well as a stream delineation of the potentially impacted riparian or wetland feature. If such features are present and may be impacted by the future development, then the City shall require appropriate vegetative buffers and/or setbacks</p>	<p>Prior to issuance of a grading permit</p>	<p>City of Rolling Hills Estates Community Development Department</p>	<p>The Community Development Department shall ensure that future development projects that require discretionary grading approval have a qualified biologist prepare a biological resources survey that includes a site survey for the presence and quality of riverine or wetland features potentially affected by project development, as well as a stream delineation. The Community Development Department shall review the</p>			

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adjoining the stream or wetland feature to reduce impacts of future development on these riparian or wetland features. If avoidance of riparian habitat, wetlands, or other drainage features within the jurisdiction of the CDFW or Army Corps is not possible, permits/approvals from the jurisdictional agency/agencies will be necessary and impacted acreage shall be replaced at a ratio acceptable to the jurisdictional agency/agencies. In no case shall the replacement ratio be less than 1:1.			assessment and ensure compliance with any suggested measures, which may include vegetative buffers and/or setbacks.			
<b>Mitigation Measure MM-CUL-1:</b> Prior to the issuance of a demolition permit for projects that propose to relocate, demolish, or alter a building or structure that is over 45 years old, possesses a distinctive architectural style, and was built during and representative of the period of significance for that architectural style (e.g., California Ranch of the 1940s and 1950s, Midcentury Modern of the 1940s-1960s, etc.), the City of Rolling Hills Estates shall require the applicant to submit a historical resources assessment report, if the building or structure has not been previously evaluated for potential historical significance. For single-family residential properties, a historical resources assessment report shall only be required if the involved building/structure is characteristic of the surrounding neighborhood and the demolition/alteration involves a façade or building volume that is/would be visible from the street or other publicly accessible vantage point. If the building or structure is determined to be a historical resource, the report shall include an assessment of the project's impacts to the resource. The report shall be prepared by a qualified Architectural Historian or Historian who meets the Secretary of the Interior's Professional Qualifications Standards, and shall satisfy federal and State guidelines for the identification, evaluation, and recordation of historical resources. Should the City conduct and/or approve a citywide or neighborhood/district historic resources inventory, within the bounds of that survey this mitigation measure shall only apply to potentially significant historic resources identified by the inventory. Similarly, should a historic context statement be prepared for any historical themes in Rolling Hills Estates, the guidance and recommendations of the historic context statement shall supersede the requirements of this mitigation measure for potentially significant historic resources within that theme.	Prior to issuance of a demolition permit	City of Rolling Hills Estates Community Development Department	Upon submission of a historical resources assessment regarding a building or structure that is of possible historical significance, the Community Development Department shall review the assessment and ensure compliance with the suggested techniques, which may include periodic site inspections or further study.			

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<b>Mitigation Measure MM-CUL-2:</b> The Secretary of the Interior's Standards for the Treatment of Historic Properties shall be used to the maximum extent possible to ensure that projects involving the relocation, conversion, rehabilitation, or alteration of a historical resource and its setting, or related new construction, will not impair the significance of the historical resource. Use of the Secretary's Standards shall be overseen by an architectural historian or historic architect meeting the Secretary of the Interior's Professional Qualification Standards. Evidence of compliance with the Secretary's Standards shall be provided to the City in the form of a report identifying and photographing character-defining features and spaces and specifying how the proposed treatment of character-defining features and spaces and related construction activities will conform to the Secretary's Standards.	Prior to construction	City of Rolling Hills Estates Community Development Department	Upon submission by a qualified architectural historian or historic architect of compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties, the Community Development Department shall review the documentation and ensure compliance with the Secretary's Standards, which may require periodic site inspections.			
<b>Mitigation Measure MM-CUL-3:</b> If the City determines that significant impacts to historical resources cannot be avoided, the City shall require, at a minimum, that the affected historical resources be thoroughly documented before issuance of any permits, and may also require additional public education efforts and/or memorialization of the historical resource. Such recordation shall be prepared under the supervision of an architectural historian, historian, or historic architect meeting the Secretary of the Interior's Professional Qualification Standards, and should take the form of Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscape Survey (HALS) documentation. At a minimum, this recordation shall include an architectural and historical narrative; archival photographic documentation; and any supplementary information available, such as building plans and elevations and/or historic photographs. The documentation package shall be produced on archival paper and made available to researchers and the public through accession by appropriate institutions, such as the Local History Center at the Peninsula Center Library, the South Central Coastal Information Center at California State University, Fullerton, and/or the HABS/HAER/HALS collection housed in the Library of Congress. Depending on the significance of the historical resource, the City, at its discretion, may also require public education about the historical resource in the form of an exhibit, web page, brochure, or other format and/or memorialization of the historical resource on or near the proposed project site. If	Prior to issuance of any permits	City of Rolling Hills Estates Community Development Department	Upon determination that significant impacts to historical resources cannot be avoided, the Community Development Department shall ensure that the affected historical resources are thoroughly documented and recorded by a qualified architectural historian, historian, or historic architect. The documentation may include narrative, archival photographic documentation, and any supplementary information.			

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memorialized, such memorialization shall be a permanent installation, such as a mural, display, or other vehicle that recalls the location, appearance, and historical significance of the affected historical resource, and shall be designed in conjunction with a qualified architectural historian, historian, or historic architect.						
<p><b>Mitigation Measure MM-CUL-4:</b> To ensure identification and preservation of archaeological resources and avoid significant impacts to those resources, prior to grading approval by the Rolling Hills Estates Planning Commission, each project requiring such approval shall be screened to determine whether an Archaeological Resources Assessment report is required. Screening shall consider the type of project and whether ground disturbance will occur in native soils (i.e., previously undisturbed soils). If so, prior to grading approval by the Rolling Hills Estates Planning Commission, the City shall require an Archaeological Resources Assessment be conducted under the supervision of an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards.</p> <p>Archaeological Resources Assessments shall include a California Historical Resources Information System records search at the South Central Coastal Information Center and a Sacred Lands File search through the Native American Heritage Commission. The records searches will determine if the proposed development area has been previously surveyed for archaeological resources, identify and characterize the results of previous cultural resource surveys, and disclose any cultural resources that have been recorded and/or evaluated. If unpaved surfaces are present within the development area, and the entire development area has not been previously surveyed within the past 10 years, a Phase I pedestrian survey shall be undertaken in proposed development areas to locate any surface cultural materials that may be present.</p>	Prior to issuance of grading permit	City of Rolling Hills Estates Community Development Department	The Community Development Department shall determine if an Archaeological Resources Assessment report is required based on criteria including the type of project and whether any ground disturbance will occur in native soils. If an Archaeological Resources Assessment is deemed necessary, the Community Development Department will ensure the report is prepared under the supervision of a qualified archaeologist and contains sufficient information including a CHRIS records search, SCCIC search, and a Sacred Lands File search. The Community Development Department will ensure that the report and ensure compliance with any suggested measures.			

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	Period of Implementation	Monitoring Responsibility	Monitoring Procedure	Comments	Date	Initials
<p><b>Mitigation Measure MM-CUL-5:</b> If the Archaeological Resources Assessment identifies potentially significant archaeological resources and impacts cannot be avoided, a Phase II Testing and Evaluation investigation shall be performed by an archaeologist who meets the Secretary of the Interior’s Standards to determine significance prior to any ground-disturbing activities. If resources are determined significant or unique through Phase II testing and site avoidance is not possible, appropriate site-specific mitigation measures shall be undertaken. These may include a Phase III data recovery program implemented by a qualified archaeologist and performed in accordance with the California Office of Historic Preservation’s “Archaeological Resource Management Reports (ARMR): Recommended Contents and Format” (1990) and “Guidelines for Archaeological Research Designs” (1991).</p>	<p>Prior to issuance of grading permit</p>	<p>City of Rolling Hills Estates Community Development Department</p>	<p>If potentially significant impacts to archaeological resources cannot be avoided, the Community Development Department shall ensure completion of a Phase II Testing and Evaluation investigation by a qualified archaeologist to determine significance of the impacted resources. If resources are determined significant, or unique and avoidance is not possible, the Community Development Department shall ensure compliance with site-specific mitigation measures which may include a Phase III data recovery program.</p>			
<p><b>Mitigation Measure MM-CUL-6:</b> If the Archaeological Resources Assessment did not identify archaeological resources but found the area to be highly sensitive for archaeological resources, a qualified archaeologist shall monitor all ground-disturbing construction and pre-construction activities in areas with previously undisturbed soil. The archaeologist shall inform all construction personnel prior to construction activities of the proper procedures in the event of an archaeological discovery. The training shall be held in conjunction with the project’s initial on-site safety meeting and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the resources are evaluated for significance by an archaeologist who meets the Secretary’s Standards, and tribal consultation shall be conducted in the case of a tribal resource. If the discovery proves to be significant, the long-term disposition of any collected materials shall be determined in consultation with the affiliated tribe(s), where relevant; this could include curation with a recognized scientific or educational repository, transfer to the tribe, or respectful reinterment in an area designated by the tribe.</p>	<p>During construction</p>	<p>City of Rolling Hills Estates Community Development Department</p>	<p>The Community Development Department shall conduct periodic site inspections during ground-disturbing activities to ensure monitoring is occurring in accordance with this measure. The Community Development Department shall ensure training has been conducted by a qualified archaeologist.</p>			



City of Rolling Hill Estates Rolling Hills Estates General Plan Update Mitigation Monitoring and Reporting Program						
Mitigation Measures	Mitigation Monitoring			Reporting		
	Period of Implementation	Monitoring Responsibility	Monitoring Procedure	Comments	Date	Initials
<p><b>Mitigation Measure MM-CUL-7:</b> If an Archaeological Resources Assessment does not identify potentially significant archaeological resources but the site has moderate sensitivity for archaeological resources, an archaeologist who meets the Secretary's Standards shall be retained on call. The archaeologist shall inform all construction personnel prior to construction activities about the proper procedures in the event of an archaeological discovery. The pre-construction training shall be held in conjunction with a future development project's initial on-site safety meeting and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the on-call archaeologist is contacted. The resource shall be evaluated for significance and tribal consultation shall be conducted, in the case of a tribal resource. If the discovery proves to be significant, the long-term disposition of any collected materials should be determined in consultation with the affiliated tribe(s), where relevant.</p>	During construction	City of Rolling Hills Estates Community Development Department	The Community Development Department shall conduct periodic site inspections during ground-disturbing activities to ensure monitoring is occurring in accordance with this measure. The Community Development Department shall ensure training has been conducted by a qualified archaeologist.			
<p><b>Mitigation Measure MM-GEO-1:</b> To ensure identification and preservation of significant paleontological resources and avoid significant impacts to those resources, prior to the issuance of a grading approval by the City of Rolling Hills Estates Planning Commission, each project requiring such approval shall be screened to determine whether a full paleontological resources assessment is required. Screening shall consider whether the proposed grading activity will extend into known undisturbed fossil-bearing strata (i.e., those of the Monterey Formation, including Lomita Marl Member, Valmonte Diatomite Member, and Altamira Shale Member). If so, the City shall require a paleontological resources assessment be conducted by a paleontologist that meets Bureau of Land Management or Society of Vertebrate Paleontology standards (i.e., a qualified paleontologist) prior to the issuance of a grading approval. If the paleontological resources assessment identifies the potential for destruction of significant paleontological resources, an avoidance and/or recovery plan shall be developed and implemented under the supervision of a qualified paleontologist to the satisfaction of the City of Rolling Hills Estates.</p>	Prior to issuance of grading permit	City of Rolling Hills Estates Community Development Department	The Community Development Department shall determine if a paleontological resources assessment is required. If required, the Community Development Department shall ensure the assessment is conducted by a qualified paleontologist. If the assessment identifies the potential for destruction of significant paleontological resources, the Community Development Department shall review and ensure compliance with an avoidance and/or recovery plan.			



City of Rolling Hill Estates Rolling Hills Estates General Plan Update Mitigation Monitoring and Reporting Program						
Mitigation Measures	Mitigation Monitoring			Reporting		
	Period of Implementation	Monitoring Responsibility	Monitoring Procedure	Comments	Date	Initials
<b>Mitigation Measure MM-GEO-2:</b> In the event that any prehistoric subsurface paleontological resources are encountered during future construction or the course of any ground disturbance activities, all such activities shall halt immediately, at which time the applicant shall notify the City and consult with a qualified paleontologist to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined to be unnecessary or infeasible by the City. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted.	During construction	City of Rolling Hills Estates Community Development Department	Upon finding of paleontological resources, the Community Development Department shall conduct periodic site inspections to ensure project development is occurring in accordance with this measure. The Community Development Department shall also review the techniques proposed by the qualified paleontologist and ensure compliance with the recommendations.			
<b>Mitigation Measure MM-NOI-1:</b> Projects with construction activities that use equipment with high vibration levels, including, but not limited to, pile drivers, vibratory rollers, large bulldozers, and loaded trucks, within 25 feet of an occupied sensitive use (i.e., historical buildings, residential, senior care facilities, hospitals, and schools/day care centers) shall be required to prepare a project-specific vibration impact analysis to identify the potential project-specific construction vibration impacts associated with the project, and to determine any specific vibration control mechanisms that shall be incorporated into the project's construction bid documents to reduce such impacts. Contract specifications shall be included in construction documents, which shall be reviewed and approved by the City Engineer prior to issuance of a grading permit.	Prior to issuance of grading permit	City of Rolling Hills Estates Community Development Department	The Community Development Department shall ensure a project-specific vibration impact analysis will be prepared in accordance with this measure.			
<b>Mitigation Measure MM-NOI-2:</b> Projects within 100 feet of a historic structure(s) shall implement the following measures to reduce the potential for architectural/structural damage resulting from elevated groundborne noise and vibration levels: <ul style="list-style-type: none"> <li>• Pile driving within 50 feet of any historic structure(s) shall utilize alternative installation methods, such as pile cushioning, jetting, predrilling, cast-in-place systems, and resonance-free vibratory pile drivers.</li> <li>• As accessible, a preconstruction survey of all eligible for listing or listed historic buildings under the National Register of Historic Places, California Register of Historic Resources, and/or local historic database(s)</li> </ul>	Prior to issuance of grading permit	City of Rolling Hills Estates Community Development Department	The Community Development Department shall ensure projects within 100 feet of a historic structure(s) implement measures to reduce the potential for architectural/structural damage. Potential measures may include utilizing alternative installation methods, documenting fixtures and finishes as described in			

City of Rolling Hill Estates Rolling Hills Estates General Plan Update Mitigation Monitoring and Reporting Program						
Mitigation Measures	Mitigation Monitoring			Reporting		
	Period of Implementation	Monitoring Responsibility	Monitoring Procedure	Comments	Date	Initials
<p>within 50 feet of proposed construction activities shall be conducted. Fixtures and finishes within 50 feet of construction activities susceptible to damage shall be documented photographically and in writing. The preconstruction survey shall determine conditions that exist before construction begins for use in evaluating any damage caused by construction activities. Construction vibration monitoring shall be conducted at the edges of these historic properties and construction activities shall be reduced, as needed, to ensure no damage occurs.</p> <ul style="list-style-type: none"> <li>Vibration monitoring shall be conducted prior to and during pile driving operations occurring within 100 feet of the historic structure(s). Contractors shall limit construction vibration levels during pile driving and impact activities in the vicinity of the historic structure(s) in accordance with the California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual, dated April 2020, or subsequent updates of this Manual.</li> </ul>			<p>this measure, and vibration monitoring.</p>			
<p><b>Mitigation Measure MM-TRAN-1:</b> The City shall work with future developers of multi-family housing, commercial projects, and mixed-use projects to ensure they provide the following as TDM measures for mitigating VMT:</p> <ul style="list-style-type: none"> <li><b>Provision of Pedestrian Network Improvements:</b> Create a connected pedestrian network within the development and connect to nearby destinations.</li> <li><b>Construction or Improvements to Bike Facility or Expand Bikeway Network:</b> Enhance bicycle network Citywide (or at similar scale), such that a building entrance or bicycle parking is within 200 yards walking or bicycling distance from a bicycle network that connects to at least one of the following: at least 10 diverse uses; a school or employment center, if the project total floor area is 50 percent or more residential; or a bus rapid transit stop, light or heavy rail station, commuter rail station, or ferry terminal.</li> </ul>	<p>Prior to construction activities</p>	<p>City of Rolling Hills Estates Community Development Department</p>	<p>The Community Development Department shall ensure future projects provide the mitigation established in this measure for mitigation of VMT.</p>			

City of Rolling Hill Estates Rolling Hills Estates General Plan Update Mitigation Monitoring and Reporting Program						
Mitigation Measures	Mitigation Monitoring			Reporting		
	Period of Implementation	Monitoring Responsibility	Monitoring Procedure	Comments	Date	Initials
<p><b>Mitigation Measure MM-TRAN-2:</b> For future projects that exceed the VMT significance thresholds shown in Table 4.16-2, of Section 4.16, Transportation, of the Draft PEIR, or the VMT significance thresholds in place at the time of the application, the City shall require conditions of approval to reduce the project's VMT. In developing such conditions of approval, the City shall minimally consider the following:</p> <ul style="list-style-type: none"> <li>• <b>Expansion of Car Share Program:</b> Implement a car-sharing program to (1) lower vehicle ownership rates to encourage a general shift to non-driving modes and (2) allow people to have on-demand access to a shared fleet of vehicles on an as-needed basis as a supplement to trips made by non-single-occupancy vehicle (SOV) modes.</li> <li>• <b>Provision of Ridesharing Program:</b> Provide ride-sharing programs through a multi-faceted approach, such as designating a certain percentage of parking spaces for ride-sharing vehicles or designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles.</li> <li>• <b>Implementation of Commute Trip Reduction Program:</b> Implement a commute trip reduction (CTR) program, which shall include all of the following to be effective:                         <ul style="list-style-type: none"> <li>○ Carpooling encouragement</li> <li>○ Ride-matching assistance</li> <li>○ Preferential carpool parking</li> <li>○ Flexible work schedules for carpools</li> <li>○ Half-time transportation coordinator</li> <li>○ Vanpool assistance</li> <li>○ Bicycle end-trip facilities (e.g., parking, showers, and lockers).</li> </ul> </li> </ul>	Prior to construction activities	City of Rolling Hills Estates Community Development Department	The Community Development Department shall ensure projects that exceed established VMT significance thresholds incorporate conditions of approval to reduce the project's VMT. These conditions of approval may include the VMT strategy in this measure.			
<p><b>Mitigation Measure MM-TRAN-3:</b> The City of Rolling Hills Estates shall coordinate with neighboring cities and LA Metro to seek additional transit opportunities and resources in the Planning Area and on the Palos Verdes Peninsula. Should a transit station or similar facility be sought on the Peninsula, the Peninsula Center Commercial District shall be a target location for such a facility to align the City's highest density development with transit opportunities.</p>	Ongoing basis	City of Rolling Hills Estates Community Development Department	The Community Development Department shall ensure the City's ongoing compliance with this measure.			

End of Mitigation Monitoring and Reporting Program.

# EXHIBIT C

## CITY OF ROLLING HILLS ESTATES

### LOS ANGELES COUNTY, CALIFORNIA

#### RESOLUTION NO. 2469

#### A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ROLLING HILLS ESTATES, CALIFORNIA, ADOPTING THE 2020 CITY OF RANCHO PALOS VERDES AND ROLLING HILLS ESTATES MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

**WHEREAS**, the City of Rolling Hills Estates is vulnerable to natural hazards which may result in loss of life and property, economic hardship, and threats to public health and safety; and

**WHEREAS**, Section 322 of the Disaster Mitigation Act of 2000 (DMA 2000) requires state and local governments to develop and submit for approval a mitigation plan that outlines processes for identifying their respective natural hazards, risks, and vulnerabilities; and

**WHEREAS**, the City of Rolling Hills Estates acknowledges the requirements of Section 322 of DMA 2000 to update the 2014 Hazard Mitigation Plan in order to be eligible for pre- and post-disaster federal hazard mitigation grant funds; and

**WHEREAS**, the City of Rolling Hills Estates developed by a Planning Team with representatives from the City, and opened the planning process to pertinent municipalities and other stakeholders; and

**WHEREAS**, a public involvement process consistent with the requirements of DMA 2000 was conducted to develop the Hazard Mitigation Plan; and

**WHEREAS**, the 2020 Hazard Mitigation Plan recommends mitigation activities that will reduce losses to life and property affected by natural hazards that face the City; and

**WHEREAS**, pursuant to the California Environmental Quality Act ("CEQA"), City Staff determined that the adoption of the 2020 Hazard Mitigation Plan ("Project") is covered by the general rule, pursuant to Section 15061(b)(3) of the State CEQA Guidelines (14 CCR§ 15061(b)(3)), that CEQA applies only to projects which have the potential for causing a significant effect on the environment, and City Staff found that there is no possible significant effect directly related to the Project. Furthermore, CEQA Guidelines Sections 15262 and 15269 provide additional guidance, in the context, that the Project is a planning study that does not tacitly approve projects that would otherwise require independent environmental review under CEQA.

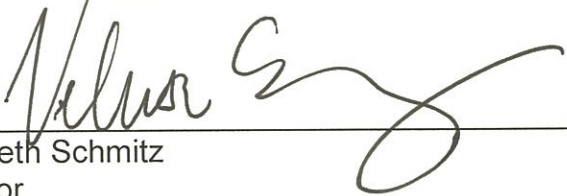
**NOW, THEREFORE, THE CITY COUNCIL OF ROLLING HILLS ESTATES, CALIFORNIA, RESOLVES AS FOLLOWS:**

**SECTION 1.** The City Council finds that all of the facts set forth in the Recitals of this Resolution are true and correct.

**SECTION 2.** The City Council has reviewed the Project and based upon the whole record before it, in the exercise of its independent judgment and analysis, concurs that the adoption of the City of Rolling Hills Estates 2020 Multi-jurisdictional Hazard Mitigation Plan is exempt from consideration under the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines Section 15061 (b)(3) because it can be seen with certainty that there is no possibility that the adoption of this Plan, in and of itself, may have a significant effect on the environment; and future projects described within the Plan may be subject to independent environmental review pursuant to CEQA, and therefore no further action is required under CEQA at this time.

**SECTION 3.** The City Council hereby approves and adopts the City of Rolling Hills Estates 2020 Multi-jurisdictional Hazard Mitigation Plan.

**PASSED, APPROVED, AND ADOPTED** at a regular meeting of the City Council of the City of Rolling Hills Estates this 27<sup>th</sup> day of October, 2020.

  
\_\_\_\_\_  
Velveth Schmitz  
Mayor

ATTEST:

  
\_\_\_\_\_  
Lauren Pettit  
City Clerk/Executive Assistant

I, Lauren Pettit, City Clerk of the City of Rolling Hills Estates, do hereby certify that Resolution No. 2469 duly and regularly passed and adopted by the City Council of the City of Rolling Hills Estates on the 27<sup>th</sup> day of October 2020, by the following roll call vote, as the same appears on file and of record in the office of the City Clerk.

AYES: HUFF, MITCHELL, SCHMITZ, ZERUNYAN, ZUCKERMAN

NOES: NONE

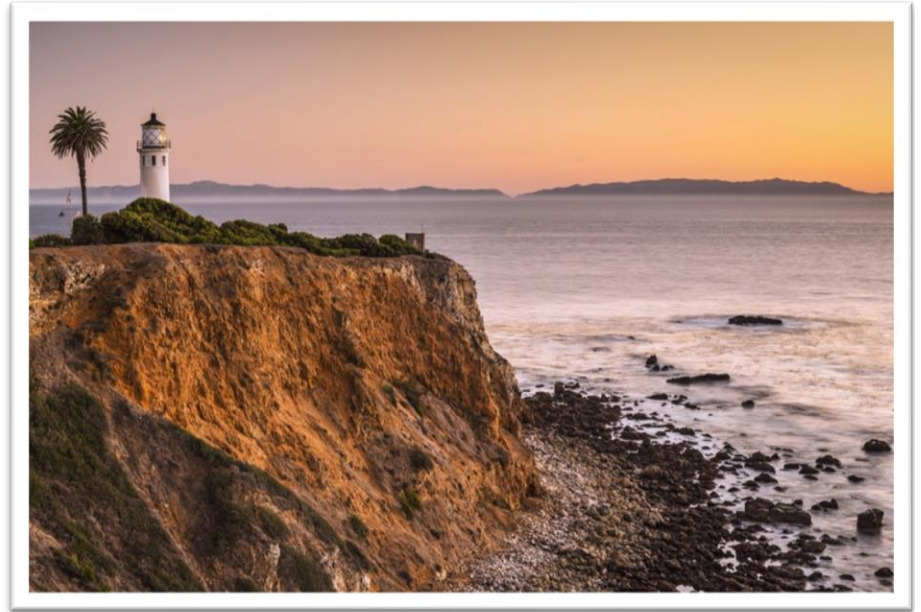
ABSENT: NONE

ABSTAIN: NONE

  
\_\_\_\_\_  
Lauren Pettit, City Clerk/Executive Assistant



October 7, 2020 | Multi-Jurisdictional Hazard Mitigation Plan



Rancho Palos Verdes



Rolling Hills Estates



## Q&A | ELEMENT A: PLANNING PROCESS | A1c.

**Q:** Does the plan identify who represented each jurisdiction? (At a minimum, it must identify the jurisdiction represented and the person’s position or title and agency within the jurisdiction.)

(Requirement §201.6(c)(1))

**A:** See **Credits** below.

## Credits

### Special Thanks

#### *Hazard Mitigation Planning Team and Plan Reviewers:*

Agency	Name	Department	Position
City of Rancho Palos Verdes Planning Team	Katie Lozano	Parks & Recreation	Administrative Analyst II
	Gabriella Yap	Administration	Deputy City Manager
	Vina Ramos	Finance	Accounting Supervisor
	Jackie Ruiz	Administration	Administrative Analyst/ Public Safety
	Natalie Chan	Public Works	Senior Engineer
	So Kim	Community Development	Deputy Director/Planning Manager
	Octavio Silva	Community Development	Senior Planner
	Lukeaz Buchwald	Administration	IT Manager
	Megan Barnes	Administration	Senior Administrative Analyst
City of Rancho Palos Verdes Plan Reviewers	Shane Lee	Administration	Administrative Analyst / Public Safety
	Kit Fox	Administration	Interim Deputy City Manager
	Jesse Villalpando	Administration	Senior Administrative Analyst
City of Rolling Hills Estates	Jeannie Naughton	Community Development	Senior Planner
	Jessica Slawson, Planning Team, Co-Chair	Administration	Administrative Analyst
	Alexa Davis	Administration	Assistant City Manager



## Acknowledgements

### *City of Rancho Palos Verdes*

- ✓ Jerry V. Duhovic, Mayor
- ✓ John Cruikshank, Mayor Pro Tem
- ✓ Eric Alegria, Councilman
- ✓ Susan M. Brooks, Councilwoman
- ✓ Ken Dyda, Councilman

### *City of Rolling Hills Estates*

- ✓ Judy Mitchell, Mayor
- ✓ Velveth Schmitz, Mayor Pro Tem
- ✓ Britt Huff, Council Member
- ✓ Frank Zerunyan, Council Member
- ✓ Steven Zuckerman, Council Member

## Point of Contact

To request information or provide comments regarding this mitigation plan, please contact:

<b>City of Rolling Hills Estates</b>	
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<b>Telephone Number</b>	(310) 377-1577 ext. 122

## Consulting Services

### *Emergency Planning Consultants*

- ✓ Project Manager: Carolyn J. Harshman, MPA, CEM
- ✓ Analyst: Israel Estrada, MS
- ✓ Planning Assistant: Megan R. Fritzler, BS
- ✓ Lead Research and Mapping Analyst: Alex L. Fritzler, BA

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## Mapping

The maps in this plan were provided by the Cities of Rancho Palos Verdes and Rolling Hills Estates, County of Los Angeles, Federal Emergency Management Agency (FEMA), or were acquired from public internet sources. Care was taken in the creation of the maps contained in this Plan, however they are provided "as is". The Cities of Rancho Palos Verdes and Rolling Hills Estates cannot accept any responsibility for any errors, omissions, or positional accuracy, and therefore, there are no warranties that accompany these products (the maps). Although information from land surveys may have been used in the creation of these products, in no way does this product represent or constitute a land survey. Users are cautioned to field verify information on this product before making any decisions.

## Mandated Content

In an effort to assist the readers and reviewers of this document, the jurisdiction has inserted "markers" emphasizing mandated content as identified in the Disaster Mitigation Act of 2000 (Public Law – 390). Following is a sample marker:

**\*EXAMPLE\***

**Q&A | ELEMENT A: PLANNING PROCESS | A1a.**

**Q** Does the plan document the planning process, including how it was prepared (with a narrative description, meeting minutes, sign-in sheets, or another method)? (Requirement §201.6(c)(1))

**A:**



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# Part I: PLANNING PROCESS

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | A1b.

**Q:** Does the plan list the jurisdiction(s) participating in the plan that are seeking approval? (Requirement §201.6(c)(1))

**A:** See **Introduction** below.

## Introduction

The Hazard Mitigation Plan (Mitigation Plan) was prepared in response to Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 (also known as Public Law 106-390) requires state and local governments to prepare mitigation plans to document their mitigation planning process, and identify hazards, potential losses, mitigation needs, goals, and strategies. This type of planning supplements the City's comprehensive land use planning and emergency management planning programs. This document is a federally mandated update to the Cities of Rancho Palos Verdes and Rolling Hills Estates 2014 Multi-Jurisdictional Hazard Mitigation Plan and ensures continuing eligibility for Hazard Mitigation Grant Program (HMGP) funding.

DMA 2000 was designed to establish a national program for pre-disaster mitigation, streamline disaster relief at the federal and state levels, and control federal disaster assistance costs. Congress believed these requirements would produce the following benefits:

- ✓ Reduce loss of life and property, human suffering, economic disruption, and disaster costs.
- ✓ Prioritize hazard mitigation at the local level with increased emphasis on planning and public involvement, assessing risks, implementing loss reduction measures, and ensuring critical facilities/services survive a disaster.
- ✓ Promote education and economic incentives to form community-based partnerships and leverage non-federal resources to commit to and implement long-term hazard mitigation activities.

In addition to compliance with regulations contained in DMA 2000, the Cities desire to conform to the standards contained in California Assembly Bill 2140. As such, the Multi-Jurisdictional Hazard Mitigation Plan will be referred to as an attachment to the next update to both of the General Plan Safety Elements.

The following FEMA definitions are used throughout this plan (Source: FEMA, 2002, *Getting Started, Building Support for Mitigation Planning*, FEMA 386-1):

Hazard Mitigation – “Any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards”.

Planning – “The act or process of making or carrying out plans; specifically, the establishment of goals, policies, and procedures for a social or economic unit.”



## Planning Approach

The four-step planning approach outlined in the FEMA publication, *Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies* (FEMA 386-3) was used to develop this plan:

- ✓ **Develop mitigation goals and objectives** - The risk assessment (hazard characteristics, inventory, and findings), along with municipal policy documents, were utilized to develop mitigation goals and objectives.
- ✓ **Identify and prioritize mitigation actions** - Based on the risk assessment, goals and objectives, existing literature/resources, and input from participating entities, mitigation activities were identified for each hazard. Activities were 1) qualitatively evaluated against the goals and objectives, and other criteria; 2) identified as high, medium, or low priority; and 3) presented in a series of hazard-specific tables.
- ✓ **Prepare implementation strategy** - Generally, high priority activities are recommended for implementation first. However, based on community needs and goals, project costs, and available funding, some medium or low priority activities may be implemented before some high priority items.
- ✓ **Document mitigation planning process** - The mitigation planning process is documented throughout this plan.

## Hazard Land Use Policy in California

Planning for hazards should be an integral element of any City's land use planning program. All California cities and counties have General Plans (also known as Comprehensive Plans) and the implementing ordinances that are required to comply with the statewide land use planning regulations.

The continuing challenge faced by local officials and state government is to keep the network of local plans effective in responding to the changing conditions and needs of California's diverse communities, particularly in light of the very active seismic region in which we live.

Planning for hazards requires a thorough understanding of the various hazards facing the City and region as a whole. Additionally, it's important to take an inventory of the structures and contents of various City holdings. These inventories should include the compendium of hazards facing the City, the built environment at risk, the personal property that may be damaged by hazard events and most of all, the people who live in the shadow of these hazards. Such an analysis is found in this hazard mitigation plan.

## State and Federal Partners in Hazard Mitigation

All mitigation is local and the primary responsibility for development and implementation of risk reduction strategies and policies lies with each local jurisdiction. Local jurisdictions, however, are not alone. Partners and resources exist at the regional, state and federal levels. Numerous California state agencies have a role in hazards and hazard mitigation.

Some of the key agencies include:

- ✓ California Office of Emergency Services (Cal OES) is responsible for disaster mitigation, preparedness, response, recovery, and the administration of federal funds after a major disaster declaration.



- ✓ Southern California Earthquake Center (SCEC) gathers information about earthquakes, integrates information on earthquake phenomena, and communicates this to end-users and the general public to increase earthquake awareness, reduce economic losses, and save lives.
- ✓ California Department of Forestry and Fire Protection (CAL FIRE) is responsible for all aspects of wildland fire protection on private and state properties, and administers forest practices regulations, including landslide mitigation, on non-federal lands.
- ✓ California Division of Mines and Geology (DMG) is responsible for geologic hazard characterization, public education, and the development of partnerships aimed at reducing risk.
- ✓ California Division of Water Resources (DWR) plans, designs, constructs, operates, and maintains the State Water Project; regulates dams; provides flood protection and assists in emergency management. It also educates the public, serves local water needs by providing technical assistance.
- ✓ FEMA provides hazard mitigation guidance, resource materials, and educational materials to support implementation of the capitalized DMA 2000.
- ✓ United States Census Bureau (USCB) provides demographic data on the populations affected by natural disasters.
- ✓ United States Department of Agriculture (USDA) provides data on matters pertaining to land management.

## Q&A | ELEMENT A: PLANNING PROCESS | A3

**Q:** Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))

**A:** See **Stakeholders** below.

## Stakeholders

A Hazard Mitigation Planning Team (Planning Team) consisting of department representatives from Rancho Palos Verdes and Rolling Hills Estates worked with Emergency Planning Consultants to create the updated Plan. ***The Planning Team served as the primary stakeholders throughout the planning process. The general public and external agencies served as secondary stakeholders with an opportunity to contribute to the plan during the Plan Writing Phase of the planning process.***

## Hazard Mitigation Legislation

### *Hazard Mitigation Grant Program*

In 1974, Congress enacted the Robert T. Stafford Disaster Relief and Emergency Act, commonly referred to as the Stafford Act. In 1988, Congress established the Hazard Mitigation Grant Program (HMGP) via Section 404 of the Stafford Act. Regulations regarding HMGP implementation based on the DMA 2000 were initially changed by an Interim Final Rule (44 CFR Part 206, Subpart N) published in the Federal Register on February 26, 2002. A second Interim Final Rule was issued on October 1, 2002.

The HMGP helps states and local governments implement long-term hazard mitigation measures for natural hazards by providing federal funding following a federal disaster declaration. Eligible



applicants include state and local agencies, Indian tribes or other tribal organizations, and certain nonprofit organizations.

In California, the HMGP is administered by Cal OES. Examples of typical HMGP projects include:

- ✓ Property acquisition and relocation projects
- ✓ Structural retrofitting to minimize damages from earthquake, flood, high wind, wildfire, or other natural hazards
- ✓ Elevation of flood-prone structures
- ✓ Vegetative management programs, such as:
  - Brush control and maintenance
  - Fuel break lines in shrubbery
  - Fire-resistant vegetation in potential wildland fire areas

### *Pre-Disaster Mitigation Program*

The Pre-Disaster Mitigation Program (PDM) was authorized by §203 of the Stafford Act, 42 United States Code, as amended by §102 of the DMA 2000. Funding is provided through the National Pre-Disaster Mitigation Fund to help state and local governments (including tribal governments) implement cost-effective hazard mitigation activities that complement a comprehensive mitigation program.

In Fiscal Year 2009, two types of grants (planning and competitive) were offered under the PDM Program. Planning grants allocate funds to each state for Mitigation Plan development. Competitive grants distribute funds to states, local governments, and federally recognized Indian tribal governments via a competitive application process. FEMA reviews and ranks the submittals based on pre-determined criteria. The minimum eligibility requirements for competitive grants include participation in good standing in the National Flood Insurance Program (NFIP) and a FEMA-approved Mitigation Plan. (Source: <http://www.fema.gov/fima/pdm.shtm>)

### *Flood Mitigation Assistance Program*

The Flood Mitigation Assistance (FMA) Program was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 (42 U.S.C. 4101). Financial support is provided through the National Flood Insurance Fund to help states and communities implement measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the NFIP.

Three types of grants are available under FMA: planning, project, and technical assistance. Planning grants are available to states and communities to prepare Flood Mitigation Plans. NFIP-participating communities with approved Flood Mitigation Plans can apply for project grants to implement measures to reduce flood losses. Technical assistance grants in the amount of 10 percent of the project grant are available to the state for program administration. Communities that receive planning and/or project grants must participate in the NFIP. Examples of eligible projects include elevation, acquisition, and relocation of NFIP-insured structures. (Source: <http://www.fema.gov/fima/fma.shtm>)



## Q&A | ELEMENT C. MITIGATION STRATEGY | C2

**Q:** Does the Plan address each jurisdiction’s participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))

**A:** See **NFIP Participation** below.

### National Flood Insurance Program

Established in 1968, the NFIP provides federally backed flood insurance to homeowners, renters, and businesses in communities that adopt and enforce floodplain management ordinances to reduce future flood damage. The Director of the Community Development Department is the floodplain administrator for RPV.

In 2006, the City of Rancho Palos Verdes the City’s Building Code (Title 15 of the RPVMC) included a Chapter on floodplain management (Chapter 15.42). Support of the NFIP takes place when a prospective developer submits a permit request or building plans and the department staff looks up the zoning on the property. If the property is located in or near a designated floodplain, the applicant is provided with a NFIP brochure.

Although the City of Rolling Hills Estates is designated a No Special Flood Hazard Area, it does still participate in the NFIP by distributing the NFIP brochure with prospective land developers and builders.

#### *NFIP Participation*

Both cities participate in NFIP. The FEMA FIRM maps were last updated in September 26, 2008. These studies and maps represent flood risk at the point in time when FEMA completed the studies and does not incorporate planning for floodplain changes in the future due to new development. Although FEMA is considering changing that policy, it is optional for local communities. According to FEMA, Rolling Hills Estates is designated a No Special Flood Hazard Area (NSFHA). A Non-Special Flood Hazard Area (NSFHA) is an area that is in a moderate- to low-risk flood zone (Zones B, C, X Pre- and Post-FIRM). Specifically, RHE is designated Zone x and RPV is designated Zone D.

The NSFHA is not in any immediate danger from flooding caused by overflowing rivers or hard rains. However, it’s important to note that structures within a NSFHA are still at risk. In fact, over 20% of all flood insurance claims come from areas outside of mapped high-risk flood zones.

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B4

**Q:** Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))

**A:** See **Repetitive Loss Properties** below.

#### *Repetitive Loss Properties*

Repetitive Loss Properties (RLPs) are most susceptible to flood damages; therefore, they have been the focus of flood hazard mitigation programs. Unlike a countywide program, the Floodplain Management Plan (FMP) for repetitive loss properties involves highly diversified property profiles, drainage issues, and property owner’s interest. It also requires public involvement processes





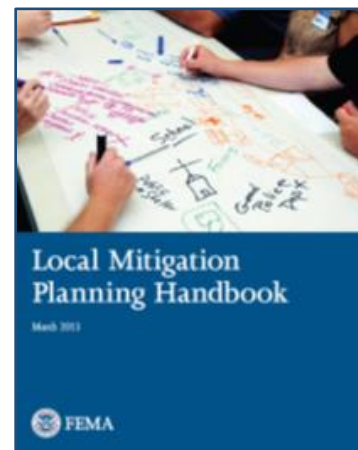
unique to each RLP area. The objective of an FMP is to provide specific potential mitigation measures and activities to best address the problems and needs of communities with repetitive loss properties. A repetitive loss property is one for which two or more claims of \$1,000 or more have been paid by the National Flood Insurance Program (NFIP) within any given ten-year period. According to FEMA resources, there are no Repetitive Loss Properties (RLPs) within the project area.

## State and Federal Guidance in Hazard Mitigation

While local jurisdictions have primary responsibility for developing and implementing hazard mitigation strategies, they are not alone. Various state and federal partners and resources can help local agencies with mitigation planning.

The Mitigation Plan was prepared in accordance with the following regulations and guidance documents:

- ✓ DMA 2000 (Public Law 106-390, October 10, 2000)
- ✓ 44 CFR Parts 201 and 206, Mitigation Planning and Hazard Mitigation Grant Program, Interim Final Rule, October 1, 2002
- ✓ 44 CFR Parts 201 and 206, Mitigation Planning and Hazard Mitigation Grant Program, Interim Final Rule, February 26, 2002
- ✓ How-To Guide for Using HAZUS-MH for Risk Assessment, (FEMA 433), February 2004
- ✓ Mitigation Planning “How-to” Series (FEMA 386-1 through 9 available at: <http://www.fema.gov/fima/planhowto.shtml>)
- ✓ Getting Started: Building Support for Mitigation Planning (FEMA 386-1)
- ✓ Understanding Your Risks: Identifying Hazards and Estimating Losses (FEMA 386-2)
- ✓ Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies (FEMA 386-3)
- ✓ Bringing the Plan to Life: Implementing the Mitigation Plan (FEMA 386-4)
- ✓ Using Benefit-Cost Review in Mitigation Planning (FEMA 386-5)
- ✓ Integrating Historic Property and Cultural Resource Considerations into Mitigation Planning (FEMA 386-6)
- ✓ Integrating Manmade Hazards into Mitigation Planning (FEMA 386-7)
- ✓ Multi-Jurisdictional Mitigation Planning (FEMA 386-8)
- ✓ Using the Mitigation Plan to Prepare Successful Mitigation Projects (FEMA 386-9)
- ✓ State and Local Plan Interim Criteria Under the DMA 2000, July 11, 2002, FEMA
- ✓ Mitigation Planning Workshop for Local Governments-Instructor Guide, July 2002, FEMA
- ✓ Report on Costs and Benefits of Natural Hazard Mitigation, Document #294, FEMA
- ✓ LHMP Development Guide – Appendix A - Resource, Document, and Tool List for Local Mitigation Planning, December 2, 2003, Cal OES
- ✓ Local Mitigation Plan Review Guide (FEMA 2011)
- ✓ Local Mitigation Planning Handbook (FEMA 2013)







## How is the Plan Organized?

The structure of the plan enables the reader to use a section of interest to them and allows the Cities to review and update sections when new data is available. The ease of incorporating new data into the plan will result in a Mitigation Plan that remains current and relevant.

Following is a description of each section of the plan:

### Part I: Planning Process

#### Introduction

Describes the background and purpose of developing a mitigation plan.

#### Planning Process

Describes the mitigation planning process including stakeholders and integration of existing data and plans.

### Part II: Risk Assessment

#### Community Profile

Summarizes the history, geography, demographics, and socioeconomics of the Planning Area.

#### Risk Assessment

This section provides information on hazard identification, vulnerability and risk associated with hazards in the Planning Area.

#### City-Specific Hazard Analysis

Describes the hazards posing a significant threat to Planning Area including:

**Earthquake | Wildfire | Earth Movement | Tsunami | Hazardous Materials | Human-Caused Events | Utility-Related Events**

Each City-Specific Hazard Analysis includes information on previous occurrences, local conditions, hazard assessment, and local impacts.

### Part III: Mitigation Strategies

#### Mitigation Strategies

Documents the goals, community capabilities, and priority setting methods supporting the Plan. Also highlights the Mitigation Actions Matrix: 1) goals met; 2) identification, assignment, timing, and funding of mitigation activities; 3) benefit/cost/priorities; 4) plan implementation method; and 5) activity status.

#### Plan Maintenance

Establishes tools and guidelines for maintaining and implementing the Mitigation Plan.



## Part IV: Attachments

The plan appendices are designed to provide users of the Mitigation Plan with additional information to assist them in understanding the contents of the mitigation plan.

### Attachments

FEMA Letter of Approval  
City Council Staff Reports  
City Council Resolutions  
Planning Team Sign-in Sheets  
Web Postings and Notices  
HAZUS Reports

### Plan Adoption and Approval

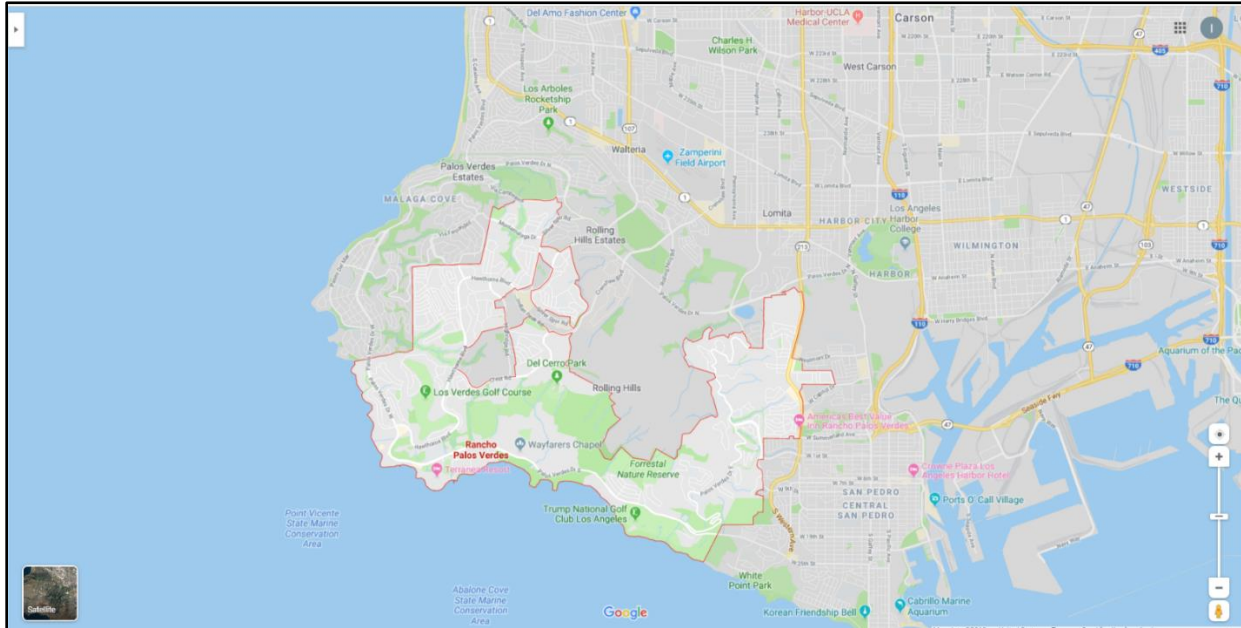
As per DMA 2000 and supporting Federal regulations, the Mitigation Plan is required to be adopted by the City Council and approved by FEMA. See the **Planning Process Section** for details.

### Who Does the Mitigation Plan Affect?

This plan provides a framework for planning for natural hazards. The resources and background information in the plan are applicable City-wide and to City-owned facilities, and the goals and recommendations provide groundwork for local mitigation plans and partnerships, for each City respectively. **Maps: Rancho Palos Verdes and Rolling Hills Estates** shows the regional proximity of the project area to their adjoining communities.

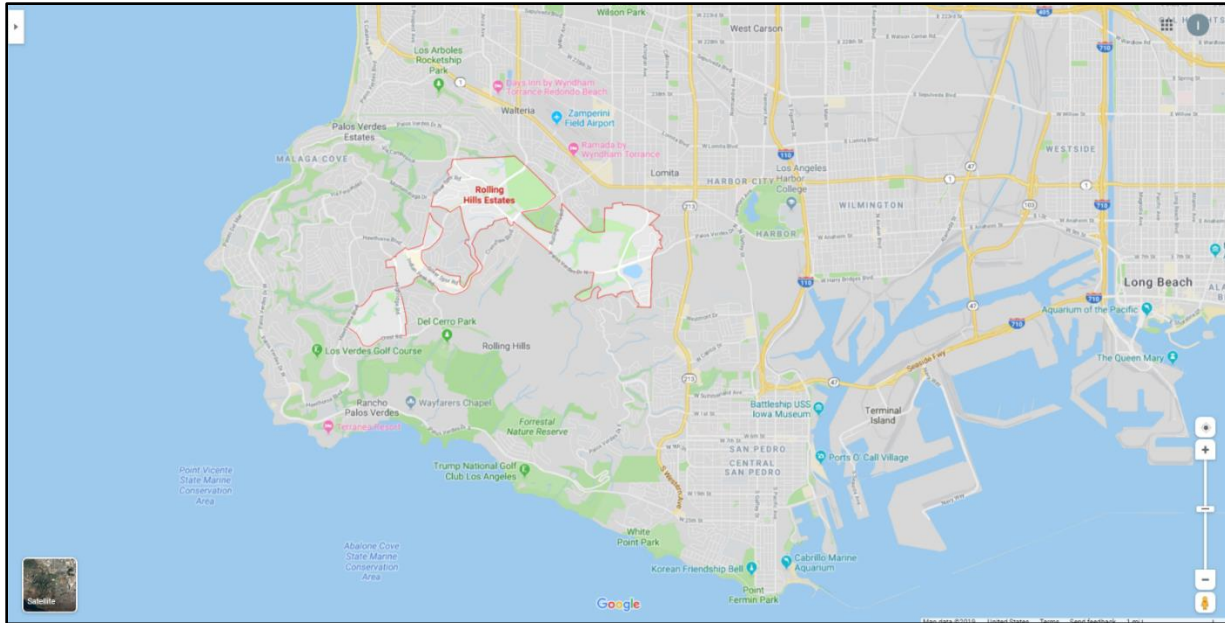


**Map: City of Rancho Palos Verdes**  
(Source: Google Maps)





**Map: City of Rolling Hills Estates**  
(Source: Google Maps)





# Planning Process

Throughout the project, the cities followed their traditional approach to developing policy documents which included preparation of a First Draft Plan for internal review by the Hazard Mitigation Planning Team who served as the primary stakeholders. Next, following any necessary revisions, a Second Draft Plan was shared with the secondary stakeholders - general public and external agencies (utilities, special districts, adjoining jurisdictions) during the plan writing phase. The comments gathered from the secondary stakeholders were incorporated into a Third Draft Plan which was submitted to Cal OES and FEMA. Next, the Planning Team completed any mandated amendments to satisfy input from Cal OES and FEMA.

Following receipt of FEMA’s “Approval Pending Adoption”, the Final Draft Plan was posted as per jurisdictional practices in advance of both City Council meetings. Any questions or comments gathered in advance of the City Council meetings were incorporated into the respective Staff Report. Following consideration and adoption by each the City Councils, proof of the Plan’s adoption was forwarded to FEMA along with a request for final approval. The planning process described above is portrayed below in a timeline:

## Q&A | ELEMENT A: PLANNING PROCESS | A1a.

**Q:** Does the plan document the planning process, including how it was prepared (with a narrative description, meeting minutes, sign-in sheets, or another method)?

**A:** See **Planning Phases Timeline** and **Plan Methodology** below.

## Q&A | ELEMENT A: PLANNING PROCESS | A3

**Q:** Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))

**A:** See **Planning Phases Timeline** below.



**Table: Planning Phases Timeline**

PLANNING PHASES TIMELINE				
Plan Writing Phase (First & Second Draft Plan)	Plan Review Phase (Third & Final Draft Plan)	Plan Adoption Phase (Final Draft Plan)	Plan Approval Phase (Final Plan)	Plan Implementation Phase
<ul style="list-style-type: none"> <li>• Planning Team input – research, meetings, writing, review of First Draft Plan</li> <li>• Incorporate input from the Planning Team into Second Draft Plan</li> <li>• Invite general public and external agencies to comment and contribute to the Second Draft Plan</li> <li>• Incorporate and document gathered input into the Third Draft Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Third Draft Plan sent to Cal OES and FEMA for “Approval Pending Adoption”</li> <li>• Address any mandated revisions identified by Cal OES and FEMA into Final Draft Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Post public notice of both City Council meetings along with posting of Final Draft Plan</li> <li>• Present Final Draft Plan to both of the City Councils</li> <li>• City Councils Adopted Plan</li> <li>• Submit Proof of Adoptions to FEMA with request for final approval</li> </ul>	<ul style="list-style-type: none"> <li>• Receive FEMA final approval</li> <li>• Incorporate FEMA approval into the Final Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct annual Planning Team meetings</li> <li>• Integrate mitigation action items into budget, CIP and other funding and strategic documents</li> </ul>





## Plan Methodology

The Planning Team discussed knowledge of natural hazards and past historical events, as well as planning and zoning codes, ordinances, and recent planning decisions.

The rest of this section describes the mitigation planning process including 1) Planning Team involvement, 2) public and external agency involvement; and 3) integration of existing data and plans.

### Q&A | ELEMENT A: PLANNING PROCESS | A1a.

**Q:** Does the plan document the planning process, including how it was prepared (with a narrative description, meeting minutes, sign-in sheets, or another method)? (Requirement §201.6(c)(1))

**A:** See **Table: Planning Team Involvement and Level of Participation** below.

## Planning Team Involvement

The Planning Team consisted of representatives from Rancho Palos Verdes and Rolling Hills Estates departments related to hazard mitigation processes. The Co-Chairs of the Planning Team sent emails to the department heads requesting names of representatives to serve on the Planning Team. The Planning Team members served as primary stakeholders throughout the planning process. Next the Co-Chairs sent emails to the identified representatives describing the nature of the Mitigation Plan and the need for their participation and attendance at four Planning Team Meetings. The Planning Team was responsible for the following tasks:

- ✓ Confirming planning goals
- ✓ Prepare timeline for plan update
- ✓ Ensure plan meets DMA 2000 requirements
- ✓ Organize and solicit involvement of public and external agencies
- ✓ Analyze existing data and reports
- ✓ Update hazard information
- ✓ Review HAZUS loss projection estimates
- ✓ Update status of Mitigation Action Items
- ✓ Develop new Mitigation Action Items
- ✓ Participate in Planning Team meetings and City Council public meetings
- ✓ Provide existing resources including maps and data

The Planning Team, with assistance from Emergency Planning Consultants, identified and profiled hazards; determined hazard rankings; estimated potential exposure or losses; evaluated development trends and specific risks; and developed mitigation goals and action items (see Mitigation Strategies section).



**Table: Planning Team Meeting Dates and Content**

	<b>Meeting #1 April 11, 2019</b>	<b>Meeting #2 May 30, 2019</b>	<b>Meeting #3 June 26, 2019</b>	<b>Meeting #4 September 30, 2019</b>
Hazard Identification and Ranking	X			
Review status of existing mitigation action items		X		
Develop New Mitigation Action Items			X	
Review First Draft Plan				X





Table: Planning Team Level of Participation

Name	Research and Writing of Plan	Planning Team Meeting 4/11/19	Planning Team Meeting 5/30/19	Planning Team Meeting 6/26/19	Planning Team Meeting 9/30/19	Planning Team and Plan Reviewers Comment on First Draft Plan	Review and input from general public and external agencies of the Second Draft Plan	Submit Third Draft Plan to Cal OES/FEMA for Approval Pending Adoption	Receive FEMA Approval Pending Adoption	Post Final Draft Plan in advance of City Council Public Meetings	Present Final Draft Plan to City Councils at Public Meeting for Plan Adoption	Submit Proof of Adoption and Request for FEMA for Final Approval	Receive FEMA Final Approval. Issue Final Plan
City of Rancho Palos Verdes													
Jackie Ruiz, Co-Chair		X	X	X		X				X			
Katie Lozano		X	X	X	X	X							
Gabriella Yap					X	X							
Vina Ramos		X		X	X	X							
Natalie Chan		X	X	X		X							
So Kim		X	X			X							
Lukeaz Buchwald			X			X							
Octavio Silva			X	X	X	X							
Megan Barnes					X	X							
City of Rolling Hills Estates													
Jessica Slawson, Planning Team Co-Chair		X	X	X	X	X	X		X	X			
Jeannie Naughton		X	X	X	X	X							
Alexa Davis					X	X							



Table: Planning Team Timeline

	March 2019	April	May	June	July	August	September	October	November – May 2020	June	July	August	September	October
Research and Writing of First Draft Plan	X	X	X											
Planning Team Meetings		X	X	X			X							
Planning Team Review and Comment on First Draft Plan							X							
Second Draft Plan review and comment by public, local community groups, and external agencies									X					
Third Draft Plan submitted to Cal OES/FEMA for Approval Pending Adoption										X				
Receive FEMA Approval Pending Adoption														X
Post Final Draft Plan in advance of City Council meetings.														X
Present Final Draft Plan to City Council at Public Meetings														
Submit Proof of Adoptions to FEMA with Request for Final Approval														
Receive FEMA Final Approval														
Incorporate FEMA Approval into Final Plan														



### Q&A | ELEMENT A: PLANNING PROCESS | A2a.

**Q:** Does the plan document an opportunity for neighboring communities, local, and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development, as well as other interested parties to be involved in the planning process? (Requirement §201.6(b)(2))

**A:** See **Secondary Stakeholder Input** below.

### Q&A | ELEMENT A: PLANNING PROCESS | A2b.

**Q:** Does the plan identify how the stakeholders were invited to participate in the process? (Requirement §201.6(b)(2))

**A:** See **Secondary Stakeholder Input** below.

### Q&A | ELEMENT A: PLANNING PROCESS | A3

**Q:** Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))

**A:** See **Table: Secondary Stakeholder Input** below.

## Secondary Stakeholder Input

In addition to the Planning Team, the secondary stakeholders also provided information, expertise, and other resources during plan writing phase. The secondary stakeholders included: general public and external agencies (e.g. utilities, special districts, adjoining jurisdictions, etc.), and the RPV Emergency Preparedness Committee. The Emergency Preparedness Committee is appointed by the City Council to advise and assist staff to ensure that RPV develops and maintains a high state of readiness to respond to a wide variety of emergencies and disasters. The Emergency Preparedness Committee was provided a copy of the First Draft Plan and a discussion held on January 16, 2020. Comments gathered are identified below in **Table: Secondary Stakeholder Input**. No other comments were gathered from the general public or external agencies.

Following review and input by the Planning Team of the First Draft Plan, a Second Draft Plan incorporating any revisions was made available to the secondary stakeholders as identified above. The Second Draft Plan and invitation to participate during the planning process was posted on the RPV website, “Notify Me”, Facebook, Instagram, Next Door, Twitter, RPV Emergency Preparedness Committee website, Council of Homeowners Associations, and Los Angeles County Area E on December 5, 2019. (**See Attachments – Web Postings**)

The gathered input from the secondary stakeholders was directed to the appropriate Co-Chair of the Planning Team and incorporated it into the Third Draft Plan. Following is a specific accounting of the comments received from the review of the Second Draft Plan by the secondary stakeholders:

**Table: Secondary Stakeholder Input**

Date Informed	Agency, Name, Title	Date & Information Gathered	How Information was Addressed
1.16.2020	RPV Emergency Preparedness Committee	1.16.2020 Revised RPV CPRI Rankings	Updated CPRI Rankings for RPV in the Third Draft Plan



Local community group members and external agencies listed below were invited via email and provided with an electronic link to each city’s website. Following is the email distributed along with the invitation to comments:

Following receipt of FEMA’s “Approval Pending Adoption” and in advance of each of the City Council public meetings, the general public (via public noticing) and external agencies (via email) were informed of the web posting of the Final Draft Plan and encouraged to attend the public meetings. Gathered comments on the Plan during the posting period were noted in each of the City Council Staff Reports and added to the Final Plan.

**Q&A | ELEMENT C. MITIGATION STRATEGY | C1a.**

**Q:** Does the plan document each jurisdiction’s existing authorities, policies, programs and resources? (Requirement §201.6(c)(3))

**A:** See **Capability Assessment – Existing Processes and Programs** below.

**Capability Assessment – Existing Processes and Programs**

Both cities will incorporate mitigation planning as an integral component of daily operations. This will be accomplished by the Planning Team working with their respective departments to integrate mitigation strategies into the planning documents and operational guidelines within each city. In addition to the Capability Assessment below, the Planning Team will strive to identify additional policies, programs, practices, and procedures that could be created or modified to address mitigation activities.

**Table: Capability Assessment - Existing Processes and Programs – City of Rancho Palos Verdes**  
(Sources: City of Rancho Palos Verdes website; Los Angeles County Fire Department website)

Resource Type	Resource Name	Ability to Support Mitigation
Personnel	City Manager’s Office	<i>Under the aegis of the City Council, the City Manager proposes policies and programs, carries out directives voted by the City Council, and develops a long range view of City problems, needs, goals, and objectives for consideration by the City Council. The City Manager also prepares general rules and regulations necessary for the conduct of the administrative offices and departments of the City and supervises the preparation of the City’s budget and financial reports each fiscal year. The City Manager can assist greatly with implementation by using the Hazard Mitigation Plan as a “strategic” document. This would ensure implementation across all departments, policies, and disciplines. In addition, the City Manager serves as the Public Information Officer which will provide numerous opportunities to share the importance of hazard mitigation.</i>
Personnel	Hazard Mitigation Planning Team	<i>Hazard Mitigation Planning Team is made up of representatives from each of the departments assigned mitigation action items in the Hazard</i>



Resource Type	Resource Name	Ability to Support Mitigation
		<p><i>Mitigation Plan. In addition to assisting with 5-year plan updates as required by FEMA, the Planning Team is responsible for implementing, monitoring, and evaluating the plan during its quarterly meetings. The Team plays perhaps the most important role in implementing the mitigation plan through inspiring the departments they represent to take action, seek funding, and push for community support.</i></p>
Personnel	Community Development	<p><i>The purpose of the Community Development Department is to ensure the orderly physical development of the community by upholding the goals and policies of the city's General Plan through the issuance of land use entitlements and permits for improvements and development of private property. Community Development will assist with implementing mitigations actions relating to land development and building standards. In addition, they will continue to distribute NFIP information.</i></p>
Personnel	Public Works	<p><i>The Public Works Department is responsible for a wide variety of activities, including leadership of the City's infrastructure and environmental programs and the planning, development and maintenance of public buildings, parks, trails, roads, street trees, storm drains and sanitary sewers. The Public Works Department is assigned to carry out many of the Mitigation Actions Matrix items. In addition to those responsibilities, most of the Public Works staff are assigned to field duties which expose them to changes in hazards and hazard characteristics. An example includes flooding patterns as upstream development takes place, the downstream flooding frequency and intensities will likely change. This hazard information needs to be incorporated into the Plan as it is known – not just when the next 5-year HMP update is due.</i></p>
Personnel	Building & Safety	<p><i>The Building and Safety Division's focus is on building construction safety through the implementation and enforcement of construction standards and codes. The Division's functions include checking plans for compliance with all of the applicable codes, issuing building permits, and conducting inspections of the construction projects as they progress to ensure that the code standards are met and that the project is constructed in accordance with the approved plans. Particularly through code enforcement efforts, Building Safety can assist in not only implementing the plan's action items but also minimize threats associated with hazards – one building at a time.</i></p>



Resource Type	Resource Name	Ability to Support Mitigation
Personnel	LACoFD	<i>The Los Angeles County Fire Department provides firefighting and emergency medical services for the unincorporated parts of Los Angeles County as well as 59 cities through contracting. LACoFD assists with implementing the Hazard Mitigation Plan by informing the City of changes in hazards and vulnerabilities observed during the field responses and research. Sharing of this information could result in hazard updates to the plan and new mitigation action items that could limit future vulnerabilities.</i>
Personnel	Information Technology	<i>Using contracted IT Services Providers, the IT department supports a variety of programs in support of citywide initiatives. These include website and eGovernment technologies, computer and server support, networking equipment and connectivity, telephone and voice services, enterprise system support / data management, GIS and land management system integration, audio / visual and broadcast equipment, network security and compliance. Through its work with GIS and land management system integration, IT can assist with implementation through hazard mapping and other means of information the public of proximity to hazards.</i>
Plans	Emergency Operations Plan	<i>Emergency Operations Plan is a reference and guidebook to operations during a major emergency impacting Rancho Palos Verdes. The Plan includes a discussion on a wide range of hazards, organization and staffing of the Emergency Operations Center, and connectivity with field responders and external agencies. The Emergency Operations Plan is an excellent source of hazard information for the Hazard Mitigation Plan. Following an activation of the EOP/EOC it is routine to prepare an After-Action Plan. The AAR should include documentation of changes in hazards and vulnerability. That information could be very useful during future HMP updates.</i>
Plans	General Plan	<i>General Plan outlines long-term direction for development and policy in a community. There are opportunities to coordinate local hazard mitigation actions with policies governed by the General Plan. Next update to General Plan Safety Element should include integration with the Hazard Mitigation Plan. Also, General Plan is an excellent resource to assist with implementing many of the mitigation action items identified in the Hazard Mitigation Plan.</i>
Plans	Capital Improvement Program	<i>The Capital Improvement Program directs construction activities for City-owned facilities and infrastructure for</i>





Resource Type	Resource Name	Ability to Support Mitigation
		<i>the next five years. Mitigation actions may involve construction of new or upgraded facilities and infrastructure.</i>
Plans	Storm Water Management Plan	<i>Storm Water Management Plan provides long-range planning of water supplies and water use to ensure a stable water supply and compliance with water conservation efforts. Mitigation actions that involve reducing water use may be incorporated into the next update to the Storm Water Management Plan.</i>
Policy	Zoning Ordinance	<i>Zoning Ordinance implements the City's General Plan by establishing specific regulations for development. It includes standards for where development can be located, how buildings must be sized, shaped, and positioned, and what types of activities can occur in an area. Hazard mitigation actions that pertain to new or substantially redeveloped buildings can be adopted into the Zoning Ordinance.</i>
Policy	Building Code	<i>Building Code specifies how new structures can be built. It includes the California Building Code, in addition to any amendments made by the City. Mitigation actions may involve amending the Building Code to improve a building's safety or structural stability.</i>
Policy	Natural Community Conservation Planning Act	<i>The Natural Community Conservation Planning Act of 1991, as amended (NCCP Act, California Fish and Game Code Section 2800, et seq.) provides for the preparation and implementation of large-scale natural resource conservation plans. A Natural Community Conservation Plan (NCCP) must identify and provide for the regional or area-wide protection and management of natural wildlife diversity while allowing for compatible and appropriate development and growth. An NCCP is intended to provide comprehensive management and conservation of multiple species, including but not limited to species listed under the California Endangered Species Act (CESA) or Federal Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). The NCCP Act is intended to promote cooperation and coordination among public agencies, landowners, and other interested organizations or individuals. The NCCP should be reviewed and finding included in future HMP updates.</i>



**Table: Capability Assessment - Existing Processes and Programs – City of Rolling Hills Estates**  
 (Sources: City of Rolling Hills Estates website; Los Angeles County Fire Department)

Resource Type	Resource Name	Ability to Support Mitigation
Personnel	City Manager's Office	<i>The day-to-day municipal activities are directed by the City Manager, who is a professional administrator appointed by the City Council. The City Manager keeps the City Council advised of the City's financial condition and future needs and makes recommendations for consideration and action by the City Council. The City Manager can assist greatly with implementation by using the Hazard Mitigation Plan as a "strategic" document. This would ensure implementation across all departments, policies, and disciplines. In addition, the City Manager serves as the Public Information Officer which will provide numerous opportunities to share the importance of hazard mitigation.</i>
Personnel	Community Services	<i>The Community Services Division includes the City maintenance program for facilities and properties and all recreation services. Specifically, the Department's maintenance division is responsible for the upkeep of public parks, parkways and equestrian trails, flood control and other public facilities. The Division are the "boots on the ground" for observing needed maintenance and impacts to facilities from hazards. This information is critical to future updates to the HMP.</i>
Personnel	Public Works	<i>The Public Works Department plans and maintains all phases of street operations including street sweeping and the maintenance of lighting, traffic signs and signals. The Public Works Department is assigned to carry out many of the Mitigation Actions Matrix items. In addition to those responsibilities, most of the Public Works staff are assigned to field duties which expose them to changes in hazards and hazard characteristics. An example includes flooding patterns as upstream development takes place, the downstream flooding frequency and intensities will likely change. This hazard information needs to be incorporated into the Plan as it is known – not just when the next 5-year HMP update is due.</i>
Personnel	Community Development	<i>The Community Development Department reviews and approves plans for development within the City, enforces subdivision and building regulations in residential and commercial areas and processes amendments to the Zoning Ordinance. Community Development will assist with implementing mitigations actions relating to land development and building standards. In addition, they will continue to distribute NFIP information</i>
Personnel	LACoFD	<i>The Los Angeles County Fire Department provides firefighting and emergency medical services for the unincorporated parts of Los Angeles County as well as 59</i>





Resource Type	Resource Name	Ability to Support Mitigation
		<p><i>cities through contracting. LACoFD assists with implementing the Hazard Mitigation Plan by informing the City of changes in hazards and vulnerabilities observed during the field responses and research. Sharing of this information could result in hazard updates to the plan and new mitigation action items that could limit future vulnerabilities.</i></p>
Personnel	Finance Division	<p><i>The Finance Division administers the cash management, accounts payable, accounts receivable, payroll, and acts as the City's license collector and purchasing agent. The Finance Division can play a critical role in implementing the plan because of access and familiarity with grants and other outside funding.</i></p>
Personnel	IT Division	<p><i>The Information Technology Division manages the City's computer servers, email, data backup and recovery, WiFi at City facilities, workstations, spam filtering, firewall protection, notebooks, weather station, alarm system, and phone system. A critical piece in mitigation is to inform the public of incoming hazards and sharing information on how to minimize or eliminate threats from hazards.</i></p>
Plans	Emergency Operations Plan	<p><i>Emergency Operations Plan is a reference and guidebook to operations during a major emergency impacting Rolling Hills Estates. The Plan includes a discussion on a wide range of hazards, organization and staffing of the Emergency Operations Center, and connectivity with field responders and external agencies. The Emergency Operations Plan is an excellent source of hazard information for the Hazard Mitigation Plan. The City desires to update its EOP in the near future.</i></p>
Plans	General Plan	<p><i>General Plan outlines long-term direction for development and policy in a community. There are opportunities to coordinate local hazard mitigation actions with policies governed by the General Plan. Next update to General Plan Safety Element should include integration with the Hazard Mitigation Plan. Also, General Plan is an excellent resource to assist with implementing many of the mitigation action items identified in the Hazard Mitigation Plan.</i></p>
Plans	Capital Improvement Program	<p><i>The Capital Improvement Program directs construction activities for City-owned facilities and infrastructure for the next five years. Mitigation actions may involve construction of new or upgraded facilities and infrastructure.</i></p>
Plans	Storm Water Management Plan	<p><i>Storm Water Management Plan provides long-range planning of water supplies and water use to ensure a stable water supply and compliance with water conservation efforts. Mitigation actions that involve reducing water use may be incorporated into the next update to the Storm Water Management Plan.</i></p>



Resource Type	Resource Name	Ability to Support Mitigation
Policy	Zoning Ordinance	<i>Zoning Ordinance implements the City’s General Plan by establishing specific regulations for development. It includes standards for where development can be located, how buildings must be sized, shaped, and positioned, and what types of activities can occur in an area. Hazard mitigation actions that pertain to new or substantially redeveloped buildings can be adopted into the Zoning Ordinance.</i>
Policy	Building Code	<i>Building Code specifies how new structures can be built. It includes the California Building Code, in addition to any amendments made by the City. Mitigation actions may involve amending the Building Code to improve a building’s safety or structural stability.</i>

**Q&A | ELEMENT A: PLANNING PROCESS | A4**

**Q:** Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))

**A:** See **Use of Existing Data** below.

## Use of Existing Data

The Planning Team gathered and reviewed existing data and plans during plan writing and specifically noted as “sources”. Numerous electronic and hard copy documents were used to support the planning process:

### City of Rancho Palos Verdes General Plan

[www.rpvca.gov/356/General-Plan-Update](http://www.rpvca.gov/356/General-Plan-Update)

*Applicable Incorporation: Land Use map, Community Profile section – geography, environmental, population, housing, transportation and demographic data*

### City of Rolling Hills Estates General Plan

[www.ci.rolling-hills-estates.ca.us/government/planning/general-plan](http://www.ci.rolling-hills-estates.ca.us/government/planning/general-plan)

*Applicable Incorporation: Land Use map, Community Profile section – geography, environmental, population, housing, transportation and demographic data*

### County of Los Angeles All-Hazards Mitigation Plan (2014)

[www.ceo.lacounty.gov/wp-content/uploads/OEM/hazmitgplan.pdf](http://www.ceo.lacounty.gov/wp-content/uploads/OEM/hazmitgplan.pdf)

*Applicable Incorporation: Information about hazards in the County contributed to the hazard-specific sections in the City’s Mitigation Plan.*

### California State Hazard Mitigation Plan (2018)

[www.caloes.ca.gov/cal-oes-divisions/hazard-mitigation/hazard-mitigation-planning/state-hazard-mitigation-plan](http://www.caloes.ca.gov/cal-oes-divisions/hazard-mitigation/hazard-mitigation-planning/state-hazard-mitigation-plan)

*Applicable Incorporation: Used to identify hazards posing greatest hazard to State.*



### **HAZUS Maps and Reports**

Created by Emergency Planning Consultants

*Applicable Incorporation: Numerous HAZUS results have been included for earthquake scenarios to determine specific risk to Cities of Rancho Palos Verdes and Rolling Hills Estates.*

### **California Department of Finance**

[www.dof.ca.gov/](http://www.dof.ca.gov/)

*Applicable Incorporation: Community Profile section – demographic and population data*

### **FEMA “How To” Mitigation Series (386-1 to 386-9)**

[www.fema.gov/media](http://www.fema.gov/media)

*Applicable Incorporation: Mitigation Measures Categories and 4-Step Planning Process are quoted in the Executive Summary.*

### **National Flood Insurance Program**

[www.fema.gov/national-flood-insurance-program](http://www.fema.gov/national-flood-insurance-program)

*Applicable Incorporation: Used to confirm there are no repetitive loss properties within the City*

### **Flood Insurance Rate Maps**

[msc.fema.gov](http://msc.fema.gov)

*Applicable Incorporation: Provided by FEMA and included in Flood Hazard section.*

### **California Department of Forestry and Fire Protection (CAL FIRE)**

[www.fire.ca.gov](http://www.fire.ca.gov)

*Applicable Incorporation: Wildland fire hazard mapping*

### **California Department of Conservation**

[www.conservation.ca.gov/cgs](http://www.conservation.ca.gov/cgs)

*Applicable Incorporation: Seismic hazards mapping*

### **U.S. Geological Survey (USGS)**

[www.usgs.gov](http://www.usgs.gov)

*Applicable Incorporation: Earthquake records and statistics*

## **Q&A | ELEMENT E: PLAN ADOPTION | E1**

**Q:** Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))

**A:** See **Plan Adoption Process** below.

## **Plan Adoption Process**

Adoption of the plan by the local governing body demonstrates each city’s commitment to meeting mitigation goals and objectives. Governing body approval legitimizes the plan and authorizes responsible agencies to execute their responsibilities.

Both City Councils must adopt the Mitigation Plan before the Plan can be approved by FEMA.



In preparation for the public meeting with each City Council, the Planning Team prepared a staff report including an overview of the Planning Process, Risk Assessment, Mitigation Goals, and Mitigation Actions.

The Rancho Palos Verdes City Council heard the item on \_\_\_\_\_. The City Council voted \_\_\_\_\_ to adopt the updated Mitigation Plan. The Resolution of adoption by the City Council is in the **Appendix**.

The Rolling Hills Estates City Council heard the item on \_\_\_\_\_. The City Council voted \_\_\_\_\_ to adopt the updated Mitigation Plan. The Resolution of adoption by the City Council is in the **Appendix**.

## Plan Approval

FEMA approved the Plan on \_\_\_\_\_. A copy of the FEMA Letter of Approval is in the **Appendix**.



## Part II: RISK ASSESSMENT

### Community Profile

#### Geography and the Environment

The planning area is located on the Palos Verdes Peninsula, approximately 20 miles south of Central Los Angeles. The total size of the planning area is 17.78 square miles. The City of Rancho Palos Verdes has an area of 13.6 square miles, while the City of Rolling Hills Estates has an area of 4.18 square miles.



The Palos Verdes Peninsula has a unique physiography, formed over millions of years of submerging and lifting from the Pacific Ocean. Once an island, the Peninsula is nine miles wide by four miles deep, now rises above the Los Angeles Basin, with the highest elevation at 1480 feet. The terrain of much of the planning area is rolling hills, steep slopes, canyons and coastal bluffs.

The planning area is bounded on the north by Torrance, Rolling Hills, and Palos Verdes Estates; on the south and west by the Pacific Ocean; and on the east by Lomita and San Pedro (Los Angeles).

#### Climate

The planning area has one of the most ideal climates of the world. Its average maximum and minimum temperatures range approximately between 67-68°F and 50-54°F and the average annual precipitation is approximately 13 inches.

The sea breeze, which is the predominant wind, is a primary factor in creating this climate and typically flows from the west-southwest in a day-night cycle with speeds generally ranging from 5 to 15 mph. The sea breeze maintains the cool temperatures and clean air circulation and generally prevents warmer inland temperatures and air pollution from permeating into the peninsula, except under certain seasonal conditions such as the offshore Santa Ana winds.

#### Population and Demographics

The planning area has a total population of about 50,692 (RPV 42,463 and RHE 8,229). The planning area includes an area of approximately 17.78 square miles (RPV 13.6 square miles and RHE 4.18 square miles). The population of the planning area has increased by 2.0% (adding 982 residents) since the 2010 U.S. Census. (Source: 2010 U.S. Census and 2017 American Community Survey)



According to the Rolling Hills Estate General Plan (1992), the City is almost fully developed with lower density residential neighborhoods and scattered concentrations of commercial land uses. Vacant parcels are mostly steep slope areas and canyons. A network of equestrian trails and other equestrian facilities provide a major recreational resource for residents. Growth in the City has been very slow, with the limited increase in single-family dwelling units accompanied by a decrease in household sizes.

The Rancho Palos Verdes General Plan states that the City is almost entirely built-out with predominately single-family residential development with scattered concentrations of multi-family residential and commercial development. The remaining vacant parcels are mostly steep slopes, canyons and areas impacted by land movement. Several active park sites and an extensive amount of preserved natural open space and passive parkland, particularly along the City's coastline, provide the majority of recreational resources for residents. Since the City's incorporation, growth has proceeded at a slow pace.

**Table: City of Rancho Palos Verdes Demographics**  
(Source: U.S. Census - 2017 American Community Survey)

City of Rancho Palos Verdes				
Racial/Ethnic Group	2010	2017	Change	Change %
White	25,698	25,600	(98)	-0.4
Black	1,015	834	(181)	-17.8
American Indian or Alaska Native	80	63	(17)	-21.3
Asian	12,077	12,170	93	0.8
Native Hawaiian or Pacific Islander	41	294	253	617.1
Other	748	935	187	25.0
Two or more races	1,840	2,567	583	29.4
Hispanic	3,556	4,541	985	27.7
<b>Total</b>	<b>45,055</b>	<b>42,463</b>	<b>820</b>	<b>2.0</b>



**Table: City of Rolling Hills Estates**  
 (Source: U.S. Census - 2017 American Community Survey)

City of Rolling Hills Estates				
Racial/Ethnic Group	2010	2017	Change	Change %
White	5,463	4,794	(669)	-12.2
Black	109	199	90	82.6
American Indian or Alaska Native	19	-	(19)	-100.0
Asian	2,007	2,521	514	25.6
Native Hawaiian or Pacific Islander	8	-	(8)	-100.0
Other	120	300	180	150.0
Two or more races	341	415	74	21.7
Hispanic	499	814	315	63.1
<b>Total</b>	<b>8,067</b>	<b>8,229</b>	<b>162</b>	<b>2.0</b>

## Housing and Community Development

**Table: City of Rancho Palos Verdes Housing**  
 (Source: U.S. Census - 2017 American Community Survey)

City of Rancho Palos Verdes		
2017	Number	Percent %
<b>Housing Type:</b>		
1-unit, detached	12,729	75.7
1-unit, attached	1,126	6.7
2-4 Units	358	2.1
5+ Units	2,582	15.4
Mobile homes/Other	20	0.1
<b>Total Housing</b>	<b>16,815</b>	<b>100</b>
<b>Occupancy:</b>		
Owner-Occupied Housing	12,553	74.7
Renter-Occupied	3,227	19.2
Vacant	1,035	6.2
<b>Total Occupied Housing Units</b>	<b>16,815</b>	<b>100</b>
<b>Average Household Size – Owner-Occupied:</b>		2.65
<b>Average Household Size – Renter-Occupied</b>		2.69





**Table: City of Rolling Hills Estates Housing**  
(Source: U.S. Census - 2017 American Community Survey)

City of Rolling Hills Estates		
2017	Number	Percent %
<b>Housing Type:</b>		
1-unit, detached	2,516	78.3
1-unit, attached	584	18.2
2-4 Units	29	0.9
5+ Units	83	2.6
Mobile homes/Other	0	0.0
<b>Total Housing</b>	<b>3,212</b>	<b>100</b>
<b>Occupancy:</b>		
Owner-Occupied Housing	2,813	87.6
Renter-Occupied	213	6.6
Vacant	186	5.8
<b>Total Occupied Housing Units</b>	<b>3,212</b>	<b>100</b>
<b>Average Household Size – Owner-Occupied:</b>		2.74
<b>Average Household Size – Renter-Occupied</b>		2.38

## Employment

Between 2014 and 2017, overall employment rose in Rancho Palos Verdes by approximately 2.0 percent and in Rolling Hills Estates by approximately 1.4 percent. Information of occupations is also included below.

**Table: City of Rolling Hills Estates Industry**  
(Source: U.S. Census - 2017 American Community Survey)

City of Rancho Palos Verdes		
Industry	2017	
	Number	Percent %
Management, business, science, and arts	11,257	61.1
Service	1,461	7.9
Sales and office	4,305	23.4
Natural resources, construction, and maintenance	469	2.5
Production, transportation, and material moving	929	5.0
<b>Civilian employed population 16 years or over</b>	<b>18,421</b>	<b>100.0</b>





**Table: City of Rancho Palos Verdes Industry**  
(Source: U.S. Census - 2017 American Community Survey)

City of Rolling Hills Estates		
Industry	2017	
	Number	Percent %
Agriculture, forestry, fishing and hunting, and mining	40	0.2
Construction	203	1.1
Manufacturing	476	2.6
Wholesale Trade	114	0.6
Retail Trade	299	1.6
Transportation and Warehousing, and Utilities	115	0.6
Information	80	0.4
Finance and insurance, and real estate and rental and leasing	220	1.2
Professional, scientific, and management, and administrative and waste management services	490	2.7
Educational services, and health care and social assistance	768	4.2
Arts, entertainment, and recreation, and accommodation and food services	290	1.6
Other services, except public administration	170	0.9
Public administration	93	0.5
<b>Civilian employed population 16 years or over</b>	<b>3,358</b>	<b>100.0</b>

## Transportation and Commuting Patterns

According to the project area General Plans, there are no freeways on the Peninsula now and it is not likely there ever will be in the future. Peninsula residents, however, have access to and use the extensive freeway network that is such an important part of travel in Southern California. The Harbor Freeway (I-110) and San Diego Freeway (I-405) act as principal lines for commuters as well as to distant points. The I-110 is the major North-South roadways within the project area and the I-405 is the major East-West roadway to and from the project area.

Additionally, the project area is served by a basic network of regional transit lines and local shuttles including PV Transit and Dial-A-Ride. Fixed route transit is provided by the Los Angeles County Metropolitan Transit Authority.



# Risk Assessment

## What is a Risk Assessment?

Conducting a risk assessment can provide information regarding: the location of hazards; the value of existing land and property in hazard locations; and an analysis of risk to life, property, and the environment that may result from natural hazard events. Specifically, the five levels of a risk assessment are as follows:

1. *Hazard Identification*
2. *Profiling Hazard Events*
3. *Vulnerability Assessment/Inventory of Existing Assets*
4. *Risk Analysis*
5. *Assessing Vulnerability/Analyzing Development Trends*

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

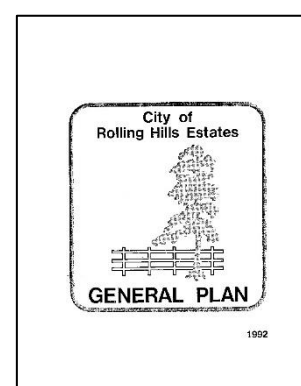
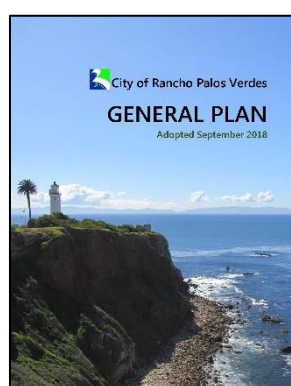
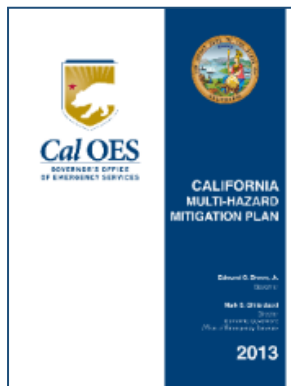
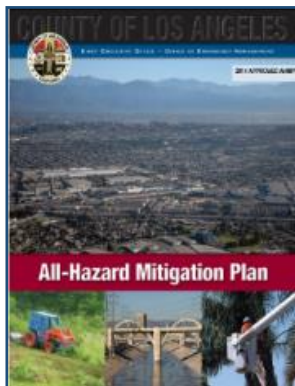
**Q:** Does the plan include a general **description** of all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Hazard Identification** below.

#### 1) Hazard Identification

This section is the description of the geographic extent, potential intensity, and the probability of occurrence of a given hazard. Maps are used in this plan to display hazard identification data. **The Planning Team initially utilized the categorization of hazards as identified in California’s State Hazard Mitigation Plan, including: Earthquakes, Floods, Levee Failures, Wildfires, Landslides and Earth Movements, Tsunami, Climate-related hazards, Volcanoes, and Other Hazards (including Drought).**

Next, the Planning Team reviewed the 2014 Multijurisdictional Hazard Mitigation and the project area General Plans to determine which hazards pose the most significant threat - in other words, which hazard would likely result in a local declaration of emergency.





The geographic extent of each of the identified hazards was identified by the Planning Team utilizing maps and data contained in the Cities' General Plans. In addition, numerous internet resources and the County of Los Angeles All-Hazards Mitigation Plan served as valuable resources. Utilizing the Calculated Priority Risk Index (CPRI) ranking technique, the Planning Team concluded the following hazards posed a significant threat against the planning area:

**Earthquake | Wildfire | Earth Movement | Tsunami | Hazardous Materials | Human-Caused Events | Utility-Related Events**

### *Climate Change*

Although “flood” was not identified as a significant hazard, it’s important to note that with climate change could come an increase in threat. Climate change could result in an increase in flooding due to changes in the frequency, duration and intensity of storm events. Rising snowlines caused by climate change will allow additional mountain areas to contribute to peak storm runoff. High frequency flood events (e.g. 10-year floods) will likely increase with a changing climate. Along with reductions in the amount of the snowpack and accelerated snowmelt, scientists project greater storm intensity, resulting in more direct runoff and flooding. Changes in watershed vegetation and soil moisture conditions will likewise change runoff and recharge patterns.

As stream flows and velocities change, erosion patterns will also change, altering channel shapes and depths, possibly increasing sedimentation behind dams, and affecting habitat and water quality. With potential increases in the frequency and intensity of wildfires due to climate change, there is potential for more floods following fire, which increase sediment loads and water quality impacts. As hydrology changes, what is currently considered a 100-year flood may occur more often, leaving many communities at greater risk.

As peak flows and precipitation change over time, planners will need to factor a new level of safety into the design, operation, and regulation of flood protection facilities such as dams, floodways, bypass channels and levees, as well as the design of local sewers and storm drains. Use of historical data has long been the standard of practice for designing and operating flood protection projects, developing flood forecasting models, and forecasting snowmelt runoff. The use of past data for forecasting assumes that the climate of the future will be similar to that of the period of historical record. However, the historical hydrologic record cannot be used to predict increases in the frequency and severity of extreme events such as floods and droughts. National resource managers have concluded the following:

- Historical hydrologic patterns can no longer be solely relied upon to forecast the water future.
- Precipitation and runoff patterns are changing, increasing the uncertainty for water supply and quality, flood management and ecosystem functions.
- Extreme climate events will become more frequent, necessitating improvement in flood protection, drought preparedness and emergency response.

In light of these conclusions, model calibration or statistical relation development in the future must happen more frequently, new forecast-based tools must be developed, and a standard of practice that explicitly considers climate change must be adopted.

### *Ranking Hazards*

The hazard ranking system is described in **Table: Calculated Priority Risk Index**, while the actual ranking is shown in **Tables: Calculated Priority Risk Index Ranking**.



**Table: Calculated Priority Risk Index  
(Source: Federal Emergency Management Agency)**

CPRI Category	Degree of Risk			Assigned Weighting Factor
	Level ID	Description	Index Value	
Probability	Unlikely	Extremely rare with no documented history of occurrences or events. Annual probability of less than 1 in 1,000 years.	1	45%
	Possibly	Rare occurrences. Annual probability of between 1 in 100 years and 1 in 1,000 years.	2	
	Likely	Occasional occurrences with at least 2 or more documented historic events. Annual probability of between 1 in 10 years and 1 in 100 years.	3	
	Highly Likely	Frequent events with a well-documented history of occurrence. Annual probability of greater than 1 every year.	4	
Magnitude/ Severity	Negligible	Negligible property damages (less than 5% of critical and non-critical facilities and infrastructure). Injuries or illnesses are treatable with first aid and there are no deaths. Negligible loss of quality of life. Shut down of critical public facilities for less than 24 hours.	1	30%
	Limited	Slight property damage (greater than 5% and less than 25% of critical and non-critical facilities and infrastructure). Injuries or illnesses do not result in permanent disability, and there are no deaths. Moderate loss of quality of life. Shut down of critical public facilities for more than 1 day and less than 1 week.	2	
	Critical	Moderate property damage (greater than 25% and less than 50% of critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and at least 1 death. Shut down of critical public facilities for more than 1 week and less than 1 month.	3	
	Catastrophic	Severe property damage (greater than 50% of critical and non-critical facilities and infrastructure). Injuries and illnesses result in permanent disability and multiple deaths. Shut down of critical public facilities for more than 1 month.	4	
Warning Time	> 24 hours	Population will receive greater than 24 hours of warning.	1	15%
	12–24 hours	Population will receive between 12-24 hours of warning.	2	
	6-12 hours	Population will receive between 6-12 hours of warning.	3	
	< 6 hours	Population will receive less than 6 hours of warning.	4	
Duration	< 6 hours	Disaster event will last less than 6 hours	1	10%
	< 24 hours	Disaster event will last less than 6-24 hours	2	
	< 1 week	Disaster event will last between 24 hours and 1 week.	3	
	> 1 week	Disaster event will last more than 1 week	4	



**Table: Calculated Priority Risk Index Ranking for City of Rancho Palos Verdes**

Hazard	Probability	Weighted 45% (x.45)	Magnitude Severity	Weighted 30% (x.3)	Warning Time	Weighted 15% (x.15)	Duration	Weighted 10% (x.1)	CPRI Total
Earthquake – Palos Verdes M7.3	3	1.35	4	1.2	4	0.6	1	0.1	<b>2.98</b>
Earthquake – San Andreas M7.8	3	1.35	3	0.9	4	0.6	1	0.1	<b>2.95</b>
Earthquake – Newport-Inglewood M7.2	3	1.35	3	0.9	4	0.6	1	0.1	<b>2.95</b>
Wildfire	3	1.35	2	0.6	4	0.6	3	0.3	<b>2.85</b>
Utility-Related Events	3	1.35	2	0.6	4	0.6	3	0.3	<b>2.76</b>
Earth Movement	3	1.35	1	0.3	4	0.6	4	0.4	<b>2.65</b>
Hazardous Materials	2	0.9	2	0.6	4	0.6	2	0.2	<b>2.30</b>
Human-Caused Events	2	0.9	2	0.6	4	0.6	2	0.2	<b>2.30</b>
Tsunami	1	.45	3	0.9	4	0.6	2	0.2	<b>2.15</b>

**Table: Calculated Priority Risk Index Ranking for City of Rolling Hills Estates**

Hazard	Probability	Weighted 45% (x.45)	Magnitude Severity	Weighted 30% (x.3)	Warning Time	Weighted 15% (x.15)	Duration	Weighted 10% (x.1)	CPRI Total
Earthquake – Palos Verdes M7.3	3	1.35	4	1.2	4	0.6	1	0.1	<b>2.98</b>
Earthquake – San Andreas M7.8	3	1.35	3	0.9	4	0.6	1	0.1	<b>2.95</b>
Earthquake – Newport-Inglewood M7.2	3	1.35	3	0.9	4	0.6	1	0.1	<b>2.95</b>
Utility-Related Events	3	1.35	2	0.6	4	0.6	2	0.2	<b>2.75</b>
Earth Movement	3	1.35	1	0.3	4	0.6	4	0.4	<b>2.65</b>
Wildfire	3	1.35	2	0.6	1	0.15	2	0.2	<b>2.30</b>
Hazardous Materials	2	0.9	2	0.6	4	0.6	2	0.2	<b>2.30</b>
Human-Caused Events	2	0.9	2	0.6	4	0.6	2	0.2	<b>2.30</b>



## 2) Profiling Hazard Events

This process describes the causes and characteristics of each hazard and what part of the planning area’s facilities, infrastructure, and environment may be vulnerable to each specific hazard. A profile of each hazard discussed in this plan is provided in the City-Specific Hazard Analysis. **Table: Vulnerability: Location, Extent, and Probability** indicates a generalized perspective of the community’s vulnerability of the various hazards according to extent (or degree), location, and probability.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1b.

**Q:** Does the plan provide rationale for the omission of any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement §201.6(c)(2)(i))

**A:** See **Table: Vulnerability: Location, Extent, and Probability** below.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1c.

**Q:** Does the plan include a description of the **location** for all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Table: Vulnerability: Location, Extent, and Probability** below.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1d.

**Q:** Does the plan include a description of the **extent** for all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Table: Vulnerability: Location, Extent, and Probability** below.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2a.

**Q:** Does the plan include information on **previous occurrences** of hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Table: Vulnerability: Location, Extent, and Probability** below.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2b.

**Q:** Does the plan include information on the **probability** of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Table: Vulnerability: Location, Extent, and Probability** below.



**Table: Vulnerability: Location, Extent, and Probability - Rancho Palos Verdes**

Hazard	Location (Where)	Extent (How Big an Event)	Probability (Frequency of an Event of Disaster Proportions) *	Most Recent Occurrence
Earthquake	Entire Project Area	The Southern California Earthquake Center (SCEC) in 2007 concluded that there is a 99.7% probability that an earthquake of M6.7 or greater will hit California within 30 years. <sup>1</sup>	Likely	1987 – Whitter Narrows
Wildfire	Entire Project Area	CAL FIRE has identified the entire project area to be within a Very High Fire Hazard Severity Zone (VHFHSZ)	Likely	1973 fire in nearby Rolling Hills
Earth Movement	Entire Project Area	Earthquake-induced and rain-induced landslide events possibly impacting dozens of structures.	Likely	Ongoing - 2019
Tsunami	Coastline	Los Angeles County identifies the entire project area as being outside of the Tsunami Risk Zone, with the exception of the coastline.	Possibly	2013 (very small displacement)
Hazardous Materials	Entire Project Area	Scope and scale very difficult to predict ranging for isolated to regional, minor to severe medical consequences, limited to extended exposure times.	Possibly	Not Known
Human-Caused Events	Entire Project Area	Extent varies based on range of weapons and proximity.	Possibly	Not Known
Utility-Related Events	Entire Project Area	Depending on the season, a utility emergency could be limited to inconvenience or range as high as life-threatening. Outages and spills could be isolated locations or entire sections of the project area.	Likely	Recent regional events started by downed electrical lines. Now, PSPS poses threat of power stoppage.

\* Probability is defined as: Unlikely = 1:1,000 years, Possibly = 1:100-1:1,000 years, Likely = 1:10-1:100 years, Highly Likely = 1:1 year

<sup>1</sup> Uniform California Earthquake Rupture Forecast





**Table: Vulnerability: Location, Extent, and Probability – Rolling Hills Estates**

Hazard	Location (Where)	Extent (How Big an Event)	Probability (Frequency of an Event of Disaster Proportions) *	Most Recent Occurrence
Earthquake	Entire Project Area	The Southern California Earthquake Center (SCEC) in 2007 concluded that there is a 99.7% probability that an earthquake of M6.7 or greater will hit California within 30 years. <sup>1</sup>	Likely	1987 – Whitter Narrows
Wildfire	Entire Project Area	CAL FIRE has identified the entire project area to be within a Very High Fire Hazard Severity Zone (VHFHSZ)	Likely	2009 Portuguese Bend Reserve Fire
Earth Movement	Entire Project Area	Earthquake-induced and rain-induced landslide events possibly impacting dozens of structures.	Likely	1999 event in Deep Valley
Hazardous Materials	Entire Project Area	Scope and scale very difficult to predict ranging for isolated to regional, minor to severe medical consequences, limited to extended exposure times.	Possibly	Not Known
Human-Caused Events	Entire Project Area	Extent varies based on range of weapons and proximity.	Possibly	Not Known
Utility-Related Events	Entire Project Area	Depending on the season, a utility emergency could be limited to inconvenience or range as high as life-threatening. Outages and spills could be isolated locations or entire sections of the project area.	Possibly	Recent regional events started by downed electrical lines. Now, PSPS poses threat of power stoppage.

\* Probability is defined as: Unlikely = 1:1,000 years, Possibly = 1:100-1:1,000 years, Likely = 1:10-1:100 years, Highly Likely = 1:1 year

<sup>1</sup> Uniform California Earthquake Rupture Forecast





### 3) Vulnerability Assessment/Inventory of Existing Assets

A Vulnerability Assessment in its simplest form is a simultaneous look at the geographical location of hazards and an inventory of the underlying land uses (populations, structures, etc.). Facilities that provide critical and essential services following a major emergency are of particular concern because these locations house staff and equipment necessary to provide important public safety, emergency response, and/or disaster recovery functions.

#### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

**Q:** Is there a description of each identified hazard’s overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

**A:** See **Critical Facilities** below.

### Critical Facilities

FEMA separates critical buildings and facilities into the five categories shown below based on their loss potential. All of the following elements are considered critical facilities:

**Essential Facilities** are essential to the health and welfare of the whole population and are especially important following hazard events. Essential facilities include hospitals and other medical facilities, police and fire stations, emergency operations centers and evacuation shelters, and schools.

**Transportation Systems** include airways – airports, heliports; highways – bridges, tunnels, roadbeds, overpasses, transfer centers; railways – trackage, tunnels, bridges, rail yards, depots; and waterways – canals, locks, seaports, ferries, harbors, drydocks, piers.

**Lifeline Utility Systems** such as potable water, wastewater, oil, natural gas, electric power and communication systems.

**High Potential Loss Facilities** are facilities that would have a high loss associated with them, such as nuclear power plants, dams, and military installations.

**Hazardous Material Facilities** include facilities housing industrial/hazardous materials, such as corrosives, explosives, flammable materials, radioactive materials, and toxins.

**Table: Impacts to Critical Facilities in Project Area** illustrates the hazards with potential to impact critical facilities owned by or providing services to the project area.



**Table: Impacts to Critical Facilities in Project Area  
(Sources: Hazards Maps in the Mitigation Plan)**

Name of Facility	Earthquake	Wildfire	Earth Movement	Tsunami	Hazardous Materials	Human-Caused Events	Utility-Caused Events
<b>Rancho Palos Verdes</b>							
California Water Service Reservoir 3960 East Crest Road	X	X	X		X	X	X
California Water Service Reservoir 5837 West Crest Road	X	X	X		X	X	X
California Water Service Reservoir 4405 Palos Verdes Drive East	X	X			X	X	X
FAA Radar Domes East Crest Road	X	X	X		X	X	X
Los Angeles County Communications Tower 5741 Crestridge Road	X	X			X	X	X
Los Angeles County Fire Station No. 53 6124 Palos Verdes Drive South	X	X	X	X	X	X	X
Los Angeles County Fire Station No. 83 83 Miraleste Plaza	X	X			X	X	X
RPV City Hall/EOC and Public Works 30940 Hawthorne Boulevard	X	X			X	X	X
Southern California Edison Substation Crestridge Road	X	X			X	X	X
Southern California Edison Substation Tarragon Road	X	X	X	X	X	X	X



Name of Facility	Earthquake	Wildfire	Earth Movement	Tsunami	Hazardous Materials	Human-Caused Events	Utility-Caused Events
<b>Rolling Hills Estates</b>							
California Water Service Pump Station 27591 Crenshaw Boulevard	X	X			X	X	X
Metro Water District Palos Verdes Drive North/Palos Verdes Drive East (SW corner)	X	X			X	X	X
Cox Communications 43 Peninsula Center	X	X			X	X	X
Los Angeles County Fire Station No. 106 27413 Indian Peak Road	X	X			X	X	X
RHE City Hall and Council Chambers/EOC 4045 Palos Verdes Drive North	X	X			X	X	X
RHE Maintenance Yard 25851 Hawthorne Boulevard	X	X			X	X	X
<b>Outside Planning Area</b>							
Los Angeles County Sheriff's Station 26123 Narbonne Avenue, Lomita	X	X			X	X	X

#### 4) Risk Analysis

Estimating potential losses involves assessing the damage, injuries, and financial costs likely to be sustained in a geographic area over a given period of time. This level of analysis involves using mathematical models. The two measurable components of risk analysis are magnitude of the harm that may result and the likelihood of the harm occurring. Describing vulnerability in terms of dollar losses provides the community and the state with a common framework in which to measure the effects of hazards on assets. For each hazard where data was available, quantitative estimates for potential losses have been included in the hazard assessment. Data was not available to make vulnerability determinations in terms of dollar losses for all of the identified hazards. The **Mitigation Actions Matrix** includes an action item to conduct such an assessment in the future.



## 5) Assessing Vulnerability/ Analyzing Development Trends

This step provides a general description of City facilities and contents in relation to the identified hazards so that mitigation options can be considered in land use planning and future land use decisions. This Mitigation Plan provides comprehensive description of the character of Rancho Palos Verdes and Rolling Hills Estates in the **Community Profile Section**. This description includes the geography and environment, population and demographics, land use and development, housing and community development, employment and industry, and transportation and commuting patterns. Analyzing these components of Rancho Palos Verdes and Rolling Hills Estates can help in identifying potential problem areas and can serve as a guide for incorporating the goals and ideas contained in this mitigation plan into other community development plans.

Hazard assessments are subject to the availability of hazard-specific data. Gathering data for a hazard assessment requires a commitment of resources on the part of participating organizations and agencies. Each hazard-specific section of the plan includes a section on hazard identification using data and information from City, County, state, or federal sources.

Regardless of the data available for hazard assessments, there are numerous strategies each City can take to reduce risk. These strategies are described in the action items detailed in the Mitigation Actions Matrix in the **Mitigation Strategies Section**. Mitigation strategies can further reduce disruption to critical services, reduce the risk to human life, and alleviate damage to personal and public property and infrastructure.

### Land and Development

Rancho Palos Verdes and Rolling Hills Estates General Plans provide the framework for the growth and development of the Cities. These Plans are the most important tools in addressing environmental challenges including transportation and air quality; growth management; conservation of natural resources; clean water and open spaces.

City of Rancho Palos Verdes is designated into two broad classifications – Natural Environment/Hazard Areas and Urban Activity Areas. The Natural Environment/Hazard Areas include areas that possess extreme physical constraints due to the impacts of features such as active landslides, sea cliff erosion, and extreme slopes. They also represent areas designated as Open Space Preserve, which make up the City’s Palos Verdes Nature Preserve. The Urban Activity Areas include different designations. They are (1) Residential, (2) Commercial, (3) Institutional, (4) Recreational, (5) Agricultural, and (6) Infrastructure land use designations.

City of Rolling Hills Estates, there are ten distinct land use designations. These include (1) Commercial General, (2) Commercial/Office, (3) Neighborhood Commercial, (4) Commercial Recreation, (5) Very Low Density Residential, (6) Low Density Residential, (7) Medium Density Residential, (8) High Density Residential, (9) Institutional, and (10) Open Space.



## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3a.

**Q:** Is there a description of each hazard’s **impacts** on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? (Requirement §201.6(c)(2)(ii))

**A:** See **Impacts to Types of Land Uses** below.

### Impact of Hazards to Types of Land Uses

As discussed above, the project area General Plans identify primarily land uses categories. Following is a table that plots land uses by hazard category.

**Table: Impacts to Existing and Future Land Uses**

(Source: Rancho Palos Verdes 2018 General Plan, Land Use Element)

City of Rancho Palos Verdes								
Category of Land Use Designation	Acres (Area)	Earthquake	Wildfire	Earth Movement	Tsunami	Hazardous Materials	Human-Caused Events	Utility-Related Events
Residential	5,111	X	X	X	X	X	X	X
Commercial	273	X	X	X	X	X	X	X
Institutional	338	X	X	X	X	X	X	X
Recreational	396	X	X	X	X	X	X	X
Open Space	1,367	X	X	X	X	X	X	X



**Table: Impacts to Existing and Future Land Uses**  
 (Source: Rolling Hills Estates 1992 General Plan, Land Use Element)

City of Rolling Hills Estates							
Category of Land Use Designation	Acres (Area)	Earthquake	Wildfire	Earth Movement	Hazardous Materials	Human-Caused Events	Utility-Related Events
Commercial General	98	X	X	X	X	X	X
Commercial/Office	15	X	X	X	X	X	X
Neighborhood Commercial	7	X	X		X	X	X
Commercial Recreation	264	X	X		X	X	X
Residential	1,290	X	X	X	X	X	X
Institutional	342	X	X		X	X	X
Open Space	1,402	X	X	X	X	X	X

**Q&A | ELEMENT D: MITIGATION STRATEGY | D1**

**Q:** Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))

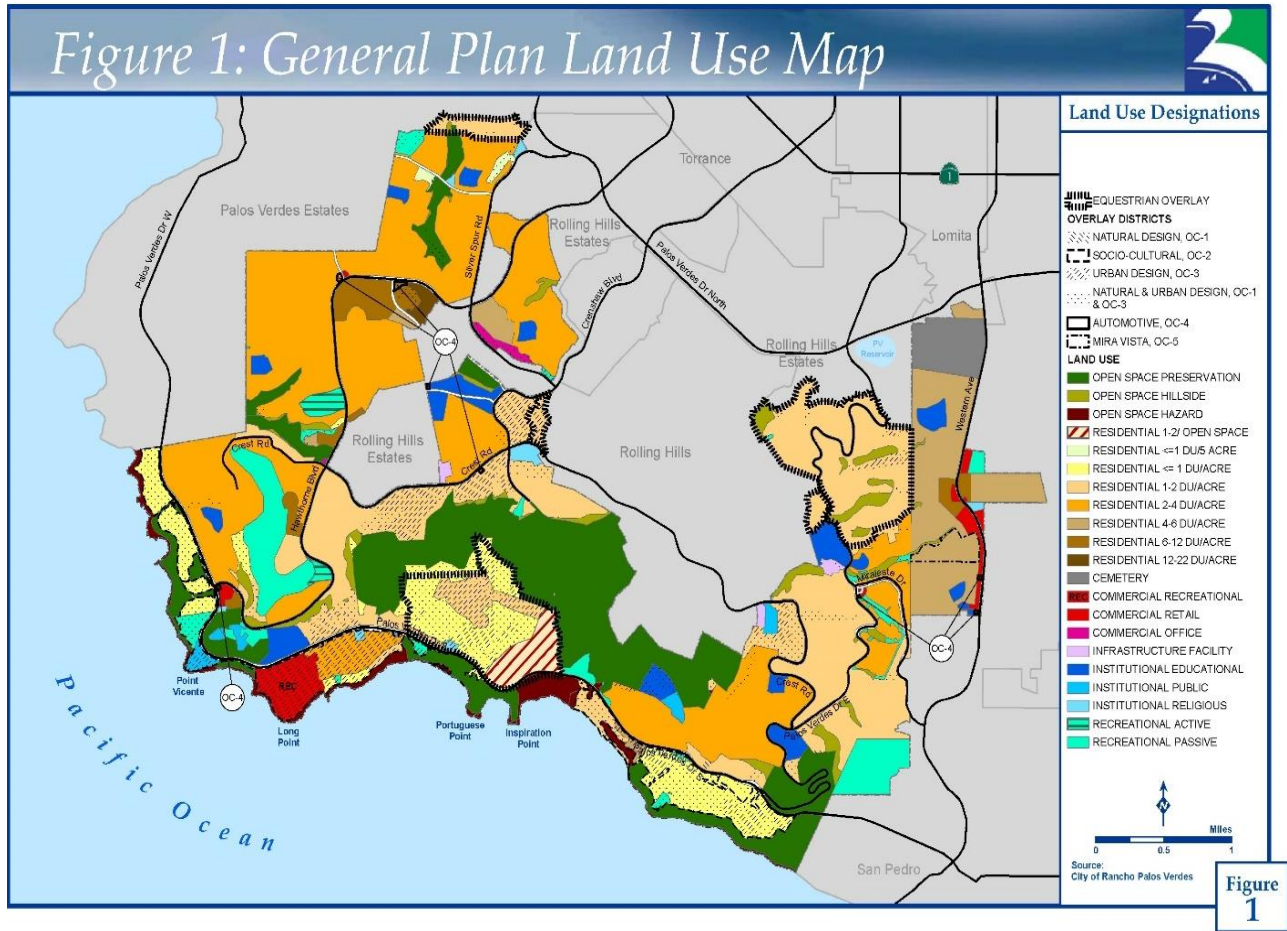
**A:** See **Changes in Development** below

*Changes in Development*

Since the adoption of the 2014 Plan, there have been no significant alterations to the development pattern of the project area in the hazard prone areas. This conclusion was reached after a thorough review of both General Plans and discussions with the Planning Team. Furthermore, the Planning Team concluded the overall vulnerability to identified hazards remained approximately the same.



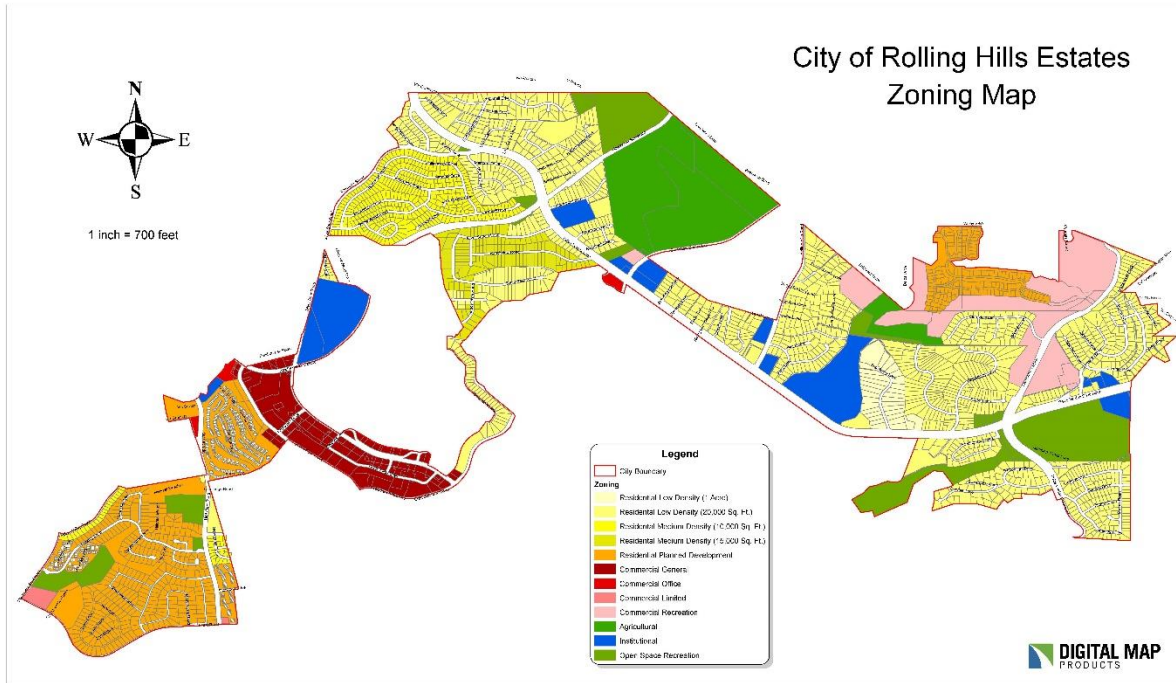
Map: Land Use Map City of Rancho Palos Verdes  
 (Source: Rancho Palos Verdes General Plan, Land Use Element)







**Map: Land Use Map City of Rolling Hills Estates**  
(Source: Rolling Hills Estates General Plan, Land Use Element)







# Earthquake Hazards

## Previous Occurrences of Earthquakes in the Project Area

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2a.

**Q:** Does the plan include information on **previous occurrences** of hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Previous Occurrences of Earthquakes in the Project Area** below.

A shallow magnitude 2.9 earthquake was reported on Friday, June 7, 2013. The temblor occurred six miles from Rancho Palos Verdes at 4:19 a.m. Pacific Time at a depth of 0 miles. According to the USGS, the epicenter was nine miles from San Pedro, 10 miles from Palos Verdes estates, and 11 miles from Lomita. Since the writing of the 2014 Mitigation Plan, there have been no significant earthquake events impacting the project area.

## Previous Occurrences of Earthquakes in Los Angeles County

Southern California has a history of powerful and relatively frequent earthquakes, dating back to the powerful magnitude 8.0+ 1857 San Andreas Earthquake which did substantial damage to the relatively few buildings that existed at the time.

Paleoseismological research indicates that large magnitude (M8.0+) earthquakes occur on the San Andreas Fault at intervals between 45 and 332 years with an average interval of 140 years. Other lesser faults have also caused very damaging earthquakes since 1857. Notable earthquakes include the 1933 Long Beach Earthquake, the 1971 San Fernando Earthquake, the 1987 Whittier Earthquake and the 1994 Northridge Earthquake.

Scientists have stated that such devastating shaking should be considered the norm near any large thrust earthquake. Recent reports from scientists of the U.S. Geological Survey and the Southern California Earthquake Center say that the Los Angeles Area could expect one earthquake every year of magnitude 5.0 or more for the foreseeable future.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

**Q:** Does the plan include a general **description** of all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Local Conditions** below.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

**Q:** Is there a description of each identified hazard's overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

**A:** See **Local Conditions** below.



## Local Conditions

The project area lies within a metropolitan area that has historically been seismically active. Faults are prevalent throughout California and are commonly classified as either “active” or “potentially active.” An active fault is a break that has moved in recent geologic time (the last 11,000 years) and that is likely to move within the next approximately 100 years. Active faults are the primary focus of concern in attempting to prevent earthquake hazards. A potentially active fault is one that has shifted but not in the recent geologic period (or, between 11,000 and 3,000,000 years ago) and is therefore considered dormant or unlikely to move in the future.

Several active faults have been identified within close proximity or within the project area boundaries which, most importantly, indicates that the community falls under the State Earthquake Fault Zoning Act and the State Hazards Mapping Act. These Acts require that local governments, in the general plan update process, adopt policies and criteria to ensure the structural adequacy of buildings erected across active faults for human occupancy. In some cases, the development of structures must be prohibited.

Earthquakes that could affect the project area would most likely originate from the Southern San Andreas (M7.8), Newport-Inglewood (M7.2), or Palos Verdes (M7.3) Faults. These faults are close enough in proximity or expected to generate strong enough shaking that could significantly impact the project area.

### *San Andreas Fault Zone*

The San Andreas Fault Zone is located approximately 80 miles east of the project area. This fault zone extends from the Gulf of California northward to the Cape Mendocino area where it continues northward along the ocean floor. The total length of the San Andreas Fault Zone is approximately 750 miles. The activity of the fault has been recorded during historic events, including the 1906 (M8.0) event in San Francisco and the 1857 (M7.9) event between Cholame and San Bernardino, where at least 250 miles of surface rupture occurred. These seismic events are among the most significant earthquakes in California history. Geologic evidence suggests that the San Andreas Fault has a 50 percent chance of producing a magnitude 7.5 to 8.5 quake (comparable to the great San Francisco earthquake of 1906) within the next 30 years.

### *Newport-Inglewood Fault Zone*

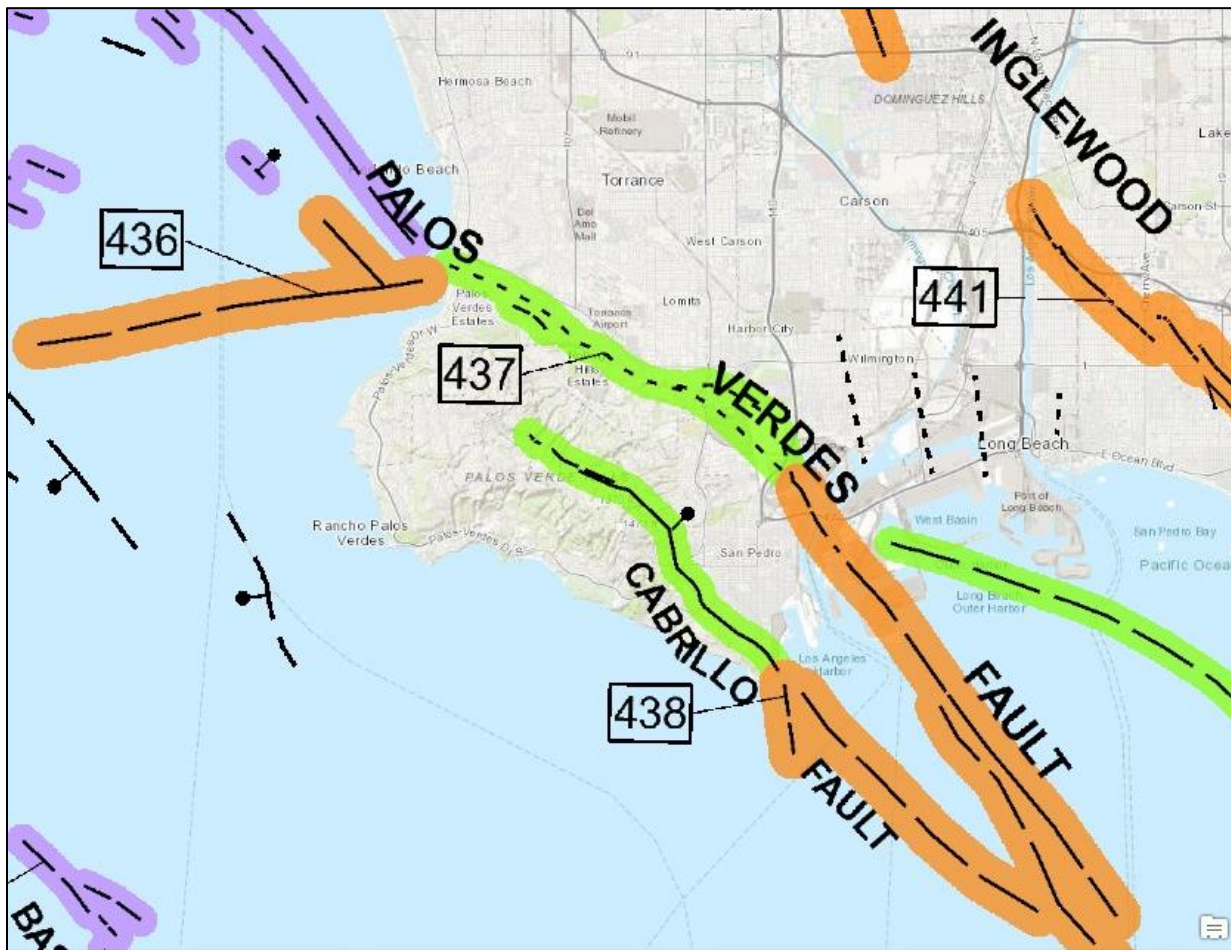
The Newport-Inglewood Fault Zone’s closest point to the project area is approximately 10 miles from it, and its surface trace is a discontinuous 75 km in the Los Angeles Basin, but the fault zone can easily be noted there by the existence of a chain of low hills extending from Culver City to Signal Hill. South of Signal Hill, it roughly parallels the coastline until just south of Newport Bay, where it heads offshore, and becomes the Newport-Inglewood – Rose Canyon fault zone. The most recent rupture was on March 10, 1993 (M6.4) but was not a surface rupture.

### *Palos Verdes Fault Zone*

The Palos Verdes Fault Zone has two main branches, the Cabrillo Fault and the Redondo Canyon Faulty. The Cabrillo Fault runs 20 km, and the Redondo Canyon Faulty 11 km. The Palos Verdes Fault Zone is roughly 80 km. These faults are all in the immediate vicinity of the project area.



Map: Local Faults  
(Source: California Geological Survey)



### Earthquake-Induced Landslides

Earthquake-induced landslides are secondary earthquake hazards that occur from ground shaking. They can destroy the roads, buildings, utilities, and other critical facilities necessary to respond and recover from an earthquake. Many communities in Southern California have a high likelihood of encountering such risks, especially in areas with steep slopes.

### Liquefaction

Liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking or other events. Liquefaction occurs in saturated soils, which are soils in which the space between individual soil particles is completely filled with water. This water exerts a pressure on the soil particles that influences how tightly the particles themselves are pressed together. Prior to an earthquake, the water pressure is relatively low. However, earthquake shaking can cause the water pressure to increase to the point where the soil particles can readily move with respect to each other. Because liquefaction only occurs in saturated soil, its effects are most commonly observed in low lying areas. Typically, liquefaction is associated with shallow groundwater, which is less than 50 feet beneath the earth's surface.



According to the project area General Plans, liquefaction presents itself as a threat only in a small portion of the northeast quadrant of the City of Rolling Hills Estates. Liquefaction-related lateral spreads can occur adjacent to stream channels and deep washes that provide a free face toward which the liquefied mass of soil fails. Lateral spreads can cause extensive damage to pipelines, utilities, bridges, roads and other structures.

### *Climate Change*

The impacts of global climate change on earthquake probability are unknown. Some scientists say melting glaciers could induce tectonic activity. As ice melts and waters runs off, tremendous amounts of weight are lifted off the Earth's crust. As the newly freed crust settles back to its original, pre-glacier shape, it could cause seismic plates to slip and stimulate volcanic activity, according to research into prehistoric earthquakes and volcanic activity. NASA and USGS scientists found that retreating glaciers in southern Alaska may be opening the way for future earthquakes (NASA, 2004).

The secondary impacts of earthquakes could be magnified by climate change. Soils saturated by repetitive storms could fail prematurely during seismic activity due to the increased saturation. Dams storing increased volumes of water due to changes in the hydrograph could fail during seismic events. Wildfire risks associated with earthquakes could be significantly enhanced by drought conditions triggered by climate change. There are currently no models available to estimate these impacts.

#### **Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3a.**

**Q:** Is there a description of each hazard's **impacts** on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? (Requirement §201.6(c)(2)(ii))

**A:** See **Impact of Earthquakes in the Project Area** below.

### **Impact of Earthquakes in the Project Area**

Based on the risk assessment, it is evident that earthquakes will continue to have potentially devastating economic impacts to the project area. Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life
- ✓ Commercial and residential structural damage
- ✓ Disruption of and damage to public infrastructure
- ✓ Secondary health hazards e.g. mold and mildew
- ✓ Damage to roads/bridges resulting in loss of mobility
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community
- ✓ Negative impact on commercial and residential property values and
- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed.



## HAZUS-MH



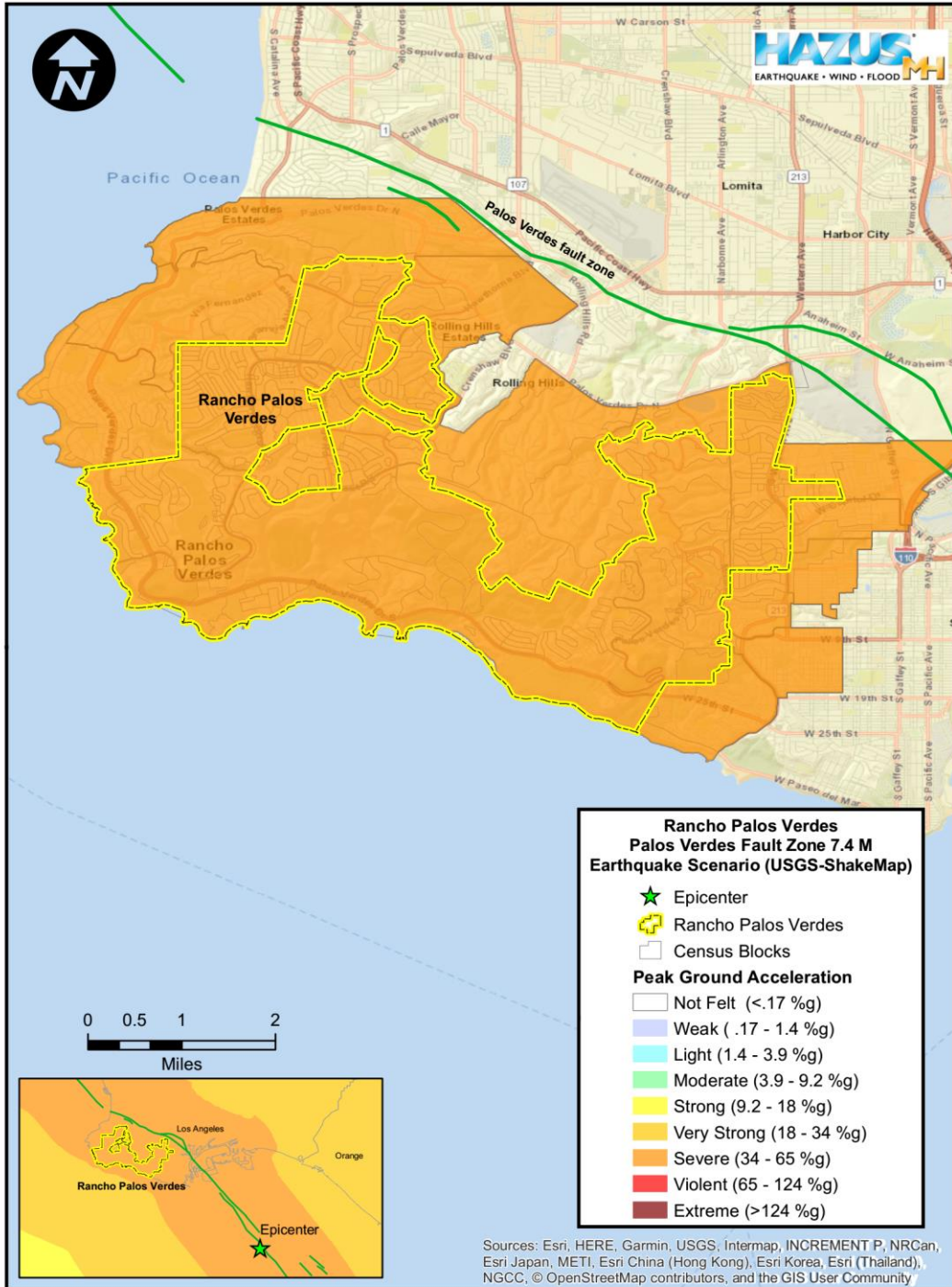
jurisdictional boundaries.

The maps that follow were generated by Emergency Planning Consultants using the Hazards United States – Multi Hazard (HAZUS-MH) software program. Please see **Attachments – HAZUS** for complete reports. Once the location and size of a hypothetical earthquake are identified, HAZUS-MH estimates the intensity of the ground shaking, the number of buildings damaged, the number of casualties, the amount of damage to transportation systems and utilities, the number of people displaced from their homes, and the estimated cost of repair and clean up. It's important to note that the “project area” is based on Census Tracts not



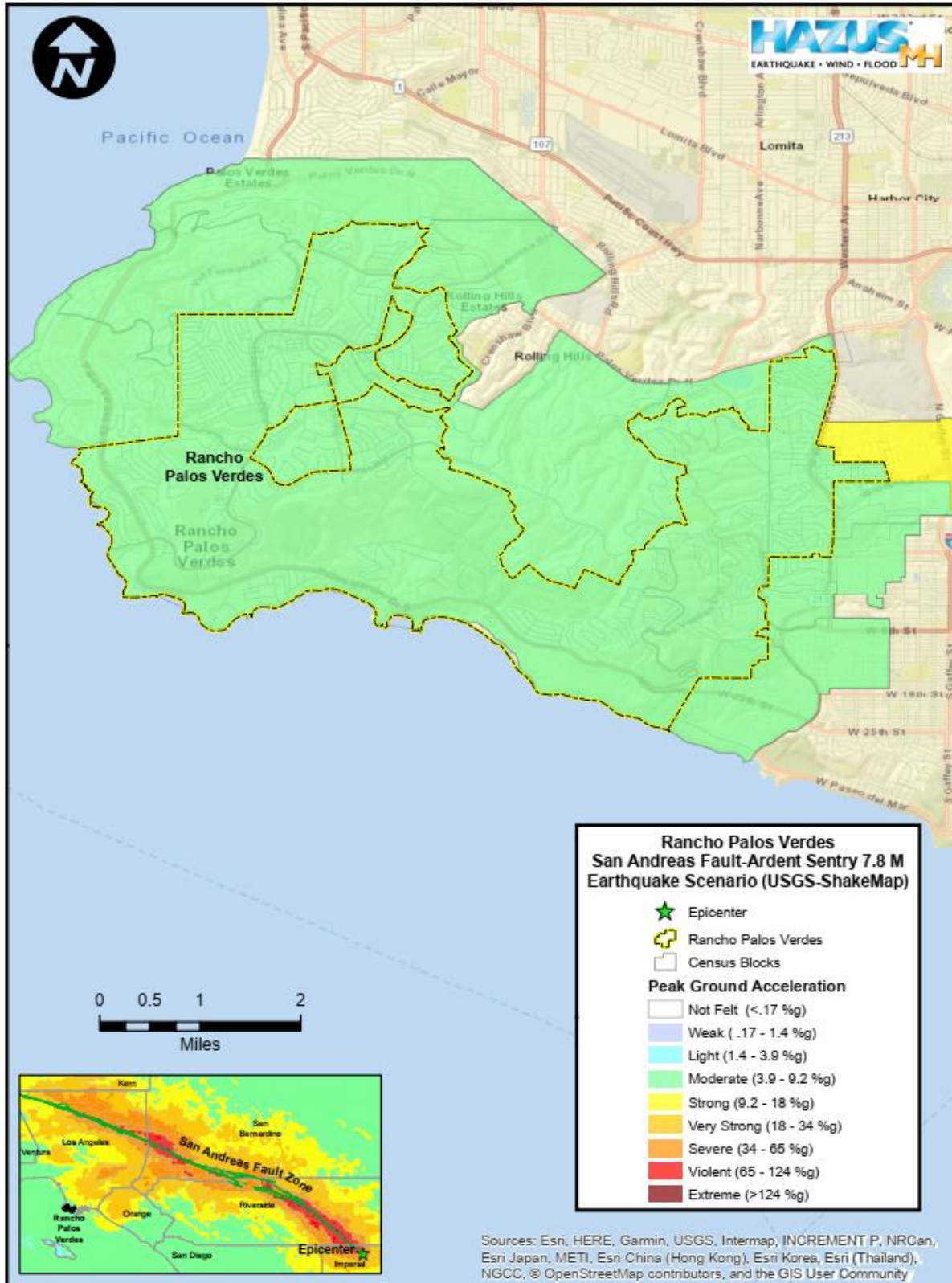


Map: Shake Intensity Map – Palos Verdes Fault M7.4  
(Source: Emergency Planning Consultants)





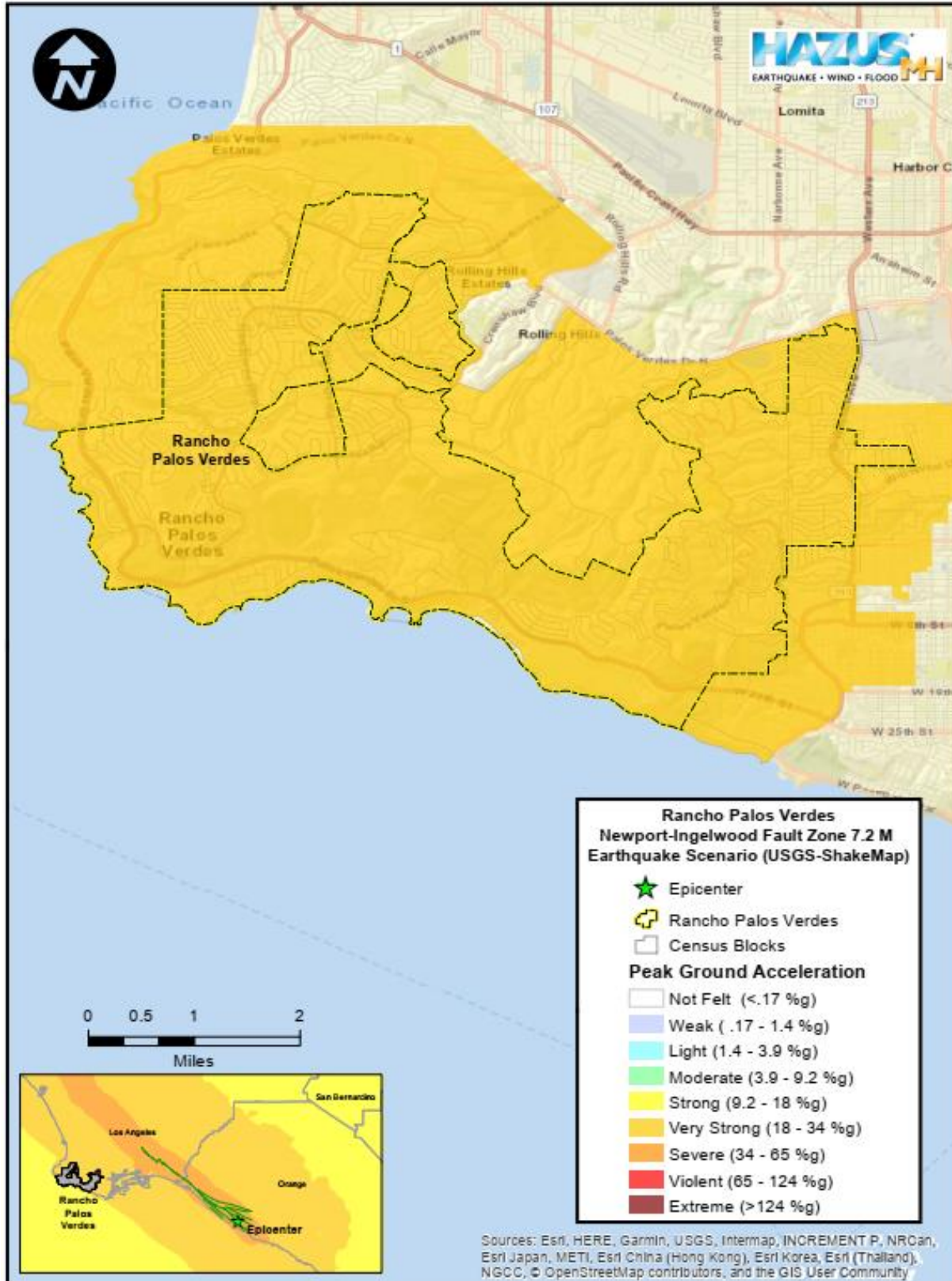
Map: Shake Intensity Map – Southern San Andreas Fault M7.8  
 (Source: Emergency Planning Consultants)







Map: Shake Intensity Map – Newport/Inglewood Fault M7.2  
(Source: Emergency Planning Consultants)

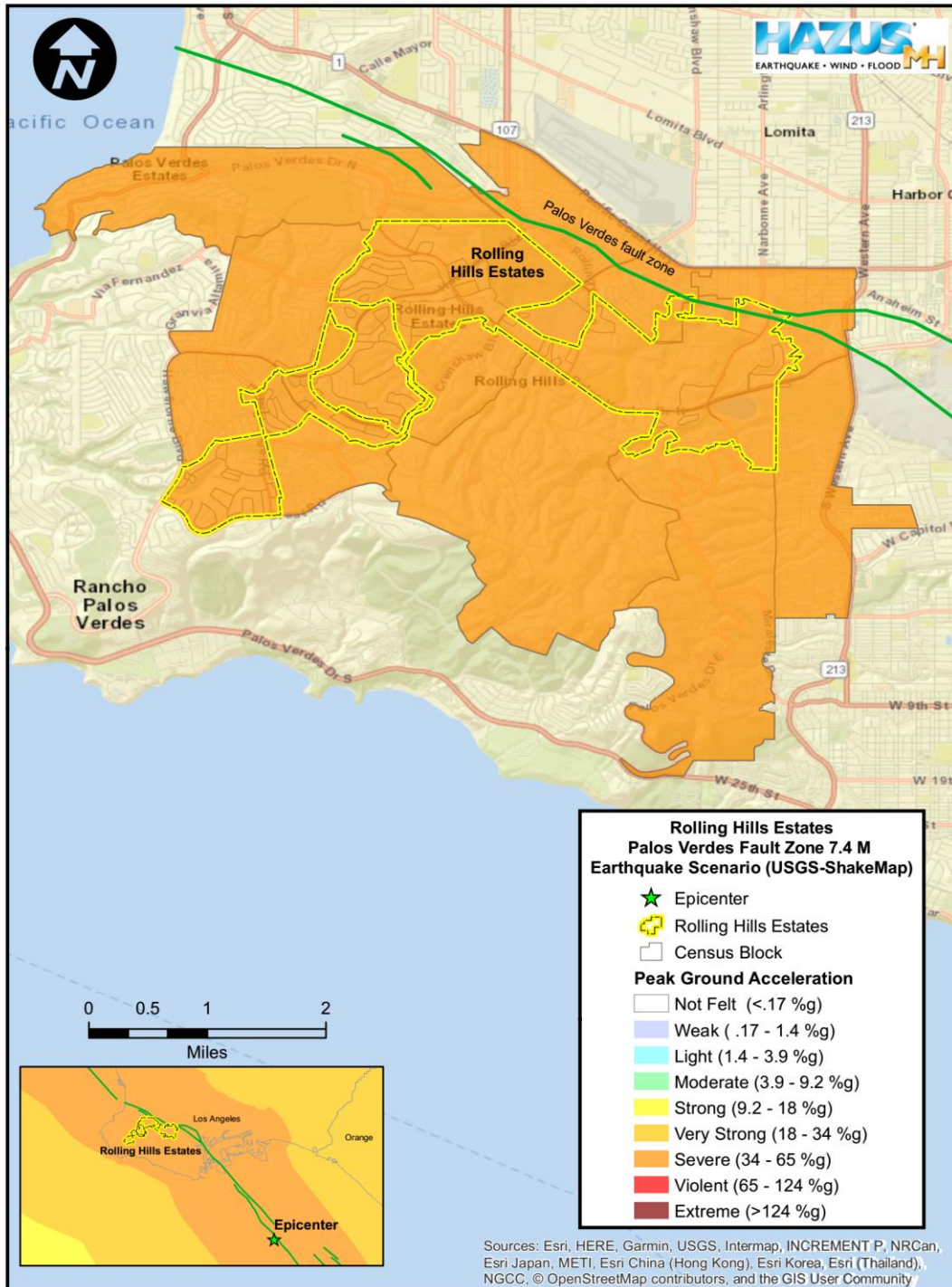






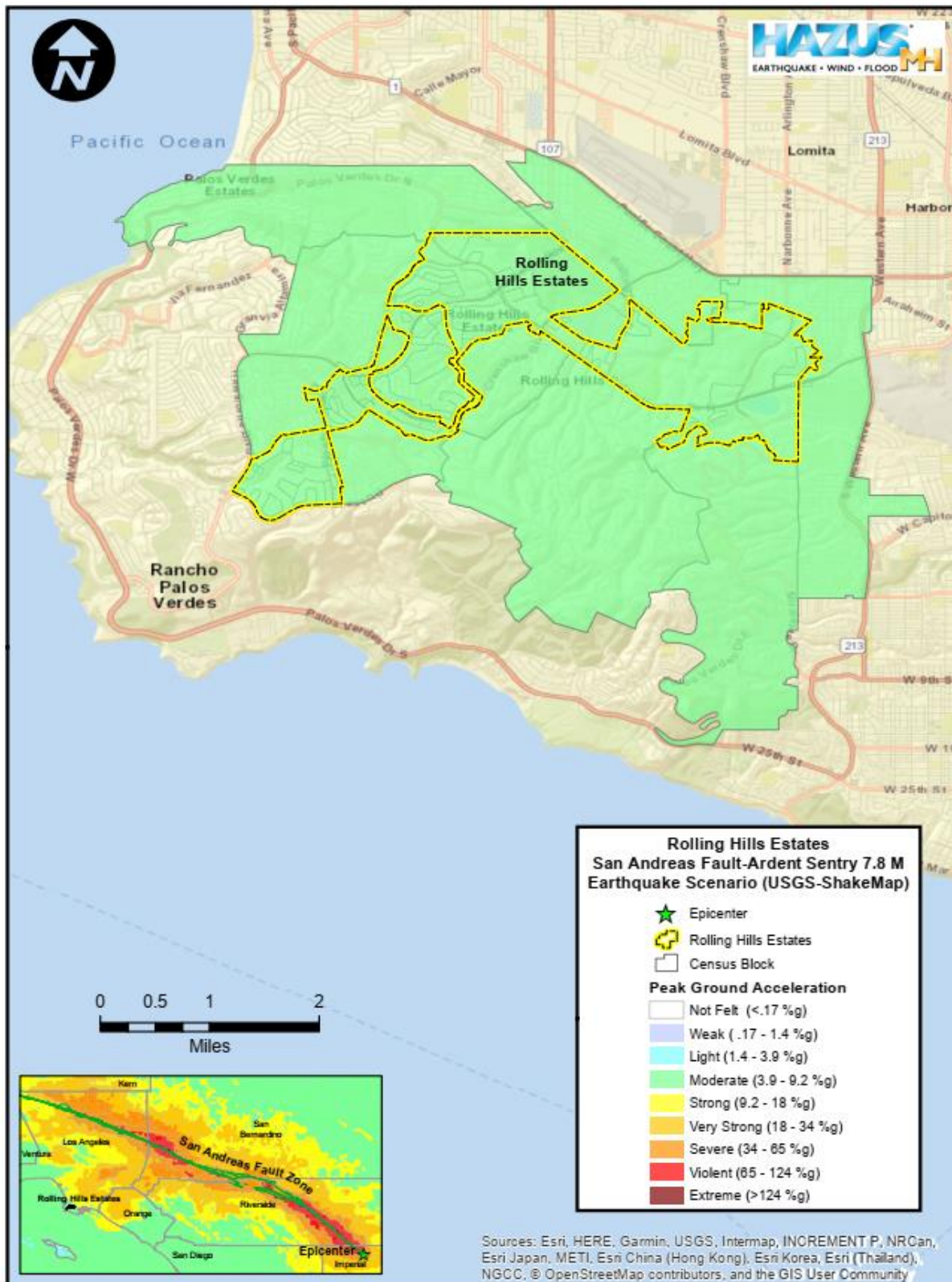
City of Rolling Hills Estates

Map: Shake Intensity Map – Palos Verdes Fault M7.4  
(Source: Emergency Planning Consultants)





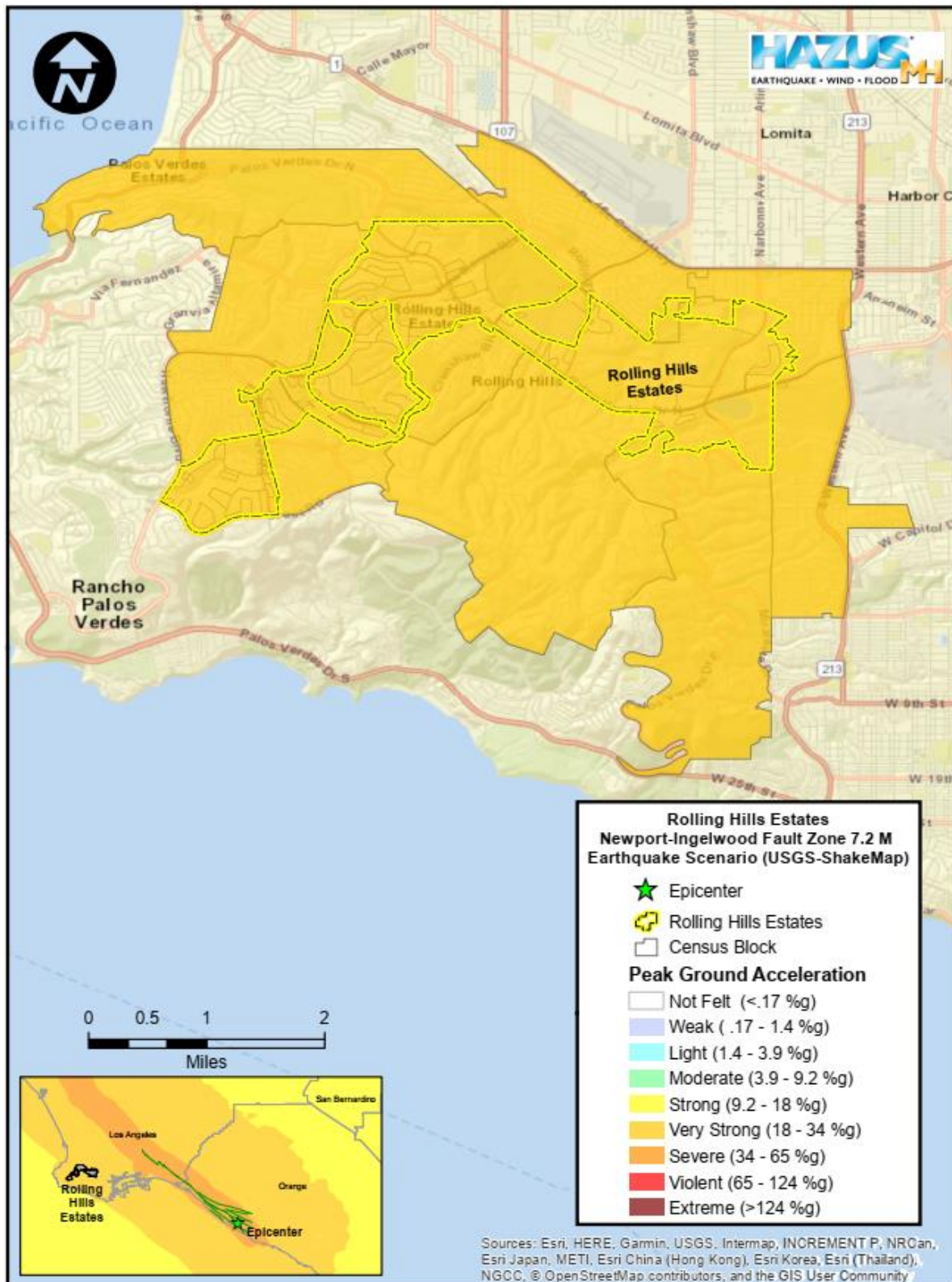
Map: Shake Intensity Map – Southern San Andreas Fault M7.8  
(Source: Emergency Planning Consultants)







Map: Shake Intensity Map – Newport/Inglewood Fault M7.2  
(Source: Emergency Planning Consultants)

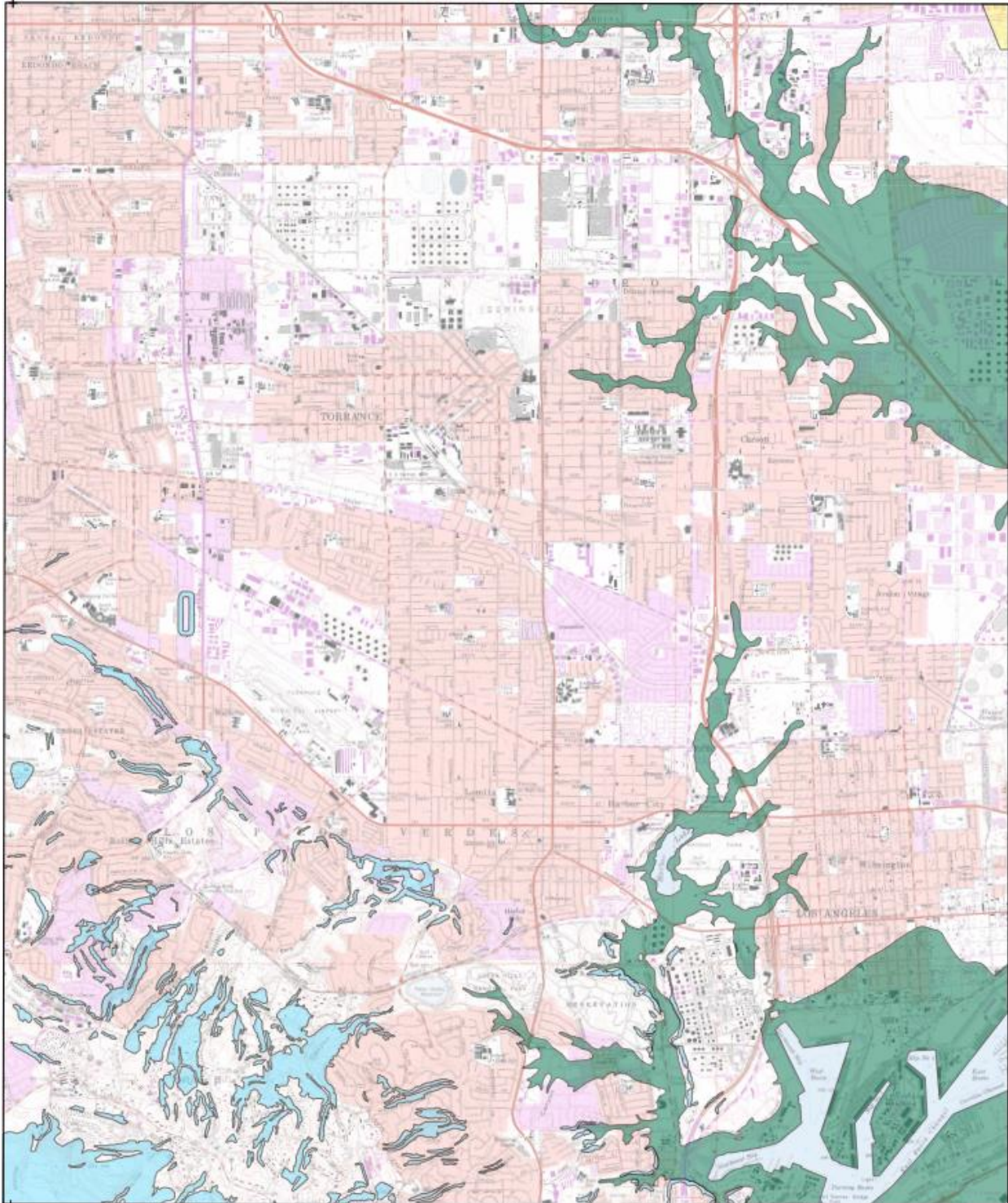






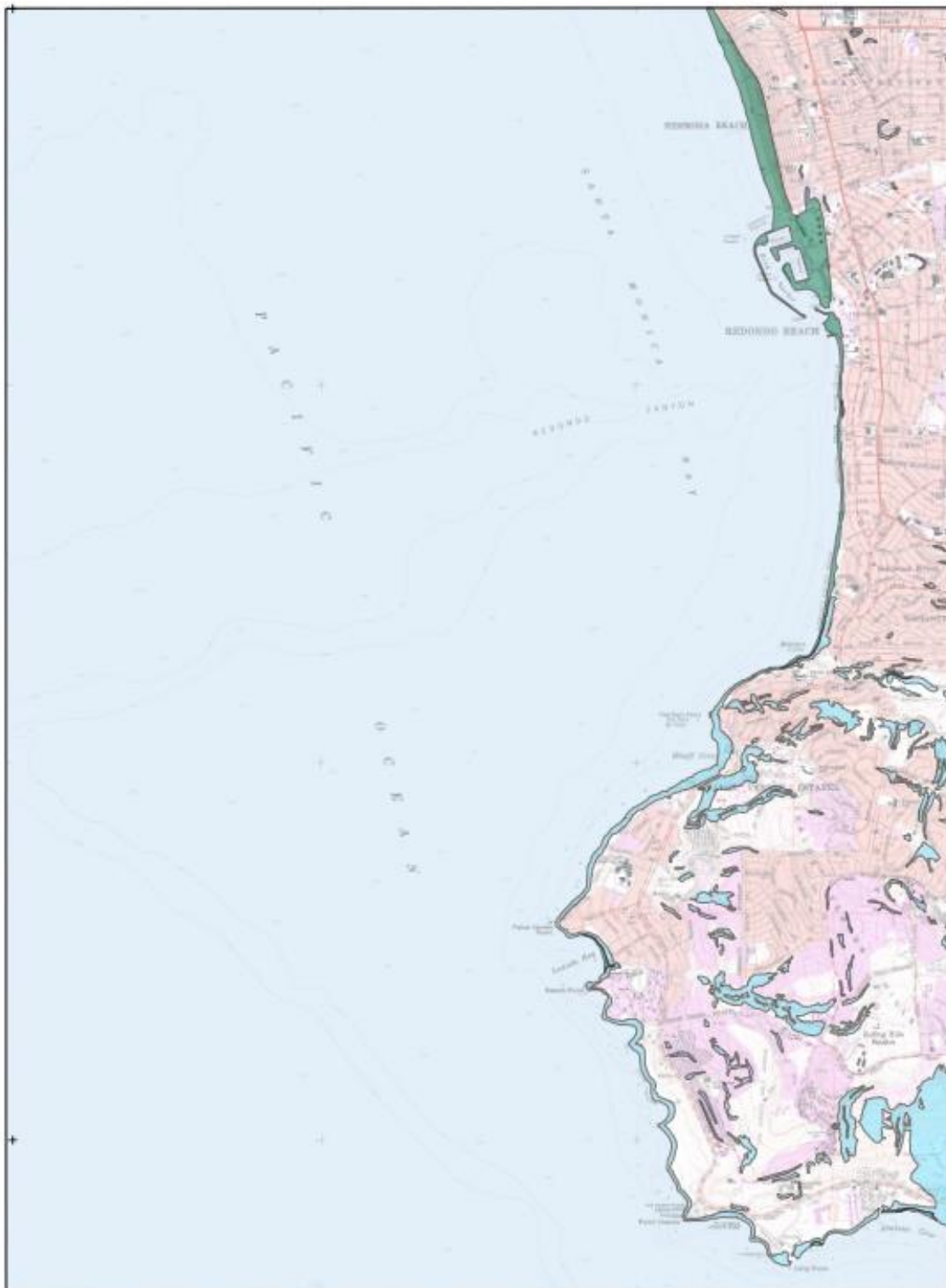
Maps: Liquefaction & Earthquake-Induced Landslide Areas  
(Source: California Geological Survey)

Torrance Quadrangle (Note: green = liquefaction zones, blue = earthquake-induced landslide zones)





Redondo Beach Quadrangle (Note: green = liquefaction zones, blue = earthquake-induced landslide zones)







# Wildfire

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2a.

**Q:** Does the plan include information on **previous occurrences** of hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Previous Occurrences of Wildfire in the Cities of Rancho Palos Verdes and Rolling Hills Estates** below.

### Previous Occurrences of Wildfire in the Cities of Rancho Palos Verdes and Rolling Hills Estates

Though wildland fires have not been a major hazard within the Peninsula, there are records of destructive occurrences. The August 27, 2009 Palos Verdes Fire burned approximately 180-acres in the cities of Rancho Palos Verdes and Rolling Hills. The fire began, in and was centered within, the 399-acre Portuguese Bend Reserve (Reserve). The Reserve is the largest of the ten reserves that make up the Palos Verdes Nature Preserve (PVNP). As well as providing community-valued recreation, the Reserve contains important linkages for wildlife and valuable native habitat for sensitive species. The wildfire burned approximately 165-acres within the Reserve, affecting both native and non-native vegetation and known nesting sites of the threatened coastal California gnatcatcher (*Polioptila californica californica*) and the special status cactus wren (*Campylorhynchus brunneicapillus*).



Since the writing of the 2014 Mitigation Plan, there have been no major wildland fires.

### Previous Occurrences of Wildfire in Los Angeles County

Due to its weather, topography, and native vegetation, the majority of Los Angeles County is at risk from wildland fires. The extended droughts characteristic of California's Mediterranean climate result in large areas of dry vegetation that provide fuel for wildland fires. Furthermore, the native vegetation typically has a high oil content that makes it highly flammable. The area is also intermittently impacted by Santa Ana winds, the hot, dry winds that blow across southern California in the spring and late fall.

According to the United States Forest Service, the largest wildfire event to impact the County of Los Angeles was the Station Fire in 2009. The Station Fire destroyed 209 structures and burned a total of 160,577 acres within Los Angeles County.

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

**Q:** Does the plan include a general **description** of all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Local Conditions** below.



## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

**Q:** Is there a description of each identified hazard's overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

**A:** See **Local Conditions** below.

### Local Conditions

According to the General Plans, the Palos Verdes Peninsula is a folded, uplifted block of sedimentary and metamorphic material located adjacent to the Pacific Ocean. The marine influence along with the local geology have played significant roles in shaping the terrestrial ecology and fire hazards potential of the Peninsula. Two geological factors important in this discussion include (1) the makeup of the local soils and (2) the topography of the Peninsula.

The soils encountered in the Peninsula have been derived from the parent metamorphic and sedimentary materials. Soils of this type are usually very clayey and not particularly conducive to the establishment of well-developed planned communities. This, in part, explains the absence of dense, heavy strands of native vegetation encountered in other areas.

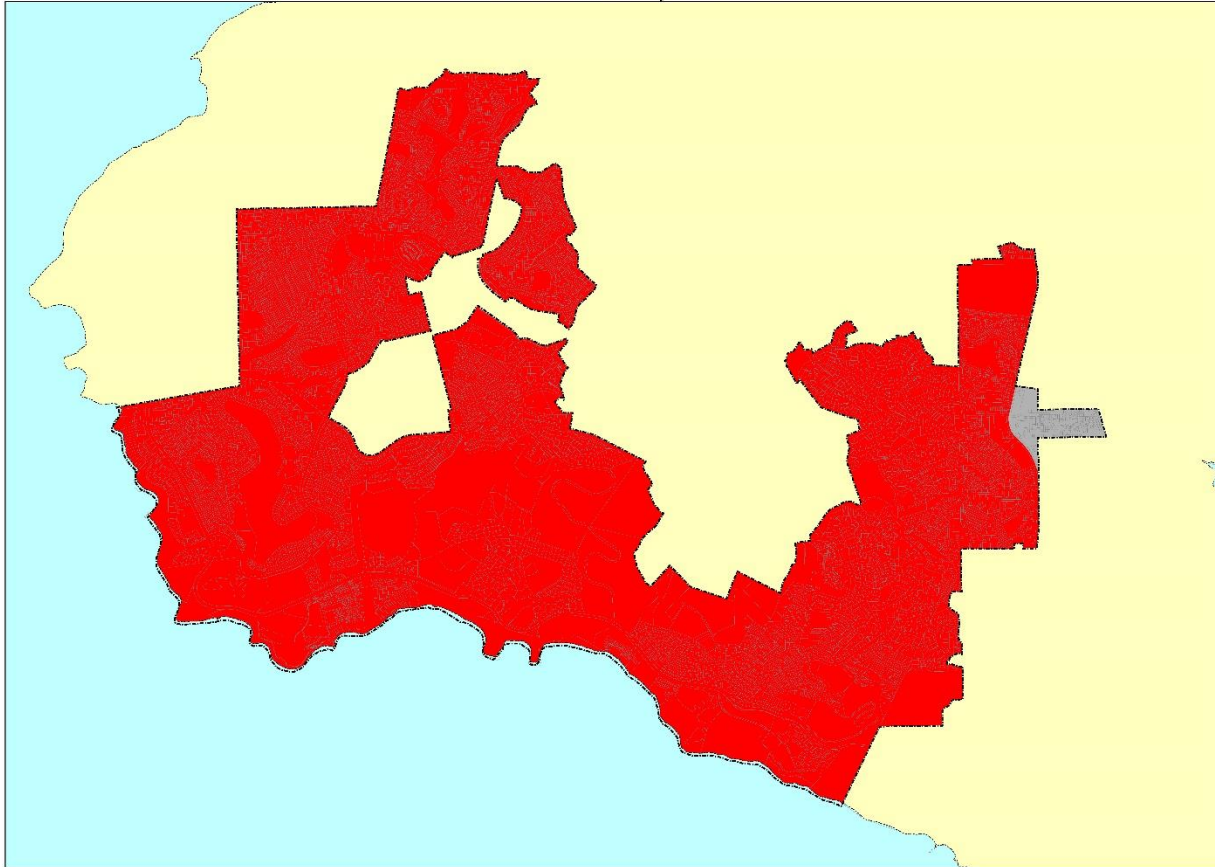
The local topography can best be described as dominated by hillsides and canyons. This ecological condition adds to the hazard's potential. Development in some localities has extended into the canyons of the Project Area and has reduced the fire hazard by removing the vegetation. However, it has also introduced the human element into more outlying locations, thus increasing the hazard. In some cases, these divergent relationships have reduced the possibility of wildfire, but in most, they have enhanced the hazard of fire.



Map: Very High Fire Hazard Severity Zones – Rancho Palos Verdes  
 (Source: CAL FIRE Fire Severity Zones)

# Rancho Palos Verdes

## Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE



**Fire Hazard Severity Zone**  
 Very High (Red) Low to Moderate (Yellow)  
 City Boundary (Dashed line)  
 County Boundary (Dotted line)

This map was prepared using data provided to us as part of the conditions provided to our government agencies. It is not intended to be used as a legal or engineering document. The user is responsible for verifying the accuracy of the data and for obtaining any necessary permits or approvals from the appropriate government agency.

California State Plane NAD 1983  
 Scale 1:10,000  
 at 30" x 36"  
 September 2017

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City of Rancho Palos Verdes, data, maps, data and publications on the internet at <http://rap.eplca.gov>  
 For more information, contact CAL FIRE at 944245, Sacramento, CA 95834-2450, (916) 321-3039

Andy Brown, Governor  
 State of California  
 John L. Allen, Secretary for Resources  
 The Natural Resources Agency  
 Ken Pinnell, Director  
 Department of Forestry and Fire Protection

MAP ID: Rancho Palos Verdes  
 DATA SOURCES: CAL FIRE Fire Hazard Severity Zones (FHCS) 05-16, CAL FIRE Very High Fire Hazard Severity Zones in LRA - Los Angeles (LRFHVR05\_16)

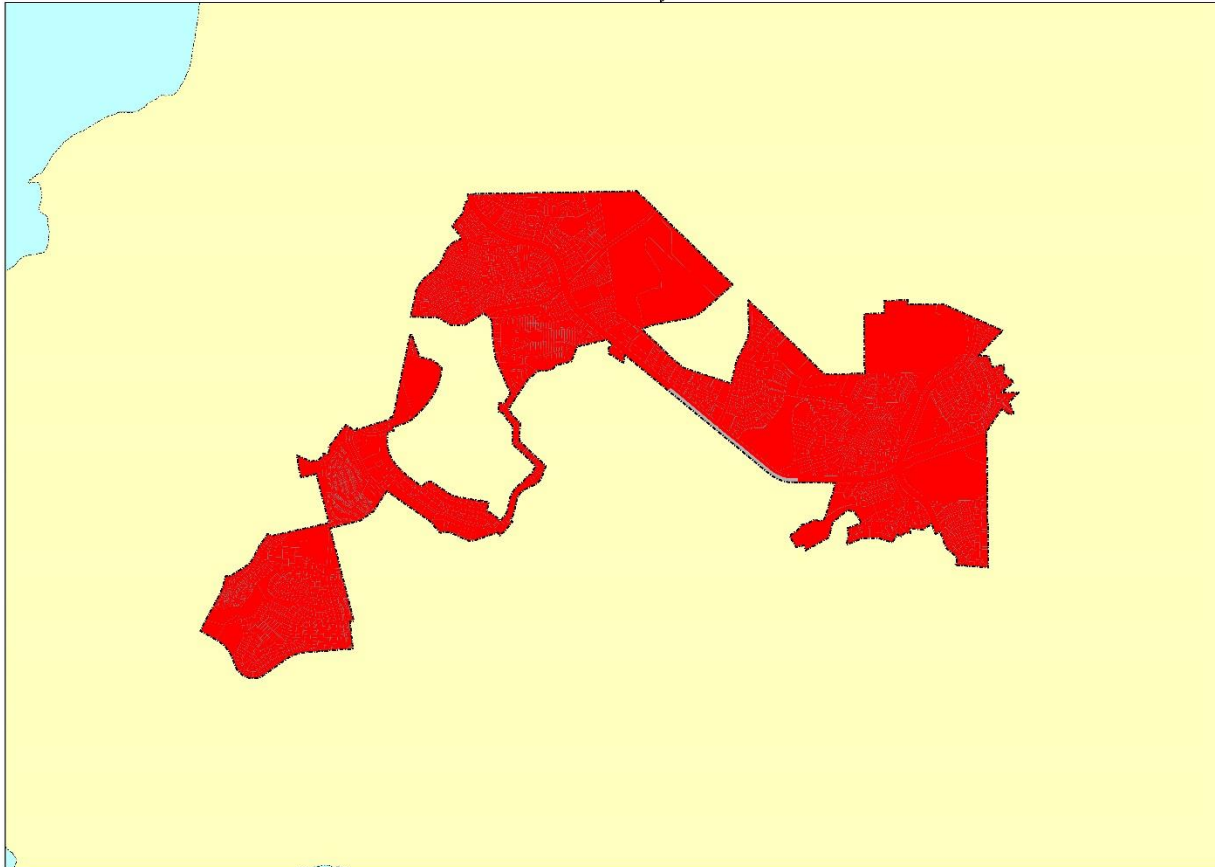




**Map: Very High Fire Hazard Severity Zones – Rolling Hills Estates**  
 (Source: CAL FIRE Fire Severity Zones)

**Rolling Hills Estates**

**Very High Fire Hazard Severity Zones in LRA**  
 As Recommended by CAL FIRE



**Fire Hazard Severity Zones**

Very High	High
Very High	High
Very High	High

City Boundary  
 County Boundary

This map was developed and published as part of the City's compliance with the California Statewide Hazard Mitigation Act (SB 675). The map is intended to provide information to the public and is not intended to be used for any other purpose. The map is not a warranty of accuracy and is not intended to be used for any other purpose. The map is not a warranty of accuracy and is not intended to be used for any other purpose.

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California State Albers NAD 1983  
 Scale 1:12,000  
 at 30° x 30"

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City of Rolling Hills Estates, 10000 Wilshire Blvd., Suite 100, Culver City, CA 90230  
 For more information, contact CAL FIRE at 916-439-2400, Sacramento, CA 95824-2400, (916) 321-3299

John Land, Secretary for Resources, The State of California  
 Ken Pimentel, Director, Department of Forestry and Fire Protection

MAP ID: Rolling\_Hills\_Estates  
 DATA SOURCES: CAL FIRE Fire Hazard Severity Zones (PR22\_00\_03)  
 CAL FIRE Very High Fire Hazard Severity Zones in LRA - Los Angeles (01/12/09\_03)





## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3a.

**Q:** Is there a description of each hazard's **impacts** on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? (Requirement §201.6(c)(2)(ii))

**A:** See **Impact of Flooding in the Cities of Rancho Palos Verdes and Rolling Hills Estates** below.

## Impact of Wildfire in the Cities of Rancho Palos Verdes and Rolling Hills Estates

Wildfires and their impact vary by location and severity of any given wildfire event and will likely only affect certain areas of the county during specific times. Based on the risk assessment, it is evident that wildfires will have a potentially devastating economic impact to certain areas of the Project Area.

Impact that is not quantified, but anticipated in future events includes:

- ✓ Injury and loss of life;
- ✓ Commercial and residential structural damage;
- ✓ Disruption of and damage to public infrastructure;
- ✓ Secondary health hazards e.g. mold and mildew
- ✓ Damage to roads/bridges resulting in loss of mobility
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community
- ✓ Negative impact on commercial and residential property values and
- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed.



# Earth Movement

## Previous Occurrences of Earth Movement in the Project Area

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2a.

**Q:** Does the plan include information on **previous occurrences** of hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Previous Occurrences of Earth Movement in the Project Area** below.

The largest landslide to occur in the planning area was the Portuguese Bend Landslide. The slide area encompasses approximately 270 acres. The weight of the moving material is estimated to be about 60 million tons, with a maximum thickness calculated to be 250 feet. The slide began in August 1956 in conjunction with a County roadway project to extend Crenshaw Boulevard from Crest Road to Palos Verdes Drive South. Initially, movement was 3 to 4 inches per day, quickly slowing to 1 inch per day a month later. The reactivation of this ancient landslide resulted in the loss of 134 residential dwellings, which were damaged beyond repair and razed. Relocation to safer ground saved a few homes. (The Palos Verdes Peninsula: A Geologic Guide and More, by Martin Reiter, Kendall/Hunt Publishing Company, 1984) The slide also destroyed the Portuguese Bend Beach Club (Reiter, 1984), a private recreational facility that included a large clubhouse, saltwater pool, boating pier, tennis courts, and volleyball courts (PV News, 1948 & 1952). Between 1962 and 1970, movement slowed to ½ inch per day (Reiter, 1984). Today, movement is approximately 3 feet per year, depending on the amount of rainfall the previous season. Nearly all of the remaining homes in the active slide area have been placed on elevated or so-called “floating” foundations that can be adjusted as the earth continues to slowly move and buckle beneath the homes.

Reactivation of the 80-acre Abalone Cove Landslide was first noted at the shoreline in February 1974. At the time, Abalone Cove was a private beach club. Slow movement continued between the shoreline and Palos Verdes Drive South until 1978, but only impacted vacant land. In late April or early May 1978, following one of the rainiest seasons on record (29.61 inches fell during 1977-78 compared to an average annual rainfall of 11.38 inches), the slide began to accelerate, and cracking was seen in the roadway. The slide reached its maximum inland extent in February 1980, following 7.75 inches of rain during a 10-day period. Because the Abalone Cove Landslide started along the coastline and progressed landward, it was not triggered by drag from the abutting Portuguese Bend Landslide. The major factors attributed to reactivation of the slide appear to be rainfall and rising groundwater levels (Reiter, 1984). Although no homes were destroyed as a result of this slide, the visitor’s center at the landmark Wayfarers Chapel was severely damaged and closed to the public in 1982. All but a small portion of the original structure was razed in 1995 and a new visitors center was constructed west of the slide scarp in 1999 (Daily Breeze, June 26, 1999).

A third landslide in the planning area that deserves mention is the Klondike Canyon Landslide. This landslide is located adjacent to the coastline and to the east of the much larger Portuguese Bend Landslide. Like the Portuguese Bend and the Abalone Cove Landslides, Woodring published the location of the ancient “Beach Club Landslide” in 1946. However, by that time, both Yacht Harbor Drive (in 1927) and Palos Verdes Drive South (in 1937) had been constructed across this landslide. Development of the two roadways was followed in the late 1940’s by the construction of the Portuguese Bend Club and grading for the Seaview tract landward of Palos Verdes Drive South was completed in late 1956. Following record-breaking rainfall in 1977-1978,



the first indications of movement of the Klondike Canyon Landslide were noted in September 1979 at the intersection of Dauntless Drive and Exultant Drive in the Seaview tract. Heavy rainfall continued during 1979-1980 and 1982-1983, accelerating land movement, which damaged local roads and eventually destroyed one home in the Seaview tract. In 1982, the Klondike Canyon Landslide Geologic Abatement District was formed and began installing dewatering wells to lower the ground water table within the slide mass. (Kerwin, Scott, "Land Stability in the Klondike Canyon," Moore and Taber professional report, no date but probably 1981 or 1982) The dewatering efforts have been successful in stabilizing the area and additional landslide abatement efforts have continued since that time, such as drainage improvements in Klondike Canyon and the installation of a private sewer system in the Portuguese Bend Beach Club.

Unlike the slower moving landslides in the Portuguese Bend area, the planning area most recently experienced two fast-moving earth failures that each caused a considerable amount of property damage. In March 1997, two office buildings located in the 900 block of Indian Peak Road in Rolling Hills Estates toppled and slid down a hillside, causing damage to another building at 655 Deep Valley Drive. In June 1999, the entire 18th fairway of the Ocean Trails Golf Course slid into the ocean, just a week prior to the course's scheduled grand opening, taking approximately 12 acres of land with it.

In its 38-year history, the City of Rancho Palos Verdes has only declared a local emergency on two occasions, both related to earth movement caused by severe weather. On March 8, 1979, the City of Rancho Palos Verdes declared a local emergency due to severe land movement resulting from heavy and unusual rains. Rancho Palos Verdes again declared a local emergency on January 17, 1995 due to severe El Nino rainstorms that caused flooding and sliding throughout the community.

## Previous Occurrences of Earth Movement in Los Angeles County

### *1928 St. Francis Dam*

Cost, \$672.1 million (2000 Dollars). The dam, located in Los Angeles County, gave way on March 12, and its waters swept through the Santa Clara Valley toward the Pacific Ocean, about 54 miles away. Sixty-five miles of valley was devastated, and over 500 people were killed.

### *1956 Portuguese Bend*

Cost, \$14.6 million (2000 Dollars). California Highway 14, Palos Verdes Hills. Land use on the Palos Verdes Peninsula consists mostly of single-family homes built on large lots, many of which have panoramic ocean views. All of the houses were constructed with individual septic systems, generally consisting of septic tanks and seepage pits. Landslides have been active here for thousands of years, but recent landslide activity has been attributed in part to human activity. The Portuguese Bend Landslide began its modern movement in August 1956, when displacement was noticed at its northeast margin. Movement gradually extended down slope so that the entire eastern edge of the slide mass was moving within 6 weeks. By the summer of 1957, the entire slide mass was sliding towards the sea.

### *1958-1971 Pacific Palisades*

Cost, \$29.1 million (2000 Dollars). California Highway 1 and house damaged.



### *1961 Mulholland Cut*

Cost, \$41.5 million (2000 Dollars). On Interstate 405, 11 miles north of Santa Monica, Los Angeles County.

### *1963 Baldwin Hills Dam*

Cost, \$50 million (1963 Dollars). On December 14, the 650-foot-long by 155-foot-high earth fill dam gave way and sent 360 million gallons of water in a fifty-foot-high wall cascading onto the community below, killing five persons.

### *1969 Glendora*

Cost, \$26.9 million (2000 Dollars). Los Angeles County, 175 houses damaged, mainly by debris flows.

### *1969 Seventh Ave., Los Angeles County*

Cost, \$14.6 million (2000 Dollars). California Highway 60.

### *1970 Princess Park*

Cost, \$29.1 million (2000 Dollars). California Highway 14, ten miles north of Newhall, near Saugus, northern Los Angeles County.

### *1971 Upper and Lower Van Norman Dams, San Fernando*

Cost, \$302.4 million (2000 Dollars). Earthquake-induced landslides. Damage due to the February 9, 1971, M7.5 San Fernando, Earthquake. The earthquake of February 9 severely damaged the Upper and Lower Van Norman Dams.

### *1971 Juvenile Hall, San Fernando*

Cost, \$266.6 million (2000 Dollars). Landslides caused by the February 9, 1971, San Fernando earthquake. In addition to damaging the San Fernando Juvenile Hall, this 1.2 km-long slide damaged trunk lines of the Southern Pacific Railroad, San Fernando Boulevard, Interstate Highway 5, the Sylmar electrical converter station, and several pipelines and canals.

### *1977-1980 Monterey Park, Repetto Hills, Los Angeles County*

Cost, \$14.6 million (2000 Dollars). 100 houses damaged in 1980 due to debris flows.

### *1978 Bluebird Canyon Orange County*

Cost, \$52.7 million (2000 Dollars). October 2, 60 houses destroyed or damaged. Unusually heavy rains in March of 1978 may have contributed to initiation of the landslide. Although the 1978 slide area was approximately 3.5 acres, it is suspected to be a portion of a larger, ancient landslide.

### *1979 Big Rock, California, Los Angeles County*

Cost, \$1.08 billion (2000 Dollars). California Highway 1 rockslide.



### *1980 Southern California Slides*

Cost, \$1.1 billion in damage (2000 Dollars). Heavy winter rainfall in 1979-90 caused damage in six Southern California counties. In 1980, the rainstorm started on February 8. A sequence of 5 days of continuous rain and 7 inches of precipitation had occurred by February 14. Slope failures were beginning to develop by February 15 and then very high-intensity rainfall occurred on February 16. As much as eight inches of rain fell in a six-hour period in many locations. Records and personal observations in the field on February 16 and 17 showed that the mountains and slopes literally fell apart on those two days.

### *1983 San Clemente, Orange County*

Cost, \$65 million (2000 Dollars). California Highway 1. Litigation at that time involved approximately \$43.7 million (2000 Dollars?).

### *1983 Big Rock Mesa*

Cost, \$706 million (2000 Dollars) in legal claims, condemnation of 13 houses, and 300 more threatened rockslide caused by rainfall.

### *1994 Northridge Earthquake Landslides*

As a result of the M6.7 Northridge Earthquake, more than 11,000 landslides occurred over an area of 10,000 km<sup>2</sup>. Most were in the Santa Susana Mountains and in mountains north of the Santa Clara River Valley. Destroyed dozens of homes, blocked roads, and damaged oil-field infrastructure. Caused deaths from Coccidioidomycosis (valley fever) the spore of which was released from the soil and blown toward the coastal populated areas. The spore was released from the soil by the landslide activity.







## March 1995 Los Angeles and Ventura Counties

Above normal rainfall triggered damaging debris flows, deep-seated landslides, and flooding. Several deep-seated landslides were triggered by the storms, the most notable was the La Conchita landslide, which in combination with a local debris flow, destroyed or badly damaged 11 to 12 homes in the small town of La Conchita, about 20 km west of Ventura. There also was widespread debris-flow and flood damage to homes, commercial buildings, and roads and highways in areas along the Malibu coast that had been devastated by wildfire two years before.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

**Q:** Does the plan include a general **description** of all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Local Conditions** below.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

**Q:** Is there a description of each identified hazard's overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

**A:** See **Local Conditions** below.

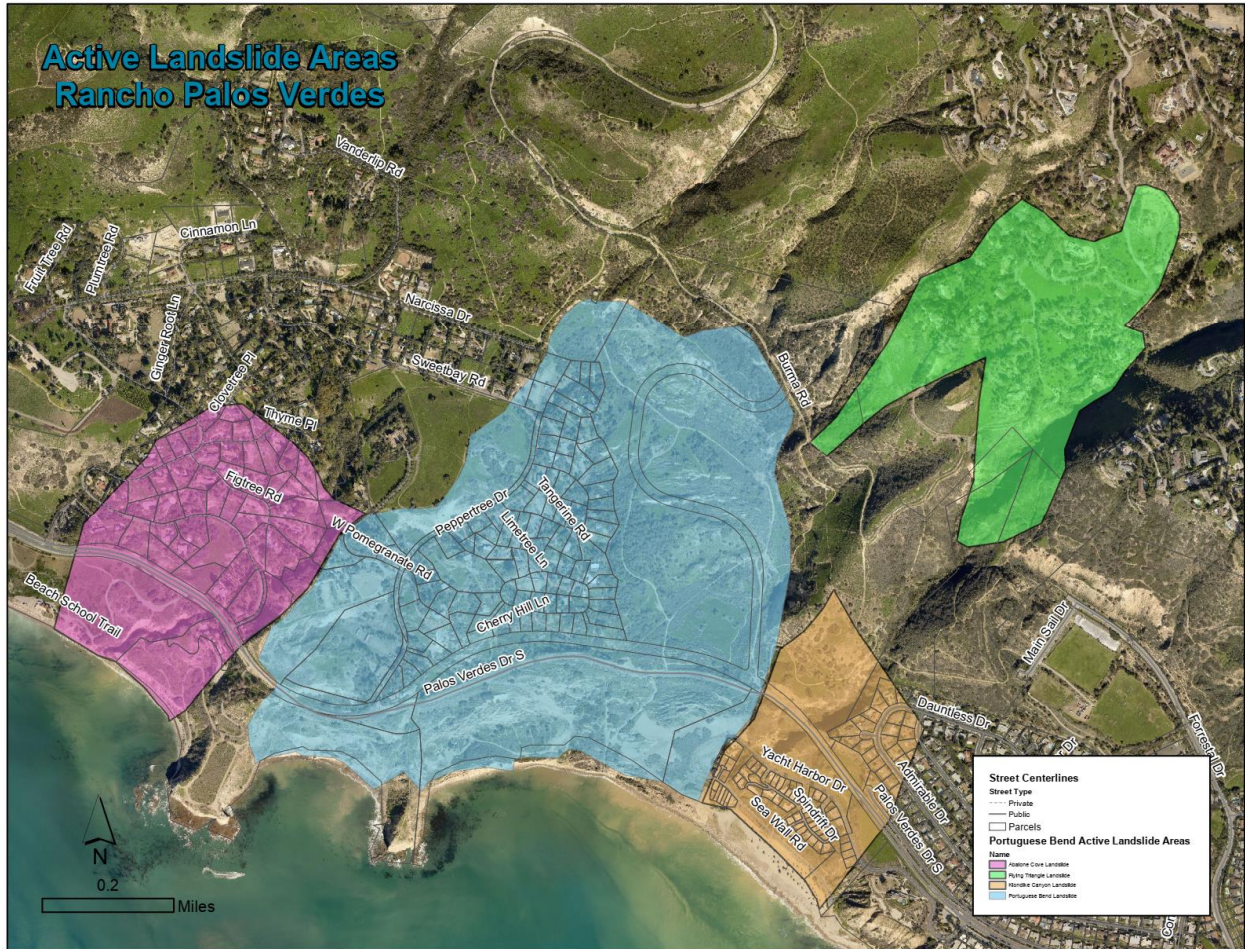
## Local Conditions

According to the Rancho Palos Verdes General Plan (2018), development on the Palos Verdes Peninsula has taken advantage of natural plateaus, but, in some areas, steep slopes have created difficulties for access, utility service, and site improvements, resulting in constrained urban development. Within the planning area, 40% to 50% of all land area falls into the category of steep slopes (inclines of approximately 25% and greater).

A series of 13 staircase marine terraces developed surrounding the Palos Verdes Peninsula during the late Pleistocene and Holocene geologic times (the last few hundred thousand years). The landscape in parts of this area has also been significantly modified by the movement of massive landslides during the time between the formation of the oldest terraces and the present.



Map: Rancho Palos Verdes Active Landslide Areas  
(Source: City of Rancho Palos Verdes)







## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3a.

**Q:** Is there a description of each hazard's **impacts** on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? (Requirement §201.6(c)(2)(ii))

**A:** See **Impact of Earth Movement in the Project Area** below.

### Impact of Earth Movement in the Project Area

Based on the risk assessment, it is evident that earthquakes will continue to have potentially devastating economic impacts to the project area. Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life
- ✓ Commercial and residential structural damage
- ✓ Disruption of and damage to public infrastructure
- ✓ Secondary health hazards e.g. mold and mildew
- ✓ Damage to roads/bridges resulting in loss of mobility
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community
- ✓ Negative impact on commercial and residential property values and
- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed.

### *Climate Change*

Climate change has and will continue to impact storm patterns in California. This changing of the hydrograph means that the probability of more frequent, intense storms with varying duration will increase. Increase in global temperature will also affect the snowpack and its ability to hold and store water. Additionally, warming temperatures will increase the occurrence and duration of droughts, which will increase the probability of wildfire, which impacts the vegetation that helps to support steep slopes. All of these factors working in unison would increase the probability for landslide occurrences in the planning area.



# Tsunami

## Previous Occurrences of Tsunamis in Rancho Palos Verdes

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

**Q:** Does the plan include information on **previous occurrences** of hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Previous Occurrences of Tsunami in the Project Area** below.

History has shown that the probability of a tsunami in the planning area is a relatively low threat and there is not considered to be any threat to the City of Rolling Hills Estates given that the City has no coastline.

However, the planning area has 7 ½ miles of coastline in the City of Rancho Palos Verdes. If a tsunami should occur, the consequences would be great. The impact could cause loss of life, destroy many high-priced homes along the bluffs and greatly affect City’s many coastal public parks and commercial businesses, such as the Trump National Golf Club and the Terranea Resort. Even if all residents and visitors were safely evacuated, the damage to property would still be tremendous. Fortunately, the planning area has yet to be significantly impacted by a Tsunami event.

## Previous Occurrences of Tsunamis in Los Angeles County

Tsunamis have been reported since ancient times. They have been documented extensively in California since 1806. Although the majority of tsunamis have occurred in Northern California, Southern California has been impacted as well. In the 1930’s, four tsunamis struck the Los Angeles County, Orange County, and San Diego County coastal areas. In Orange County the tsunami wave reached heights of 20 feet or more above sea level. In 1964, following the Alaska Earthquake (Magnitude 8.2), tidal surges of approximately 4 feet to 5 feet hit the Huntington Harbor area causing moderate damage. Most recently, the 2011 M8.9 earthquake in Japan triggered tsunamis as far as the California coast, with Crescent City experiencing the most damage.

**Table: Tsunami Events in California 1930-2013**  
(Source: [Worldwide Tsunami Database, www.ngdc.noaa.gov](http://WorldwideTsunamiDatabase.ngdc.noaa.gov))

Date	Location	Maximum Run up*(m)	Earthquake Magnitude
08/31/1930	Redondo Beach	6.10	5.2
08/31/1930	Santa Monica	6.10	5.2
08/31/1930	Venice	6.10	5.2
03/11/1933	La Jolla	0.10	6.3
03/11/1933	Long Beach	0.10	6.3
08/21/1934	Newport Beach	12.00	Unknown
02/09/1941	San Diego	Unknown	6.6



10/18/1989	Monterey	0.40	7.1
10/18/1989	Moss Landing	1.00	7.1
10/18/1989	Santa Cruz	0.10	7.1
04/25/1992	Arena Cove	0.10	7.1
04/25/1992	Monterey	0.10	7.1
09/01/1994	Crescent City	0.14	7.1
11/04/2000	Point Arguello	5.00	Unknown
6/15/2005	N. California	0.10	7.2

\* Maximum Run up (M) -The maximum water height above sea level in meters. The run-up is the height the tsunami reached above a reference level such as mean sea level. It is not always clear which reference level was used.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

**Q:** Does the plan include a general **description** of all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Local Conditions** below.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

**Q:** Is there a description of each identified hazard’s overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

**A:** See **Local Conditions** below.

## Local Conditions

The probability of a tsunami in the planning area is a relatively low threat and there is not considered to be any threat to the City of Rolling Hills Estates given that the City has no coastline.

However, the planning area has 7 ½ miles of coastline in the City of Rancho Palos Verdes. If a tsunami should occur, the consequences would be great. The impact could cause loss of life, destroy many high-priced homes along the bluffs and greatly affect City’s many coastal public parks and commercial businesses, such as the Trump National Golf Club and the Terranea Resort. Even if all residents and visitors were safely evacuated, the damage to property would still be tremendous. Fortunately, the planning area has yet to be significantly impacted by a Tsunami event.



## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3a.

**Q:** Is there a description of each hazard's **impacts** on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? (Requirement §201.6(c)(2)(ii))

**A:** See **Impact of Earth Movement in the Project Area** below.

### Impact of Tsunamis in Rancho Palos Verdes

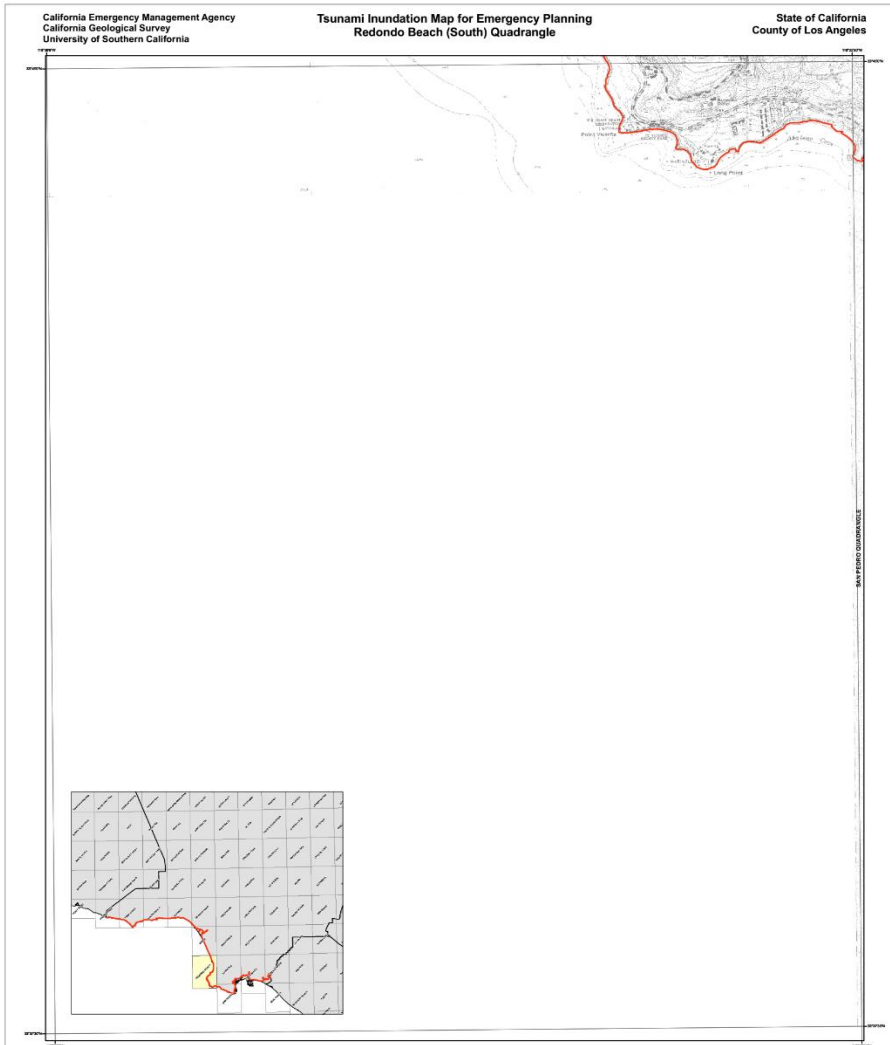
Based on the risk assessment, it is evident that earthquakes will continue to have potentially devastating economic impacts to the project area. Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life
- ✓ Commercial and residential structural damage
- ✓ Disruption of and damage to public infrastructure
- ✓ Secondary health hazards e.g. mold and mildew
- ✓ Damage to roads/bridges resulting in loss of mobility
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- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed.



# Map: Tsunami Inundation Map – Redondo Beach (South) Quadrangle

(Source: State of California Department of Conservation)



### METHOD OF PREPARATION

Initial tsunami modeling was performed by the University of Southern California (USC) Tsunami Research Center funded through the California Emergency Management Agency (CEMA) by the National Tsunami Hazard Mitigation Program. The tsunami modeling process utilized the MOST (Method of Splitting Tsunami) computational program (Wright 03), which allows for wave evolution over a variable bathymetry and topography used for the inundation mapping (Tsu and Gonzalez, 1997; Tsu and Gonzalez, 1998).

The bathymetry/topographic data that were used in the tsunami models consist of a series of nested grids. Nearshore grids with a 3-m resolution (75 to 10-meters) resolution or higher, were adjusted to "Mean High Water" sea-level conditions, representing a conservative sea level for the modeled use of the tsunami modeling and mapping.

A series of tsunami cross sections were selected for modeling, representing realistic local and distant earthquake and hypothetical extreme offshore, near-shore tsunamis (Table 1). Local tsunami events that were considered include offshore nearshore tsunamis, representing events on relatively flat zones and large submarine volcanoes capable of significant nearshore displacement and tsunami generation. Distant tsunamis were based on the historical 1964 great subduction zone events that are known to have occurred historically (1960 Chile and 1964 Alaska earthquakes) and/or other which can occur around the Pacific Ocean "Ring of Fire".

In order to enhance the results from the 75- to 10-meter inundation grid data, a method was developed utilizing higher-resolution digital topographic data (5- to 10-meters resolution) that better define the location of the tsunami inundation line (Table 1). This method was implemented by using digital imagery and laser data on a GIS platform with consideration given to historic available information (Smith et al., 1992). This information was verified, where possible, by field work coordinated with local emergency personnel.

The accuracy of the inundation line shown on these maps is subject to limitations in the accuracy and completeness of available terrain and oceanographic information, and the current understanding of tsunami generation and propagation phenomena as expressed in the models. Thus, although an effort has been made to identify a credible upper bound to inundation at any location along the coastline, it remains possible that actual inundation could be greater in a major tsunami event.

This map does not represent inundation from a single scenario event. It was created by combining inundation results for a complete of seven events affecting a given region (Table 1). For this reason, all of the inundation regions in a particular area will not likely be inundated during a single tsunami event.

**References:**  
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### TSUNAMI INUNDATION MAP FOR EMERGENCY PLANNING

State of California – County of Los Angeles  
**REDONDO BEACH (SOUTH) QUADRANGLE**

March 1, 2009

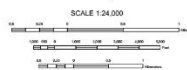


Table 1. Tsunami sources modeled for the Los Angeles County quadrangle.

Sources (if moment magnitude used in modeled event)	Areas of Inundation Map Coverage and Coastal Impact			
	Method	Shore	Beaches	Highway
Local Sources				
Chico Mendocino Fault	X	X	X	X
San Jacinto Fault	X	X	X	X
San Jacinto Fault Zone	X	X	X	X
Palma Verde, Lompoc #1	X	X	X	X
Palma Verde, Lompoc #2	X	X	X	X
California Subduction Zone (AS 02)	X	X	X	X
Central America Subduction Zone (AS 03)	X	X	X	X
Central America Subduction Zone (AS 04)	X	X	X	X
Central America Subduction Zone (AS 05)	X	X	X	X
1960 Chile Subduction Zone (AS 06)	X	X	X	X
1964 Alaska Subduction Zone (AS 07)	X	X	X	X
Central America Subduction Zone (AS 08)	X	X	X	X
East Islands Subduction Zone (AS 09)	X	X	X	X
East Islands Subduction Zone (AS 10)	X	X	X	X

### MAP EXPLANATION

- Tsunami Inundation Line
- Tsunami Inundation Area

### PURPOSE OF THIS MAP

This tsunami inundation map was prepared to assist cities and counties in identifying their tsunami hazard. It is intended for local jurisdictional, coastal evacuation planning and use. This map, and the inundation presented herein, is not a legal document and does not constitute any approval for real estate transactions or for any other regulatory purposes.

The inundation map has been compiled with best currently available scientific information. The inundation line represents the maximum considered tsunami run-up from a number of extreme, and realistic, tsunami sources. Tsunami sources events. But it does not mean inundation in the historical record. It is not intended to provide information about the probability of any tsunami affecting any area within a specific period of time.

Please refer to the following websites for additional information on the construction and/or intended use of the tsunami inundation map:

State of California Emergency Management Agency, Earthquake and Tsunami Program: <http://www.cemag.ca.gov/EMSP/quakeandtsunami.html>

University of Southern California – Tsunami Research Center: <http://www.usc.edu/tsunami2009/index.php>

National Oceanic and Atmospheric Administration Center for Tsunami Research (MOST model): <http://www.ncei.noaa.gov/most/model/index.html>

### MAP BASE

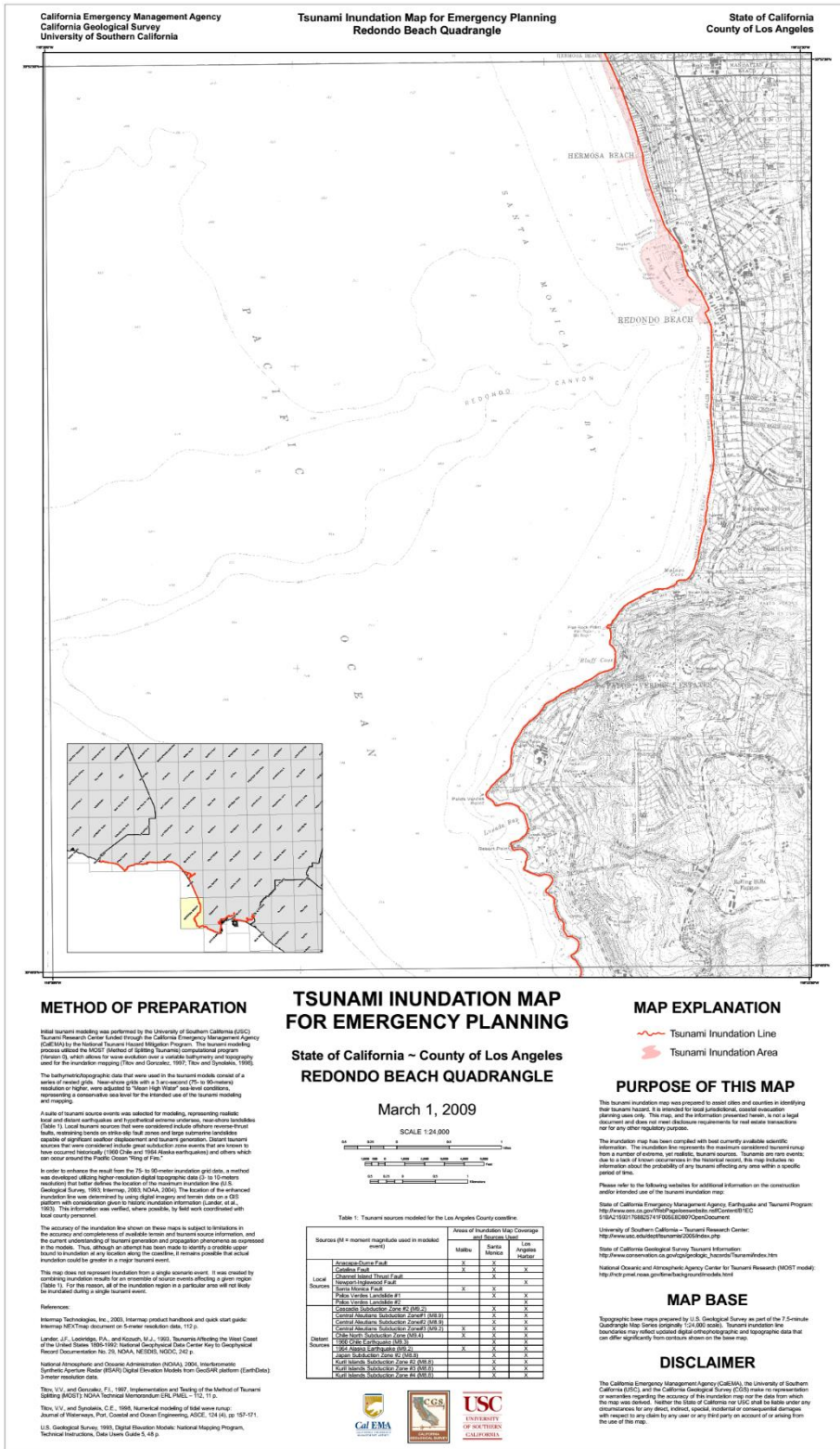
Topographic base maps prepared by U.S. Geological Survey as part of the 7.5-minute Quadrangle Base Maps (originally 7.5:30,000 scale). Tsunami inundation data that overlies may reflect digital elevation/topographic data and topographic data that can differ significantly from contours shown on the base map.

### DISCLAIMER

The California Emergency Management Agency (CEMA), the University of Southern California (USC), and the California Geological Survey (CGS) make no representation or warranty regarding the accuracy of this inundation map or the data from which the map was derived. Neither the State of California nor USC shall be liable under any circumstances for or due to, in whole or in part, any negligent or consequential damages that may result to any claim by any third party on account of or arising from the use of this map.



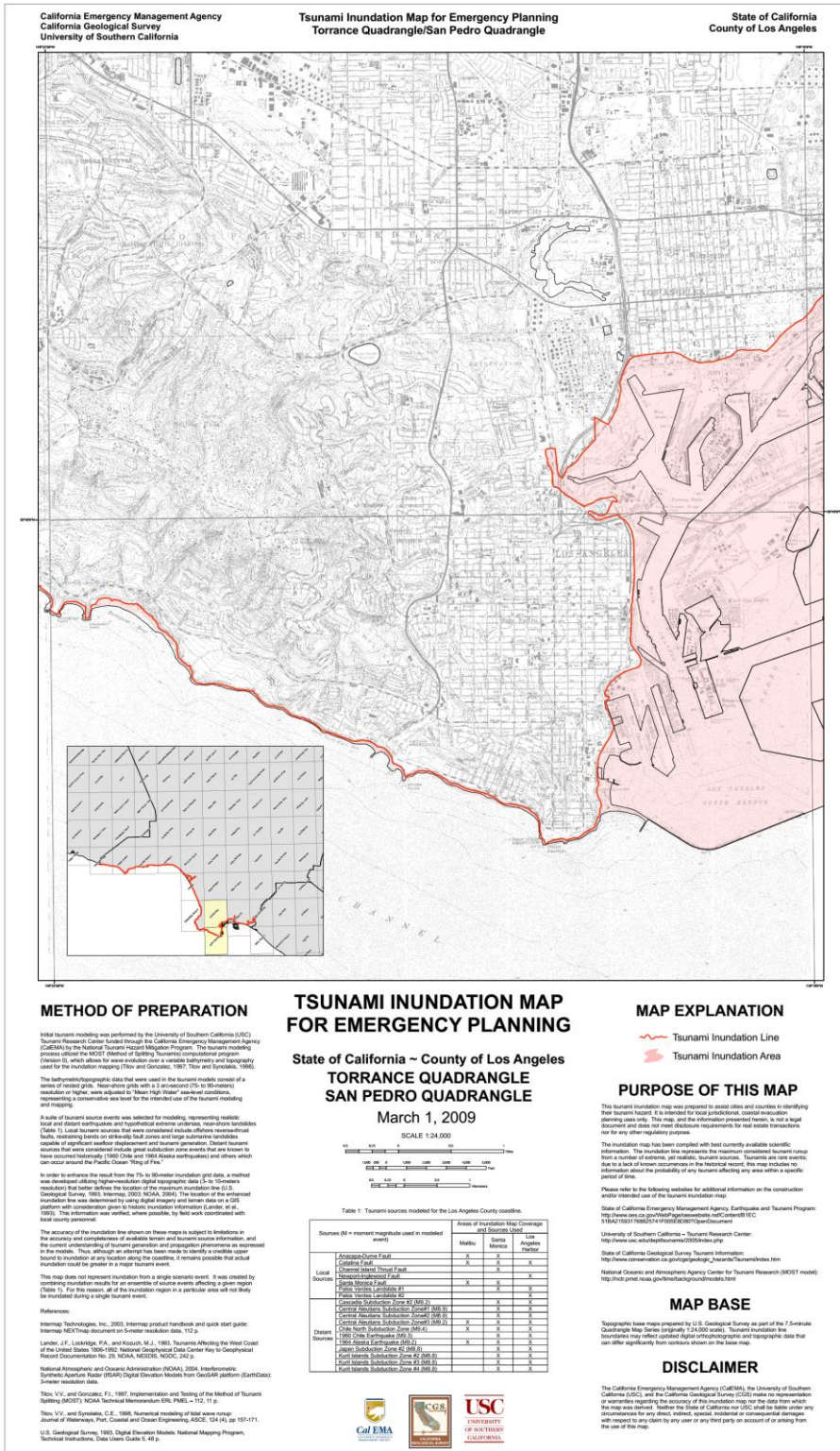
# Map: Tsunami Inundation Map – Redondo Beach Quadrangle (Source: State of California Department of Conservation)







# Map: Tsunami Inundation Map – Torrance Quadrangle/San Pedro Quadrangle (Source: State of California Department of Conservation)







# Hazardous Materials Events

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2.

**Q:** Does the plan include information on **previous occurrences** of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Previous Occurrence of Hazardous Material Events in Rancho Palos Verdes and Rolling Hills Estates** below.

### Previous Occurrence of Hazardous Materials Events in Rancho Palos Verdes and Rolling Hills Estates

According to the Planning Team, there have been no significant hazardous materials events in the project area.



### Previous Occurrences of Hazardous Materials Release in Los Angeles County

There are small-scale hazardous materials releases on a regular basis. However, Los Angeles County has never experienced a large-scale life-threatening hazardous materials release.

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1.

**Q:** Does the plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction (s)? (Requirement §201.6(c)(2)(i))

**A:** See **Local Conditions** below.

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2.

**Q:** Does the plan include information on previous occurrences of hazard events and on the **probability** of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Local Conditions** below.

### Local Conditions

Chemicals, petroleum products, explosives, radiological materials and other hazardous materials are commonly used and transported in and through the planning area. Also, industry throughout the county is making technological changes that include an ever-increasing number of sophisticated hazardous materials processes. Transportation of hazardous materials by rail, highway, air, and pipeline present a totally different situation when an accidental release occurs.



The planning area does not have any heavy industry, which effectively limits the quantity of hazardous materials. The following locations, however, could subject the Planning Area to significant hazardous materials incidents:

1. Kaiser Medical Hospital – located along the Planning Area’s north-eastern boundary
2. Pacific Coast Highway – arterial highway; potential transportation incidents
3. Interstate 110 – located east of the Planning Area; potential transportation incidents
4. Ports – Port of Los Angeles and Port of Long Beach; potential hazardous materials/terrorism/transportation incidents
5. Oil Refineries – located on Lomita Boulevard and the Crenshaw Boulevard Torrance Refinery; potential hazardous materials incident
6. LAX Airport – located north of the Planning Area; potential hazardous materials/terrorism/transportation incidents

The planning area is characterized by year-round mild to warm temperatures and light winds. The dominant wind pattern is daytime, offshore breezes from the northwest, occasionally broken by very strong Santa Ana winds from the northeasterly direction, resulting in wind velocities of up to 70 miles per hour. The Santa Ana winds typically occur during the autumn and winter months. The predominant offshore breezes could assist in the dispersal of airborne pollutants; however, an inversion layer of warm air occasionally overlaps the offshore breezes and may trap pollutants, particularly during the summer months. This phenomenon may compound health concerns related to degraded air quality.

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3.

**Q:** Is there a description of each identified hazard’s **impact** on the community as well as an overall summary of the community’s vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))

**A:** See **Impact of Hazardous Materials Events in Rancho Palos Verdes and Rolling Hills Estates** below.

## Impacts of Hazardous Materials Events in Rancho Palos Verdes and Rolling Hills Estates

Based on the risk assessment, it is evident that hazardous material events continue to have potentially devastating impacts to certain parts of the planning area.

Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Potential for fires and explosions
- ✓ Disruption of transportation systems
- ✓ Destruction of utilities and other public services
- ✓ Damage to public infrastructure and facilities
- ✓ Residential displacement, including evacuations
- ✓ Individuals trapped and injured in unsafe conditions
- ✓ Health issues related to discharges or releases



- ✓ Need for emergency food, shelter, and medical care;
- ✓ Economic impacts, both short and long-term;
- ✓ Water pollution and quality degradation.



# Human-Caused Events

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2.

**Q:** Does the plan include information on **previous occurrences** of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Previous Occurrences of Human-Caused Events in Rancho Palos Verdes and Rolling Hills Estates** below.

## Previous Occurrences of Human-Caused Events in Rancho Palos Verdes and Rolling Hills Estates

According to the Planning Team, there have been no significant human-caused events in the project area.

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1.

**Q:** Does the plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction (s)? (Requirement §201.6(c)(2)(i))

**A:** See **Local Conditions** below.

## Previous Occurrences of Human-Caused Events in Los Angeles County

There has been history of civil unrest and acts of terrorism in Los Angeles County. These events are summarized below in “Local Conditions”.

## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2.

**Q:** Does the plan include information on previous occurrences of hazard events and on the **probability** of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Local Conditions** below.

## Local Conditions

### Terrorism

Terrorism is the use of force or violence against persons or property in violation of the criminal laws of the United States for purposes of intimidation, coercion or ransom. Terrorists often use threats to create fear among the public, to try to convince citizens that their government is powerless to prevent terrorism, and to get immediate publicity for their causes. The Federal Bureau of Investigation (FBI) categorizes terrorism in the United States as one of two types: domestic terrorism or international terrorism.

**Domestic Terrorism** - involves groups or individuals whose terrorist activities are directed at elements of our government or population without foreign direction.

**International Terrorism** - involves groups or individuals whose terrorist activities are foreign- based and/or directed by countries or groups outside the United States or whose activities transcend national boundaries.



A terrorist attack can take several forms, depending on the technological means available to the terrorist, the nature of the political issue motivating the attack, and the points of weakness of the terrorist's target. Bombings are the most frequently used terrorist method in the United States. Other possibilities include an attack at transportation facilities, an attack against utilities, other public services or an incident involving chemical or biological agents.



Throughout California and Los Angeles County there is a nearly limitless number of potential terrorist targets, including government facilities; schools; religious institutions; gathering places (shopping centers, entertainment venues, etc.); abortion clinics; power plants and other utility infrastructure; transportation infrastructure; oil refineries, water storage facilities; locations of high profile individuals; and, financial institutions.

### *Cyber Terrorism*

Cyber terrorism is the act of Internet terrorism in terrorist activities, including acts of deliberate, large-scale disruption of computer networks, especially of personal computers attached to the Internet, by the means of tools such as computer viruses. Cyber terrorism can be also defined as the intentional use of computer, networks, and public internet to cause destruction and harm for personal objectives.

### *Civil Disorder*



Civil disorder, also known as civil unrest or civil strife, is a broad term that is typically used by law enforcement to describe unrest caused by a group of people. Civil disturbance can include a form of protest against major socio-political problems, but also can simply be an expression of antisocial values. The "Occupy Movement" was an international progressive socio-political movement that expressed opposition to social and economic inequality and to the perceived lack of "real democracy" around the world. It aimed primarily to advance social and economic justice and new

forms of democracy. The movement had many different scopes, since local groups often had different focuses, but its prime concerns included how large corporations (and the global financial system) control the world in a way that disproportionately benefited a minority, undermined democracy and caused instability. The Movement came to Los Angeles City Hall in September 2011.





## Active Shooter

There are no reported events of an active shooter in Rancho Palos Verdes and Rolling Hills Estates; however, several schools and workplaces throughout the United States have witnessed tragic active shooting incidents in recent years. On February 14, 2018, seventeen students and staff at Marjory Stoneman Douglas High School in Parkland, Florida were fatally shot and seventeen others were wounded, making the shooting one of the deadliest school massacres in the United States, surpassing the Columbine High School massacre as the worst high school shooting in the United States.

The Sandy Hook Elementary School shooting on December 14, 2012 was the result of an active shooter. In this incident, a single man shot and killed 20 children and six staff at the school. Additionally, on February 14, 2018 a 19-year old gunman killed 17 students and injured 17 others at Douglas High School in Parkland, Florida.

An active shooter event could occur at any place, any time. Local law enforcement will generally be the first responder and should maintain trained personnel to handle these situations.



### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3.

**Q:** Is there a description of each identified hazard’s **impact** on the community as well as an overall summary of the community’s vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))

**A:** See **Impact of Human-Caused Events in Rancho Palos Verdes and Rolling Hills Estates** below.

## Impacts of Human-Caused Events in Rancho Palos Verdes and Rolling Hills Estates

Based on the risk assessment, it is evident that Human-Caused events continue to have potentially devastating impacts to certain portions of the planning area.

Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life;
- ✓ Disruption of and damage to public infrastructure;
- ✓ Secondary fires and explosions;
- ✓ Economic impacts (jobs, sales, tax revenue) upon the community;
- ✓ Significant demands on emergency services.



## Utility-Related Events

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2.

**Q:** Does the plan include information on **previous occurrences** of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Previous Occurrences of Utility-Related Events in Rancho Palos Verdes and Rolling Hills Estates** below.

## Previous Occurrences of Utility-Related Events in Rancho Palos Verdes and Rolling Hills Estates

### *Power Failure/Stoppages*

There have been brief power failures in the project area but none to the extent posing a significant threat. The Public Safety Power Stoppage program just began in 2019 and to date no deliberate stoppages have been ordered in the project area.

### *Drought/Water Shortages*

Fortunately, there is no severe history of drought within the project area. However, there was a Cal Water pipe break during 2019 that caused a disruption in water delivery interrupting service to much of the project area.

### *Natural Gas Pipelines*

There have been no pipeline incidents posing a significant threat to the project area.

### Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1.

**Q:** Does the plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction (s)? (Requirement §201.6(c)(2)(i))

**A:** See **Local Conditions** below.

## Previous Occurrences of Utility-Related Events in Los Angeles County

### *Power Failure and Stoppages*

According to the City of Los Angeles Hazard Mitigation Plan (2018), on November 5, 2001, a power outage caused by a car accident led to the release of 1.4 million gallons of raw sewage into the Pacific Ocean, Marina del Rey, and Ballona Creek. The car crash knocked powerlines into a sewage pumping station. While the subsequent power outage lasted only 20 minutes, the sewage pumps shut down completely. Enough raw sewage was released to affect beaches from Santa Monica to Manhattan Beach. The backup power and alarm system malfunctioned because the wastewater pumping plant was undergoing construction, and the systems were turned off. The sewage spill went unnoticed for 15 hours; 12 more hours passed before sanitation officials notified the Los Angeles County Public Health office; and at least 10 more hours passed before lifeguards were notified of the sewage release. Civilians in the area first reported raw sewage





pouring out of manholes and flowing directly into storm drains. It took 24 hours before the beaches were closed.

### *Drought/Water Shortages*

California’s drought from 2012-2016 set several records:

- The period from 2012 to 2014 ranked as the driest three consecutive years for statewide precipitation.
- 2014 set new climate records for statewide average temperatures and for record-low water allocations in the State Water Project and federal Central Valley Project.
- 2013 set minimum annual precipitation records for many communities.

On January 17, 2014 the governor declared a state of emergency for drought throughout California. This declaration followed release of a report that stated that California had had the least amount of rainfall in its 163-year history. Californians were asked to voluntarily reduce their water consumption by 20 percent. Drought conditions worsened into 2015. On April 1, 2015, following the lowest snowpack ever recorded, the governor announced actions to save water, increase enforcement to prevent wasteful water use, streamline the state’s drought response, and invest in new technologies to make California more drought-resilient. The governor directed the State Water Resources Control Board to implement mandatory water reductions in cities and towns across California to reduce water usage by 25 percent on average. The LADWP was assigned a 16-percent water conservation target by the State Water Resources Control Board.

### *Natural Gas Pipelines*

The City of Los Angeles Hazard Mitigation Plan (2018) notes that in 2002 an underground Kinder Morgan high-pressure gas pipeline failed causing a significant spill of diesel fuel in the Rocklin neighborhood adjacent to where the breach occurred.

## **Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2.**

**Q:** Does the plan include information on previous occurrences of hazard events and on the **probability** of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

**A:** See **Local Conditions** below.

## **Local Conditions**

### *Power Failure and Stoppages*

Power failure is defined as any interruption or loss of electrical service caused by disruption of power transmission caused by accident, sabotage, natural hazards, or equipment failure (also referred to as a loss of power or power outage). A significant power failure is defined as any incident of a long duration, which would require the involvement of the local and/or State emergency management organizations to coordinate provision of food, water, heating, cooling, and shelter. Power failures in the planning area are usually localized and are usually the result of a natural hazard event involving high winds or storms. Electricity throughout the planning areas is provided by Southern California Edison.

The massive 2011 Southern California electricity outage brought to light many critical issues surrounding the state’s power generation and distribution system, including its dependency on out-of-state resources. Although California has implemented effective energy conservation



programs, the state continues to experience both population growth and weather cycles that contribute to a heavy demand for power.

Hydro-generation provides approximately 25% of California's electric power, with the balance coming from fossil fuels, nuclear, and green sources. As experienced in 2000 and 2001, blackouts can occur due to losses in transmission or generation and/or extremely severe temperatures that lead to heavy electric power consumption.

The effects of an energy shortage would affect all occupants of the project area. Perhaps most at risk would be medically challenged individuals with health care equipment reliant on electricity (e.g. oxygen), businesses, emergency service locations, and vulnerable populations center (e.g. schools).

In 2018, the California Public Utilities Commission (CPUC) directed California's three largest energy companies to coordinate to prepare all Californians for the threat of wildfires and power outages during times of extreme weather. To help protect customers and communities during extreme weather events, electric power may now be shut off for reasons of public safety in an effort to prevent a wildfire. This new protocol is referred to as Public Safety Power Shutoff (PSPS). During the writing of this HMP update, all three of the power companies initiated PSPS due to expected Santa Ana winds during the second week of October.

### *Drought/Water Shortages*

It's impossible to separate drought from water supply shortages. Drought is defined as a deficiency of precipitation over an extended period of time, usually a season or more. This deficiency results in a water shortage for some activity, group, or environmental sector. Drought should be considered relative to some long-term average condition of balance between precipitation and evapotranspiration (i.e., evaporation + transpiration) in a particular area, a condition often perceived as "normal". It is also related to the timing (e.g., principal season of occurrence, delays in the start of the rainy season, occurrence of rains in relation to principal crop growth stages) and the effectiveness of the rains (e.g., rainfall intensity, number of rainfall events).

Other climatic factors such as high temperature, high wind, and low relative humidity are often associated with it in many regions of the world and can significantly aggravate its severity. Drought should not be viewed as merely a physical phenomenon or natural event. Its impacts on society result from the interplay between a natural event (less precipitation than expected resulting from natural climatic variability) and the demand people place on water supply. Human beings often exacerbate the impact of drought. Recent droughts in both developing and developed countries and the resulting economic and environmental impacts and personal hardships have underscored the vulnerability of all societies to this natural hazard.

One dry year does not normally constitute a drought in California, but serves as a reminder of the need to plan for droughts. California's extensive system of water supply infrastructure — its reservoirs, groundwater basins, and inter-regional conveyance facilities — mitigates the effect of short-term dry periods for most water users. Defining when a drought begins is a function of drought impacts to water users. Hydrologic conditions constituting a drought for water users in one location may not constitute a drought for water users elsewhere, or for water users having a different water supply. Individual water suppliers may use criteria such as rainfall/runoff, amount of water in storage, or expected supply from a water wholesaler to define their water supply conditions.



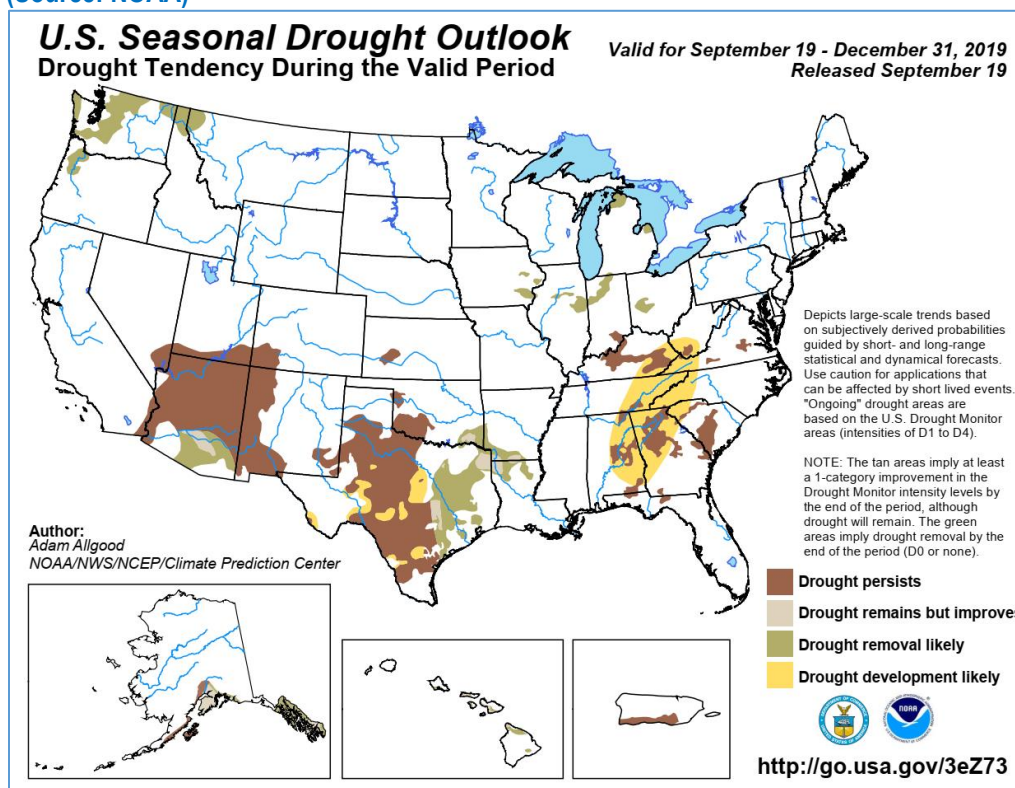
Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Most natural disasters, such as floods or forest fires, occur relatively rapidly and afford little time for preparing for disaster response. Droughts occur slowly, over a multiyear period. There is no universal definition of when a drought begins or ends. Impacts of drought are typically felt first by those most reliant on annual rainfall - ranchers engaged in dry land grazing, rural residents relying on wells in low-yield rock formations, or small water systems lacking a reliable source. Criteria used to identify statewide drought conditions do not address these localized impacts. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline.

There are four different ways that drought can be defined:

- **Meteorological** - a measure of departure of precipitation from normal. Due to climatic differences what is considered a drought in one location may not be a drought in another location.
- **Agricultural** - refers to a situation when the amount of moisture in the soil no longer meets the needs of a particular crop.
- **Hydrological** - occurs when surface and subsurface water supplies are below normal.
- **Socioeconomic** - refers to the situation that occurs when physical water shortage begins to affect people.

The U.S. Seasonal Drought Outlook below shows the project area as well as California as a whole is no longer in danger from the impacts of drought:

Figure: U.S. Seasonal Drought Outlook - 2019  
(Source: NOAA)





Additionally, the long-term effects of climate change on regional water resources are unknown, but global water resources are already stressed without climate change. Current stresses on water resources include:

- Growing populations
- Increased competition for available water
- Poor water quality
- Environmental claims
- Uncertain reserved water rights
- Groundwater overdraft
- Aging urban water infrastructure

With a warmer climate, droughts could become more frequent, more severe, and longer-lasting. The drought of the late 1980s showed what the impacts might be if climate change leads to a change in the frequency and intensity of droughts across the United States. From 1987 to 1989, losses from drought in the United States totaled \$39 billion (OTA, 1993). More frequent extreme events such as droughts and floods could end up being more cause for concern than the long-term change in temperature and precipitation averages.

The best advice to water resource managers regarding climate change is to start addressing current stresses on water supplies and build flexibility and robustness into any system. Flexibility helps to ensure a quick response to changing conditions, and robustness helps people prepare for and survive the worst conditions. With this approach to planning, water system managers will be better able to adapt to the impacts of climate change.

### *Natural Gas Pipelines*

There are several major natural gas pipelines that traverse the planning area as shown on **Map: California Natural Gas Pipeline Systems**. While pipelines are often thought of as presenting risks to communities, natural hazards can impact the integrity of pipelines. According to the U.S. Department of Transportation, although natural hazards are cited as the cause in fewer than ten percent (10%) of pipeline incidents, the failure of a large-diameter, high-pressure natural gas or hazardous liquid transmission pipeline during an earthquake can significantly complicate a communities' ability to respond and recover from the event. Natural gas is supplied to the planning area by Southern California Gas.

On September 9, 2010, a 30-inch steel natural gas transmission pipeline owned and operated by PG&E ruptured and exploded in the City of San Bruno residential neighborhood. The blast and ensuing inferno resulted in 8 confirmed deaths, 66 reported injuries, 34 destroyed structures, and 8 damaged structures. Cal OES has identified preliminary damage estimates at \$15.4 million, including \$2.5 million for debris removal, \$10.2 million for protective measures, \$2.1 million for roads and bridges, and \$0.6 million for utilities and other facilities. Investigations into the cause of the explosion are under way by the National Safety Transportation Board (NSTB), the California Public Utilities Commission (CPUC), and PG&E. Although it will not be confirmed until official investigations are completed, initial speculation points to the weakening of the 60-year-old pipeline due to corrosion. The day after the explosion, the CPUC asked PG&E to provide a list of its top 100 high-priority projects to upgrade or replace portions of the pipeline for reasons of public safety, as well as information on the status of listed projects. The list was published on September 21, 2010. Although targeted for repair several years ago, the San Bruno pipeline was not on the list.

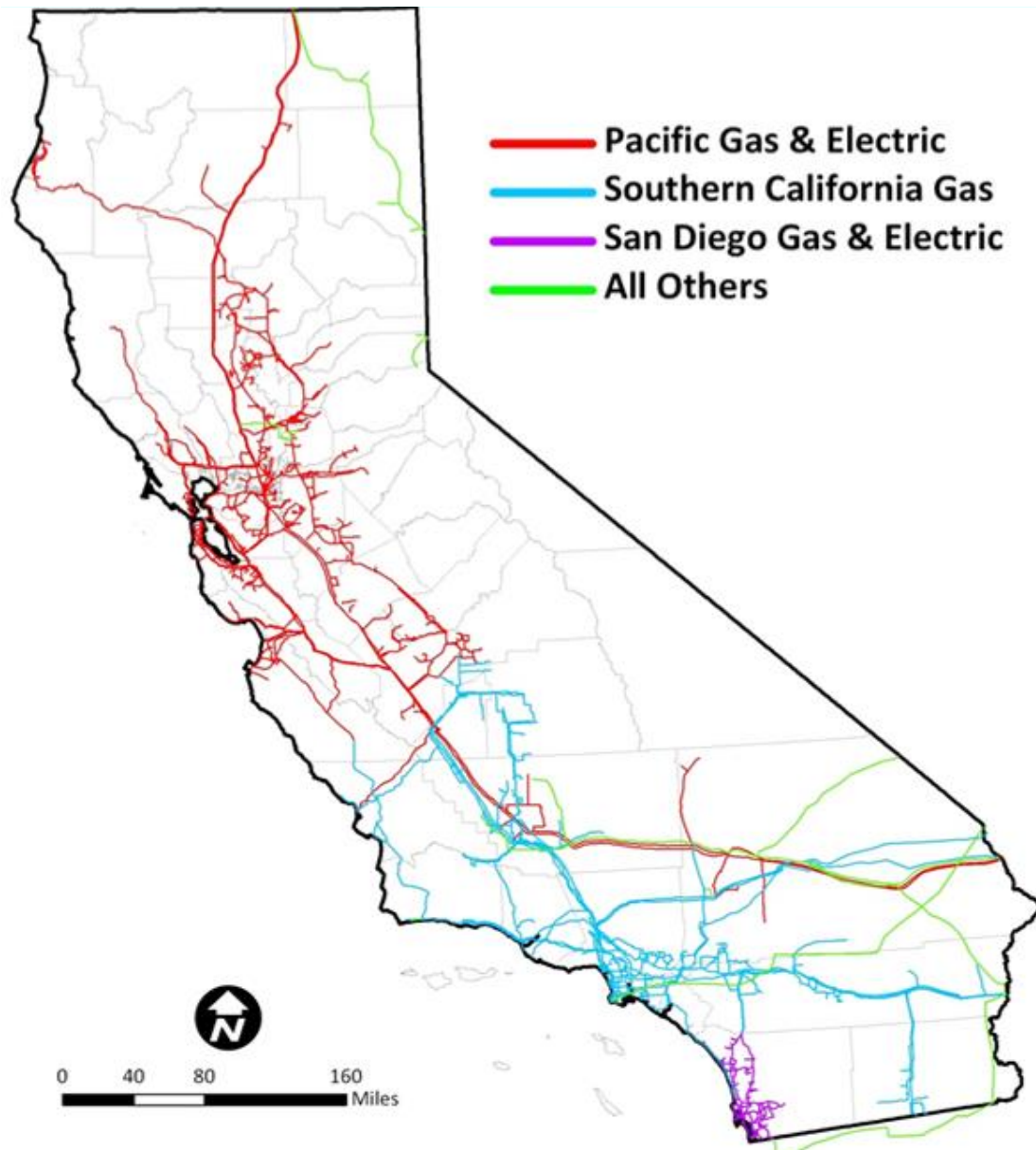


Virtually all natural gas, which accounts for about 28 percent of energy consumed annually, is transported by transmission pipelines. Although California is a leader in exploring and implementing alternative energy sources such as wind and solar, the expansion of traditional energy sources, such as natural gas, continues. There are natural gas transmission pipelines within the Planning Area, as well as adjoining communities.





Map: California Natural Gas Pipeline Systems  
(Source: California Energy Commission)





## Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3.

**Q:** Is there a description of each identified hazard's **impact** on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))

**A:** See **Impact of Utility-Related Events in Rancho Palos Verdes and Rolling Hills Estates** below.

### Impacts of Utility-Related Events in Rancho Palos Verdes and Rolling Hills Estates

Based on the risk assessment, it is evident that Utility-Related events will continue to have potentially devastating impacts to certain portions of the planning area.

Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life;
- ✓ Disruption of and damage to public infrastructure;
- ✓ Significant economic impact;
- ✓ Negative impact on commercial and residential property values.





## PART III: MITIGATION STRATEGIES

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### Mitigation Strategies

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#### Overview of Mitigation Strategy

As the cost of damage from natural disasters continues to increase nationwide, the Cities of Rancho Palos Verdes and Rolling Hills Estates recognize the importance of identifying effective ways to reduce vulnerability to disasters. Mitigation Plans assist communities in reducing risk from natural hazards by identifying resources, information and strategies for risk reduction, while helping to guide and coordinate mitigation activities throughout the planning area.

The plan provides a set of action items to reduce risk from natural hazards through education and outreach programs, and to foster the development of partnerships. Further, the plan provides for the implementation of preventative activities, including programs that restrict and control development in areas subject to damage from natural hazards.

The resources and information within the Mitigation Plan:

1. Establish a basis for coordination and collaboration among agencies and the public in the Cities of Rancho Palos Verdes and Rolling Hills Estates;
2. Identify and prioritize future mitigation projects; and
3. Assist in meeting the requirements of federal assistance programs

The Mitigation Plan is integrated with other plans within the cities including the Emergency Operations Plan and General Plan.

#### Mitigation Measure Categories

Following is FEMA's list of mitigation categories. The mitigation action items (see Mitigation Actions Matrix) identified by the Planning Team are consistent with the six broad categories of mitigation actions outlined in FEMA publication 386-3 *Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies*.

- ✓ **Prevention:** Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and storm water management regulations.
- ✓ **Property Protection:** Actions that involve modification of existing buildings or structures to protect them from a hazard, or removal from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- ✓ **Public Education and Awareness:** Actions to inform and educate citizens, property owners, and elected officials about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.



- ✓ **Natural Resource Protection:** Actions that, in addition to minimizing hazard losses preserve or restore the functions of natural systems. Examples include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- ✓ **Emergency Services:** Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and protection of critical facilities.
- ✓ **Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, levees, floodwalls, retaining walls, and safe rooms.

## Q&A | ELEMENT C. MITIGATION STRATEGY | C3

**Q:** Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))

**A:** See **Goals** below.

## Goals

At the beginning of the 2019 planning process, the Planning Team agreed to keep the five goals from the 2014 Plan. The goals continue to be aligned with the risk assessment and Planning Team input and represents a long-term vision for hazard reduction or enhanced mitigation capabilities.

Each goal is supported by mitigation action items (see Mitigation Actions Matrix). The five goals and descriptions are listed below:

### *Protect Life and Property*

Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural, human-caused, and technological hazards.

Improve hazard assessment information to make recommendations for avoiding new development in high hazard areas and encouraging preventative measures for existing development in areas vulnerable to natural, human-caused, and technological hazards.

### *Enhance Public Awareness*

Develop and implement education and outreach programs to increase public awareness of the risks associated with natural, human-caused, and technological hazards.

Provide information on tools; partnership opportunities, and funding resources to assist in implementing mitigation activities.

### *Preserve Natural Systems*

Support management and land use planning practices with hazard mitigation to protect life.

Preserve, rehabilitate, and enhance natural systems to serve hazard mitigation functions.



### *Encourage Partnerships and Implementation*

Strengthen communication and coordinate participation with public agencies, citizens, non-profit organizations, business, and industry to support implementation.

Encourage leadership within the cities and public organizations to prioritize and implement local and regional hazard mitigation activities.

### *Strengthen Emergency Services*

Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure.

Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.

Coordinate and integrate hazard mitigation activities where appropriate, with emergency operations plans and procedures.

## **How are the Mitigation Action Items Organized?**

The action items are a listing of activities in which planning area agencies and citizens can be engaged to reduce risk. Each action item includes an estimate of the timeline for implementation.

The action items are organized within the following **Mitigation Actions Matrix**, which lists all of the multi-hazard (actions that reduce risks for more than one specific hazard) and hazard-specific action items included in the mitigation plan. Data collection and research and the public participation process resulted in the development of these action items. The Matrix includes the following information for each action item:

### *Funding Source*

The action items can be funded through a variety of sources, possibly including operating budget/general fund, development fees, Community Development Block Grant (CDBG), Hazard Mitigation Grant Program (HMGP), other grants, private funding, Capital Improvement Plan, and other funding opportunities.

### *Coordinating Organization*

The Mitigation Actions Matrix assigns a “coordinating organization” - the agency with regulatory responsibility to address hazards, or that is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitoring, and evaluation.

### *Plan Goals Addressed*

The plan goals addressed by each action item are included as a way to monitor and evaluate how well the mitigation plan is achieving its goals once implementation begins.

The plan goals are organized into the following five areas:

- ✓ Protect Life and Property
- ✓ Enhance Public Awareness



- ✓ Preserve Natural Systems
- ✓ Encourage Partnerships and Implementation
- ✓ Strengthen Emergency Services

### *Planning Mechanism*

It's important that each action item be implemented. Perhaps the best way to ensure implementation is through integration with one or many of the planning area's existing "planning mechanisms" including the General Plans, Capital Improvement Programs, General Funds and grants. Opportunities for integration will be simple and easy in cases where the action item is already compatible with the content of the planning mechanism. As an example, if the action item calls for the creation of a floodplain ordinance and the same action is already identified in the General Plan's policies, then the General Plan will assist in implementation.

The Capital Improvement Program, depending on the budgetary environment, is updated every 5 years. The CIP includes infrastructure projects built and owned by each City. As such, the CIP is an excellent medium for funding and implementing action items from the Mitigation Plan. The Mitigation Actions Matrix includes several items from the existing CIP. The authors of the CIP served on the Planning Team and are already looking to funding addition Mitigation Plan action items in future CIPs.

The General Fund is the budget document that guides all of each city's expenditures and is updated on an annual basis. Although primarily a funding mechanism, it also includes descriptions and details associated with tasks and projects.

Grants come from a wide variety of sources – some annually and other triggered by events like disasters. Whatever the source, each city uses the General Fund to identify successful grants as funding sources.

### *Building and Infrastructure*

This addresses the issue of whether or not a particular action item results in the reduction of the effects of hazards on new and existing buildings and infrastructure.

### *Comments*

The purpose of the "Comments" is to capture the notes and status of the various action items. Since Planning Team members frequently change between plan updates and annual reviews, the Comments provide a sort of history to help in tracking the progress and status of each action. Comments are expressed in terms of Completed, Revised, Deleted, New, Deferred, and Notes.



## Q&A | ELEMENT C. MITIGATION STRATEGY | C5a.

**Q:** Does the plan explain how the mitigation actions and projects will be prioritized (including cost benefit review)? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))

**A:** See **Benefit and Cost Ratings** and **Priority Rating** below.

### *Benefit and Cost Ratings*

A general assessment of the benefits of proposed projects were weighed against relative costs as part of the project prioritization process. This less formal approach was used because some projects may not be implemented for up to 10 years, and associated costs and benefits could change dramatically in that time. Parameters were established for assigning subjective ratings (high, medium, and low) to the costs and benefits of these projects.

**Cost ratings** were defined as follows:

**High:** Existing jurisdictional funding will not cover the cost of the action item so other sources of revenue would be required.

**Medium:** The action item could be funded through existing jurisdictional funding but would require budget modifications.

**Low:** The action item could be funded under existing jurisdictional funding.

**Benefit ratings** were defined as follows:

**High:** The action item will provide short-term and long-term impacts on the reduction of risk exposure to life and property.

**Medium:** The action item will have long-term impacts on the reduction of risk exposure to life and property.

**Low:** The action item will have only short-term impacts on the reduction of risk exposure to life and property.



## Priority Rating

The Planning Team stayed with the same priority rating as used in the 2014 Plan. Designations of “High”, “Medium”, and “Low” priority have been assigned to each action item using the following criteria:

### Does the Action:

- solve the problem?
- address Vulnerability Assessment?
- reduce the exposure or vulnerability to the highest priority hazard?
- address multiple hazards?
- benefits equal or exceed costs?
- implement a goal, policy, or project identified in the General Plan or Capital Improvement Plan?

### Can the Action:

- be implemented with existing funds?
- be implemented by existing state or federal grant programs?
- be completed within the 5-year life cycle of the HMP?
- be implemented with currently available technologies?

### Will the Action:

- be accepted by the community?
- be supported by community leaders?
- adversely impact segments of the population or neighborhoods?
- require a change in local ordinances or zoning laws?
- positive or neutral impact on the environment?
- comply with all local, state and federal environmental laws and regulations?

### Is there:

- sufficient staffing to undertake the project?
- existing authority to undertake the project?

As mitigation action items were updated or written the Planning Team, representatives were provided worksheets for each of their assigned action items. Answers to the criteria above determined the priority according to the following scale.

- 1-6 = Low priority
- 7-12 = Medium priority
- 13-18 = High priority



### Q&A | ELEMENT C. MITIGATION STRATEGY | C1b.

**Q:** Does the plan document each jurisdiction's ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3) c)

**A:** See **Mitigation Actions Matrix** below.

### Q&A | ELEMENT C. MITIGATION STRATEGY | C4a.

**Q:** Does the plan identify and analyze a comprehensive range (different alternatives) of specific mitigation actions and projects to reduce the impacts from hazards? (Requirement §201.6(c)(3)(ii))

**A:** See **Mitigation Actions Matrix** below.

### Q&A | ELEMENT C. MITIGATION STRATEGY | C4b.

**Q:** Does the plan identify mitigation actions for every hazard posing a threat to each participating jurisdiction? (Requirement §201.6(c)(3)(ii))

**A:** See **Mitigation Actions Matrix** below.

### Q&A | ELEMENT C. MITIGATION STRATEGY | C4c.

**Q:** Do the identified mitigation actions and projects have an emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))

**A:** See **Mitigation Actions Matrix** below.

### Q&A | ELEMENT C. MITIGATION STRATEGY | C5a.

**Q:** Does the plan explain how the mitigation actions and projects will be prioritized (including cost benefit review)? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))

**A:** See **Mitigation Actions Matrix** below.

### Q&A | ELEMENT C. MITIGATION STRATEGY | C5b.

**Q:** Does the plan identify the position, office, department, or agency responsible for implementing and administering the action/project, potential funding sources and expected timeframes for completion? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))

**A:** See **Mitigation Actions Matrix** below.

### Q&A | ELEMENT D. MITIGATION STRATEGY | D1

**Q:** Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))

**A:** See **Mitigation Actions Matrix** below.

### Q&A | ELEMENT D. MITIGATION STRATEGY | D2

**Q:** Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))

**A:** See **Mitigation Actions Matrix** below.

### Q&A | ELEMENT D. MITIGATION STRATEGY | D3

**Q:** Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))

**A:** See **Mitigation Actions Matrix** below.





## Mitigation Actions Matrix

Following is **Table: Mitigation Actions Matrix** which identifies the existing and future mitigation activities developed by the Planning Team.

**Table: Mitigation Actions Matrix – Rancho Palos Verdes**

Action Item	Accomplishments (✓) and Ideas for Future Implementation (O)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGF=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
<b>Multi-Hazard Action Items</b>															
MH-1 Integrate the goals and action items from the Plan into existing regulatory documents and programs, where appropriate.	✓ The Joint Hazard Mitigation Plan and its contents are discussed in the 2018 update to the Safety Element of the City's General Plan.	Hazard Mitigation Planning Subcommittee (HMS)	Ongoing	X	X	X	X	X	GF	H	L	H	Y	Revised	



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
MH-2 Identify and pursue funding opportunities to develop and implement local mitigation activities.	✓ Successful California Water Resources Storm Water/Flood Management Grant. ✓ Tiger 4 Federal Grant (San Ramon Stabilization) ✓ FEMA HMGP	City Manager's Office	Ongoing	X	X	X	X	X	GF	H	H	H		Revised
MH-3 HMS will continue to develop a sustainable process for implementing,	○ The HMS will meet semi-annually to monitor and evaluate	HMS	Ongoing	X	X	X	X	X	GF	M	L	M		Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
monitoring, and evaluating regional mitigation activities.	regional mitigation activities.													
MH-4 Identify, improve, and sustain collaborative programs focusing on, public and private sector organizations, and individuals to avoid activity that increases risk to hazards.	✓ Adopted local code amendments for enhanced building, geotechnical, and fire safety. ✓ Published related information that is available at the public counter, printed	Community Development	Ongoing	X	X		X		GF	H	L	H		Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	<p>handouts, city newsletter, list-serve messages, and on the website.</p> <p>✓ Standardize plans and checklists made available for the public.</p> <p>✓ Presented information on cable TV, at local school, and during annual B&amp;S Month.</p>													



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
MH-5 Develop public and private partnerships to foster hazard mitigation program coordination and collaboration with the City's HMS	<ul style="list-style-type: none"> <li>← Maintain in cooperative outreach with PVPLC</li> <li>← Integrate brush clearance support into waste hauler contract.</li> </ul>	City Manager's Office, Public Works	Ongoing	X	X	X	X						Deleted - redundant	
MH-6 Develop inventories of critical facilities and infrastructure.	<ul style="list-style-type: none"> <li>✓ Assess deterioration, deficiencies, and vulnerability to the identified hazards and</li> </ul>	City Manager's Office, Public Works Building & Safety	Ongoing	X				X	GF	M	H	H	Y	Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
	<p>✓ prioritize mitigation projects. Planning Division is working with the South Bay Cities Council of Governments in Adaptation Planning document, which identifies critical facilities throughout the City.</p>														



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
MH-7 Strengthen emergency management program with maintained plans, training, and exercises.	✓ Emergency Operations Plan was updated in 2019. EOC Section training has been developed to train staff in their respective EOC positions. The City holds at least one annual emergency preparedness exercise activating	City Manager's Office	Ongoing	X	X	X	X	X	GF, HMGP, BRIC, PDM	±	±	±	Y	Revised





Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	the EOC at Level III and utilizing the majority of staff in EOC positions.													
MH-8 Develop, enhance, and implement education programs aimed at mitigating natural hazards, and reducing the risk to citizens, public agencies, private property	Enhanced building construction, geotechnical, and fire safety requirements Related information available at the public counter, on-printed handouts, in city newsletter, and on the website.	City Manager's Office, Community Development LA County Fire Dept	Ongoing	X	X	X	X	X	GF			±		Deleted – redundant



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
owners, businesses, and schools.	Partial fee waivers for certain building construction and energy saving upgrades. Standardized plans and checklists made available for the public.													
MH-9 Use updated technical knowledge and tools to inform the public of hazard potential.	○ Provide a separate public GIS web service that can be link from the City's website to show	City Manager's Office, Planning, Public Works, GIS	Ongoing	X	X	X	X	X	GF, HMGP, BRIC, PDM	M	L	M		Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	Hazard Maps													
MH-10 Maintain hazard warning systems to ensure effectiveness and efficiency and increase coordination between local jurisdictions and emergency service providers.	✓ Alert LA, Los Angeles County Regional Interoperability Community System ✓ Breaking News System ✓ Twitter Network	City Manager's Office	Ongoing	X	X	X	X	X	GF, HMGP, BRIC, PDM	H	L	M		Revised
MH-11 Update and Incorporate the Regional	<del>✓</del> Updated General Plan Safety	City Manager's Office	Ongoing	X	X			X	GF			H		Deleted – these maps are the responsibility of the County.



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
Evacuation Routes into appropriate planning documents.	Element in 2010.	Planning Department												
MH-12 Prepare a Pre-Disaster Recovery Plan including development of priorities for restoration of the community's infrastructure and vital public facilities following a disaster.	○ Establish restoration implementation procedures for vital facilities and establish decision making tools framework in the event of multiple site losses.	City Manager's Office, Public Works Community Development	5 years	X				X	GF, HMGP, BRIC, PDM	H	M	M	Y	Revised
MH-13 Develop policy	○ Adopted Chapter 34	Community Development	Ongoing	X					GF, HMGP, BRIC, PDM	H	L	M	Y	Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
for government to determine what reconstruction criteria should be applied to structures damaged during a disaster	<ul style="list-style-type: none"> <li>○ and new State Existing Buildings Code</li> <li>○ Develop additional zoning, building and reconstruction policies and requirements for post-disaster situations.</li> <li>○ Adopted California Building Code in 2016</li> </ul>													



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
MH-14 Develop and implement programs to coordinate maintenance and mitigation activities to reduce risk to public infrastructure.	<ul style="list-style-type: none"> <li>✓ Continue Landslide Road Maintenance Program.</li> <li>✓ Continue Storm Drain User Fee Maintenance and CIP program.</li> <li>✓ Continue Pavement Management Program</li> <li>✓ Continue Fuel Modification Program.</li> </ul>	Public Works	Ongoing	X		X	X	X	GF, HMGP, BRIC, PDM	H	L	H		Revised
MH-15 Place information on website and	<ul style="list-style-type: none"> <li>✓ Completed task now maintaining.</li> </ul>	City Manager's Office,	Ongoing	X	X			X	GF	M	L	H		Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
cable access channels to include information specific to residents, building code information, and educational information on damage prevention.		Community Development, LACoFD												
<del>MH-16 Establish policy to ensure mitigation projects are in place to safeguard</del>		<del>Public Works and Building and Safety Division</del>	<del>1-2 years</del>	<del>X</del>				<del>X</del>	<del>GF</del>			<del>H</del>		<del>Deleted (redundant)</del>





Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
critical facilities.														
MH-16 Incorporate the building inventory into the Mitigation Plan update.	✓ Completed during 2014 update to the Mitigation Plan. ✓ Future changes to the building inventory will be incorporated into future updates to the Mitigation Plan.	Public Works and Building and Safety Division	Completed	X				X	GF	H	L	H	Y	Revised
MH-17 Educate City staff on	✓ Register appropriate staff for	City Manager's Office	Ongoing	X			X	X	GF, HMGP, BRIC, PDM	M	L	H		Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services	Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation					
federal cost-share & grant programs, and other related federal programs so the full array of assistance available is understood.	✓ courses in the federal Public Assistance Reimbursement Process. Develop an internal process for tracking and preparing reimbursement requests following a disaster.	Finance/IT												
MH-19 Determine the economic feasibility of mitigating natural hazards that		City Manager's Office	Ongoing	X										Deleted (redundant)



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
can provide decision-makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.														
MH-18 Developed a Climate Action Plan.	✓ Completed through the South Bay Cities Council of Governments in 2017.	City Manager's Office	Completed	X		X	X		GF	M	H	H		Completed



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
MH-19 Installation of an Emergency Communications Center (ECC) trailer and communications antenna on Rancho Palos Verdes City Hall Campus	✓ City staff worked with outside vendors and members of the Palos Verdes Alert Network to install project in 2007.	City Manager's Office	Completed	X		X	X	X	GF	H	L	H	Y	Completed
MH-20 Implementation of Emergency Preparedness Committee "Beauty and the Beast" emergency preparedness	✓ Initiated 2010-2011	City Manager's Office	Ongoing	X	X	X	X	X	GF	M	L	H		Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
presentation for community education.														
MH-21 Emergency Preparedness Committee emergency preparedness public service announcements program.	✓ Program initiated in the FY 2010-11.	City Manager's Office	2012-13	X	X	X	X	X	GF	M	L	H		Revised
MH-22 Implemented 3-day Emergency Personal Preparedness Kits City Council prize drawing program.	✓ Program began in FY 2011-12.	City Manager's Office	Annual	X	X	X	X	X	GF	M	L	H		Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGF=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
MH-23 City Emergency Operations Plan updated and approved by City Council.	✓ Completed December 2010	City Manager's Office	2010	X	X	X	X	X	GF			H		Deleted - redundant
MH-24 City Emergency Operations Plan sent to Cal OES for approval.	As of 5-14-12, the plan is still at Cal OES for review.	City Manager's Office	2012	X	X	X	X	X	GF			H		Deleted – redundant
MH-25 Cal OES Grant approved for production of All-Hazard Multijurisdictional Mitigation Plan.	Submitted application November 2010	City Manager's Office	2011-2012	X	X	X	X	X	GF, GR			H		Deleted – redundant



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
MH-26 Conducted NIMS-ICS 300 training for all City Emergency Operations Center section management staff.	✓ Provided training as referenced in the City's Emergency Operations Plan and to fulfill NIMS requirements.	City Manager's Office	2011	X	X	X	X	X	GF			H		Deleted – not mitigation
MH-27 Maintain Disaster Service Volunteer Program.	✓ Implemented program in 2013.	City Manager's Office	2011-2012	X	X	X	X	X	GF	H	L	H		Revised
MH-28 Provided Emergency Operations Center (EOC) Section	✓ City staff and emergency management consultant	City Manager's Office	2011	X	X	X	X	X	GF			H		Deleted – not mitigation





Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
training for all EOC Staff.	provided structure and criteria for EOC section training classes.													
MH-29 Conduct functional emergency preparedness exercise with a theme of mitigation or recovery	✓ At least one functional emergency preparedness exercise is held by the City each year as recommended by Cal OES and FEMA in order to received	City Manager's Office	Annually	X	X	X	X	X	GF, HMGP, BRIC, PDM	H	L	H	Y	Revised



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	disaster reimbursement funds.													
MH-30 Send emergency preparedness staff to workshops, seminars, and annual conferences for continual update of emergency management practices.	✗ City staff is sent to emergency preparedness training opportunities as often as possible.	City Manager's Office	Ongoing	X	X	X	X	X	GF			±		Deleted – not mitigation
MH-31 Implemented emergency cache supply system.	✓ City staff and emergency preparedness consultant completed	City Manager's Office	Ongoing	X	X	X	X	X	GF	H	L	H	Y	Revised



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	program and training of staff in 2011.													
MH-32 Participate in LA County Department of Health Services Antibiotics (Doxycycline) program.	✓ City participates in program to assist with continuity of government if staff and/or council members are affected by a biological weapons attack.	City Manager's Office	Ongoing	X	X	X	X	X	GF			±		Deleted – not mitigation



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
MH-33 Implementing American Red Cross (ARC) human shelter network.	○ City shelter facilities are inspected and approved by ARC. Memorandum of Understanding between City and ARC coming soon.	City's Manager's Office	2012	X	X	X	X	X	GF			±		Deleted – not mitigation
MH-34 Purchase Mobile EOC.	○ Explore possibility of purchasing a mobile EOC in case primary and secondary EOC's are rendered out	City Manager's Office	5 years	X	X	X	X	X	GF, HMGP, BRIC, PDM	H	H	H	Y	Revised



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	of commission and/or another Peninsula City needs assistance.													
MH-35 Secure funding for seismic retrofit or reconstruction of the City Hall Campus with independent EOC.	○ The City Hall Campus will not withstand a strong earthquake or other type of disaster. The primary EOC is located within the building and also subject to collapse	City Manager's Office	5 years	X	X	X	X	X	HMGP, BRIC, PDM	H	H	H	Y	Revised



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	or severe damage.													
MH-36 Secure funding for utility vehicles and earthmoving equipment.	○ Front Loader, Haul Truck, 4-wheel drive vehicles, ATV's and/or "Gator" utility vehicles.	City Manager's Office, Public Works	1-3 years	X	X	X	X	X	HMGP, BRIC, PDM	H	H	H		Revised
MH-37 Secure funding for an emergency management consultant to provide Memorandum of Understanding	○ Cal OES and FEMA recommend cities be prepared by having MOU's in place first available	City Manager's Office	1-3 years	X	X	X	X	X	HMGP, BRIC, PDM	H	H	H		Revised



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
's (MOU's) between city and vendors for food, water, temporary housing, and heavy equipment.	service, protection from price gouging practices, and to simplify business transactions.														
MH-38 Secure funding for consultant to update Joint Hazard Mitigation Plan.	○ Joint Hazard Mitigation Plans need to be updated every five years and a consultant with expertise in the subject matter is	City Manager's Office	5 years	X	X	X	X	X	HMGP, BRIC, PDM	H	H	H		Revised	





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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	highly recommended.													
MH-39 Complete a funding for a consultant to provide a Continuity of Operations Plan for the City.	○ CalOES and FEMA recommended cities have a Continuity of Operations Plan. Fulfillment of this recommendation will enhance the City's chances of receiving future disaster	City Manager's Office	1-3 years	X	X	X	X	X	GR		H	H		Deleted – redundant



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	reimbursement funds.													
MH-40 Secure funding for a consultant to secure funding and provide a children and family plan program and supplies to use during an emergency and/or disaster.	○ Staff may need to come in to work and bring children and/or family members they can't leave behind. A program like this would augment the City's response and	City Manager's Office	1-3 years	X	X	X	X	X	GR			±		Deleted – not mitigation



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	recovery capabilities													
MH-41 Secure funding for EOC Map Plotter.	<ul style="list-style-type: none"> <li>Following an emergency, the ability to create and post maps would greatly enhance the City's ability to mitigate against additional damages.</li> </ul>	City Manager's Office	1-3 years	X	X	X	X	X	HMGP, BRIC, PDM	H	H	H	Y	Revised
MH-42 Secure funding to purchase	<ul style="list-style-type: none"> <li>The City's EOC could use more</li> </ul>	City Manager's Office	Completed	X	X	X	X	X	HMGP, BRIC, PDM	H	H	H	Y	Completed



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
existing City EOC equipment & peripherals (e.g. laptop computers, furniture, IT and telecommunication upgrades, etc.).	equipment including computers and telecommunication upgrades.													
MH-43 Secure funding to purchase protective Hazardous Materials equipment for staff to use in case of terrorist,	○ Even though the odds are low that the City would be affected by a hazardous materials incident, it	City Manager's Office	1-3 years	X	X	X	X	X	GR			L		Deleted – not practical



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
sabotage, or WMD attacks.	would not be a detriment to the City to have equipment on hand for disasters and/or emergencies just in case.													
MH-44 Construction to stabilize San Ramon Canyon and roadways.	○ Divert runoff to minimize Tarapaca landslide movement, mudslides, and flooding on	Public Works		X	X			GF, HMGP, BRIC, PDM	H	H	H	Y	Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	PVDS/25 <sup>th</sup> Street.													
MH-45 Emergency Generator Upgrades.	✓ Installation of emergency generators and propane fuel storage at City Hall (7-day supply), PVIC and Hesse Park (3-day fuel supply, each). ✓ Completed in 2011.	Public Works	Completed					X	GF	H	L	H	Y	Completed
MH-46 Hazardous	✓ Hold free collection	Public Works	Annual	X	X				GF	H	H	H	Y	Revised



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
Waste Roundup	events for public drop off of hazardous waste.													
MH-47 Brush and Landscape Materials Collection.	<ul style="list-style-type: none"> <li>✓ Hold free collection events for public drop off of brush and vegetation waste.</li> <li>✓ Twice annually</li> </ul>	Public Works	Ongoing	X				GF	H	H	H	Y	Revised	
MH-48 Heating System dedicated circuit at City Hall.	<ul style="list-style-type: none"> <li>✓ Installed dedicated electrical circuit for space heaters to</li> </ul>	Public Works	Completed	X				GF	H	L	H	Y	Completed	





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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	prevent overloading ✓ Completed in 2010													
MH-49 Urban Forest Maintenance	✓ Continue regular trimming of urban street trees to safeguard utility lines and structures.	Public Works	Ongoing	X					GF	H	L	H	Y	Revised
MH-50 Revised City's Emergency Operations Plan - Finance &	✓ Update reflects current operations and increases the chance	Finance/IT Department	Completed	X	X	X	X	X	GL			H		Deleted – not mitigation



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
Administration Section	of receiving state and federal disaster reimbursement funds.													
MH-51 Revised City's Emergency Operations Plan to include an Incident Management/ Messaging System.	<ul style="list-style-type: none"> <li>✓ Completed</li> <li>✓ The system assists staff and other agency members respond to disasters by locating and mapping incidents and providing</li> </ul>	Finance/IT Department	Done	X	X	X	X	X	GF			H		Deleted – not mitigation



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	an electronic messaging center inside the EOC.													
MH-52 Update GIS system to assist staff and first responders with preparing, planning, response, and recovery operations.	✓ Completed manually mapped incidents reported during EOC drill to assist staff in decision making	Finance/IT Department	Completed	X	X	X	X	X	GF	H	L	H		Complete
MH-53 Modified and expanded the role of the City Emergency	<del>✓ Completed.</del> <del>✓ Reconfigured the location of EOC Sections,</del>	City Manager's Office Finance/IT Department	2011	X	X	X	X	X	GF			H		Deleted – not mitigation



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
Operations Center.	installed additional white boards, new SMART boards, and satellite TV capabilities														
MH-54 Maintain an off-site backup computer server.	✓ Backup server available in the event the main system is deemed inoperable.	Finance/IT Department	Ongoing	X	X	X	X	X	GF	H	M	H	Y	Revised	
MH-55 Prepare a Vendor	✗ Finance to work with other city	Finance/IT Department Public Works	2014	X	X	X	X	X	*			M		Deleted – not mitigation	



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Memorandum of Understanding	department s (e.g. PW and Community Development) to set up vendor Memorandum of Understand ings to establish a partnership for first available service and to protect the City from price gouging practices.	Community Development													



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
MH-56 Training on federal disaster reimbursement process.	✓ Finance/IT Department or consultant to train Finance staff to learn the state and federal reimbursement process and how to fill out the forms.	Finance/IT Department	2013	X	X	X	X	X	GF, Grant			H		Deleted – not mitigation
MH-57 Secure funding to purchase a 10' X 30' storage container to be placed on	✓ Storage space is a premium at all City facilities. If additional	City Manager's Office Public Works	1-3 Years	X	X	X	X	X	GF, Grant			H		Deleted – not mitigation



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
City Hall Campus grounds for various emergency/disaster response equipment and supplies.	emergency supplies and/or equipment is procured, there is an absolute need for more storage space.													
MH-58 Establish Preserve Access Protocol to (1) identify and (2) establish maintenance criteria for vehicular	✓ This will be part of the Preserve Access Protocol required 90 days after NCCP/HC P approval.	Public Works, Recreation, Community Development	Ongoing	X	X	X	X	X	GF, HMGP, BRIC, PDM	H	H	H	Y	New





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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
access trails in the Preserve to serve public safety personnel and efforts. Will also establish protocols for entering/working in Preserve during hazardous weather (high fire danger, dangerous swell, etc.)	<ul style="list-style-type: none"> <li>✓ Expansion of fire roads</li> <li>✓ Annual</li> </ul>													
MH-59 Identify grant funding sources for public right of ways impacted by								HMGP, BRIC, PDM	H	H	H	Y	New	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
the Preserve Access Protocol.															
MH-60 Additional equipment to communicate with residents both in events with and without power.		City Manager's Office		X					HMGP, BRIC, PDM	H	H	H		New	
<b>Earthquake Action Items</b>															
EQ-1 Integrate new earthquake hazard mapping data and improve technical analysis of	✓ Incorporate Fault Lines layer from USGS for EOC 2011; Integrate GIS files produced	Finance/IT Department	Ongoing	X	X	X		X	GF	H	M	H		Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
earthquake hazards using GIS technology.	by HAZUS analysis into City GIS system for future implementation.													
EQ-2 Identify funding sources for structural and nonstructural retrofitting of structures that are identified as seismically vulnerable for private property owners and businesses.	✓ Started in 2008 with fee reductions and retrofit standard plans for residential structures. ✓ Seek grant funding	HMS	Ongoing	X	X		X	X	GF	H	H	H	Y	Revised



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
EQ-3 Encourage seismic strength evaluations of critical facilities and public infrastructure in the City to meet current seismic standards.	<ul style="list-style-type: none"> <li>✓ Started 2010: Completed for Administration, CDD and RPV TV buildings</li> </ul>	Building and Safety Departments	5 years	X					X	GF	H	L	H	Y	Revised
EQ-4 Encourage reduction of nonstructural and structural earthquake hazards in homes, businesses,	<ul style="list-style-type: none"> <li>○ City Website</li> <li>○ Standard Plans</li> <li>○ Fee Discounts</li> </ul>	City Manager's Office HMS	Ongoing	X	X					GF	H	L	H	Y	Revised



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
and government offices through public awareness.															
EQ-5 Hazard mitigation of seismic concerns, maintenance, and code related deficiencies at Ladera Linda	<ul style="list-style-type: none"> <li>✓ Building assessment conducted</li> <li>✓ Feasibility Evaluation began in 2011</li> </ul>	Community Development Department, Public Works	Ongoing	X				X	*	H	L	H	Y	Revised	
EQ-6 Participate in the OES SAP evaluator program.	<ul style="list-style-type: none"> <li>✓ Building &amp; Safety inspection staff members are now certified</li> </ul>	Community Development	Completed	X			X	X	GF	H	L	H		Completed	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
EQ-7 Ceiling Tile Seismic Retrofit in City Hall, PVIC and Hesse Park	○ All three facilities completed in 2012.	Public Works	Completed	X					H	L	H	Y	Completed	
EQ-8 Funding for a seismically sound EOC.		City Manager's Office		X				HMGP, BRIC, PDM, CIP	H	M	H	Y	New	
<b>Wildfire Action Items</b>														
WF-1 Encourage development and dissemination of information relating to the fire hazard to help educate and assist builders &	✓ Materials developed and being distributed on an ongoing basis.	City Manager's Office, LACoFD, Building and Safety Division	Ongoing	X	X			GF	H	L	H	Y	Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
homeowners in being engaged in wildfire mitigation activities, and to help guide emergency services during response.															
WF-2 Increase communication, coordination & collaboration between wildland/urban interface property owners, local planners and	○ City and LACoFD work together to manage, communicate, coordinate, and mitigate wildland	HMS	Ongoing	X	X	X	X	X	GF	H	L	H	Y	Revised	





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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
fire prevention crews & officials to address risks, existing mitigation measures, and federal assistance programs.	interface projects within City boundaries														
WF-3 Encourage implementation of wildfire mitigation activities through enforcement in a manner consistent with the goals of promoting	○ LACoFD and the City's Planning Department continue to implement wildfire mitigation activities through	LACoFD Planning Department	Ongoing			X			GF	H	L	H	Y	Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
sustainable ecological management & community stability.	community education programs and written policy.													
WF-4 Conduct Fire Expo.	<ul style="list-style-type: none"> <li>Conducted in 2009 by LACoFD. Businesses attended and provided information on products for retrofitting homes to protect from wildfires</li> </ul>	LACoFD	Complete	X	X	X	X	X	n/a	H	L	H		Completed



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	(hardened homes)													
WF-5 Establish and implement Weed Abatement Enforcement Program.	<ul style="list-style-type: none"> <li>○ Weed abatement notices were mailed to residents annually with information as to what they need to comply with.</li> <li>○ Properties inspected annually.</li> </ul>	LACoFD	Ongoing	X	X	X	X	X	GF	H	L	H	Y	Revised
WF-6 Defensible home and fuel modification	<ul style="list-style-type: none"> <li>○ Shows landscape examples of what can</li> </ul>	LACoFD – Forestry Division	Ongoing	X	X		X		LACoFD	H	L	H		Revised



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
model project that shows building changes residents can implement.	be done to lower wildfire risk (defensible space).														
WF-7 Burma Road Maintenance Agreement	<ul style="list-style-type: none"> <li>○ Partner with Edison, Cal Water, and LACoFD to maintain Burma Road by preserving for emergency access.</li> <li>○ Expansion of fire roads.</li> <li>○ Annual</li> </ul>	Public Works	Ongoing				X	X	GF	H	L	H		Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
WF-8 Fuel Modification Program	<ul style="list-style-type: none"> <li>○ Remove brush and debris within defensible space of development using LACC and goats.</li> <li>○ Annual maintenance program.</li> </ul>	Public Works	Ongoing	X		X			GF	H	L	H	Y	Revised
WF-9 GIS mapping of fuel modification defensible space areas.	<ul style="list-style-type: none"> <li>✓ Completed</li> <li>○ Add new or updated Fuel Modification areas to layer on City GIS system.</li> </ul>	Public Works	Ongoing	X					GF, HMGP, BRIC, PDM	H	L	H		Revised



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
WF-10 Continue to contract for heat camera monitoring (Catalina).		City Manager's Office		X					CIP	I	M	I		New	
WF-11 Additional funding for underground utilities.		City Manager's Office		X					CIP	H	M	H	Y	New	
<b>Earth Movement Action Items</b>															
EM-1 Improve knowledge of landslide hazard areas and understanding of vulnerability and risk to life and property	○ Established 2 landslide abatement districts (Abalone Cove and Klondike Canyon).	Planning, and Building & Safety Divisions	Ongoing	X	X				GF	H	L	H	Y	Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
in hazard-prone areas.	○ Published related information on website.														
EM-2 Address construction and subdivision design within steep slopes to reduce the potential adverse impacts from development.	<ul style="list-style-type: none"> <li>✓ Public awareness of landslides area is provided daily.</li> <li>✓ Geology/soils report required for review and approval by City Geologist prior to application complete ss.</li> </ul>	Planning and Building & Safety Divisions	Ongoing	X	X		X		GF	H	L	H	Y	Revised	





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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
	<ul style="list-style-type: none"> <li>✓ Code prohibits most activity over extreme slope areas.</li> <li>✓ Fire Department review required prior to new construction application completeness.</li> </ul>														
EM-3 Regulate	✓ Information regarding	Planning and Building &	Ongoing	X	X	X			GF	H	L	H	Y	Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
activities and provide public outreach in identified potential and historical landslide areas.	✓ location of landslide areas are provided on City's website. All code/policy changes/or dinances are available online. Building & Safety regulates all activities after approval through Planning Departmen	Safety Divisions												



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	t and City Geologist reviews.													
EM-4 Develop public information programs regarding proper maintenance of steep slopes and surface drainage structures located on private property.	✓ Vegetation management & flood control brochures made available.	Planning and Building Department	Ongoing	X	X				GF	Y	L	H	Y	Revised
EM-5 PVDS Shoulder Abutment	✓ 1,200 foot shoulder rebuild along south	Public Works	Complete	X					GF, HMGP, BRIC, PDM	H	L	H	Y	Completed



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	<p>side of PVDS in landslide area to mitigate road movement. Completed 2010</p> <p>✓ Reestablish drainage through area, completed 2011.</p> <p>✓ Ongoing Maintenance</p>													
EM-6 Install/maintain dewatering wells in	<p>✓ Annually or as funds are available</p>	Public Works, Abalone Cove Landslide Abatement	Ongoing	X	X			*	H	M	H	Y	Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
landslide areas to mitigate land movement.	for these agencies.	District Klondike Canyon Landslide Abatement District													
EM-7 Identify funding sources for sewer disruption and water quality issues resulting from landslides.										H	H	H	Y	New	
<b>Tsunami Action Items</b>															
TS-1 Tsunami Ready	○ Pursue status as a Tsunami Ready	HMS	1-2 years	X	X	X	X	X	GF	H	L	H		Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	through the National Weather Service.													
TS-2 Increase Tsunami awareness.	○ Add Tsunami awareness information to City's website. Add link to State of California's Tsunami Awareness resources.	HMS	1-2 years	X	X	X	X	X	GF	H	L	H		Revised
<b>Hazardous Material Action Items</b>														
HM-1 Continue to participate in household	○ Continue to publicize collection sites and	Public Works, City Manager's Office, -	Ongoing											



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hazardous waste events and programs.	<ul style="list-style-type: none"> <li>periodic events for hazardous materials.</li> <li>○ Continue to participate in stormwater pollution programs (i.e. Clean Bay program).</li> </ul>	Community Development Department, Sanitation Districts of Los Angeles County													
HM-2 Continue to monitor lead contamination site at the Point Vicente Interpretive Center.	<ul style="list-style-type: none"> <li>○ Performed lead remediation work removing any hot spots, removing 1 foot of soil from the</li> </ul>	City Manager's Office, Public Works, Community Development, California Department of Toxic	Ongoing												





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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	<p>area around the Point Vicente Interpretive Center building and replacing it with clean fill.</p> <p>○ Prepared a Lead Contamination Work Plan in 2009, which contains a protocol for potential lead exposure.</p>	Substances Control												



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
<b>Human-Caused Action Items</b>														
HC-1 Cyberterrorism: Mitigation: Additional training for IT Staff especially and potentially regular staff; Additional security measures (security software, cloud, firewalls, etc.).		IT, City Manager's Office							HMGP, BRIC, PDM	H	M	H		New
HC-2 Establish trainings in response to	○ The City has shared information with	City Manager's Office, Los Angeles	1-3 years											



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
active shooter incidents.	<p>residents about numerous active shooter trainings over the years hosted by the Palos Verdes Estates Police Department and Palos Verdes Peninsula Unified School District.</p> <p>○ The City can work with the Los</p>	County Sheriff's Department, Los Angeles County Fire Department												



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGF=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
	Angeles County Sheriff's Department to develop trainings for RPV residents.														
HC-3 Strengthen anti-cyber terrorism efforts to protect computer network, operations, and financial harm	<ul style="list-style-type: none"> <li>○ 24/7 cybersecurity monitoring</li> <li>○ Multiple levels of data backups</li> <li>○ Advanced network and endpoints security features</li> <li>○ Ongoing end-user</li> </ul>	IT, US Department of Homeland Security/Federal Bureau of Investigations	1-3 years												

Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
	<ul style="list-style-type: none"> <li>○ education and testing</li> <li>○ Continuous efforts to keep all software and hardware current and in a supportable state</li> <li>○ Threat intelligence subscriptions <ul style="list-style-type: none"> <li>○ Cybersecurity incident tabletop exercise</li> </ul> </li> <li>○ Disaster recovery</li> </ul>														





Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
	and business continuity plans														
<b>Utility-Related Action Items</b>															
UR-1 Continue communication, coordination, and collaboration with Southern California Edison for the Public Safety Power Shutoff (PSPS) program	✓ Ongoing vegetation management, system hardening, and aerial inspections. ✓ Distributing public information to educate residents about the shutoffs and where they can find	City Manager's Office, Public Works, Southern California Edison, Los Angeles County Sheriff's Department - Los Angeles County Fire Department	Ongoing												



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGF=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
	real-time information from SCE.														
UR-2 Development of white paper including all utility companies.	✓ Ongoing education efforts of utility company preparedness plan and customer contact updates. ○ Collaborate with other Peninsula cities and all utility companies for the development	City Manager's Office, City of Rolling Hills Estates, Rolling Hills, Palos Verdes Estates, - Southern California Edison, CalWater, SoCal Gas, Sanitation Districts of Los Angeles County	1-2 years												



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
	of a white paper.			Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						





**Table: Mitigation Actions Matrix – Rolling Hills Estates**

Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
<b>Multi-Hazard Action Items</b>															
MH-1 Integrate the goals and action items from the Joint Natural Hazards Mitigation Plan into existing regulatory documents and programs, where appropriate.	○ General Plan Safety Element Update	Community Development, General Plan Advisory Committee & Michael Baker International Consultants.	Ongoing	X	X	X	X	X	GF, HMGP, BRIC, PDM	H	M	H		Revised Note: General Plan Update currently underway. Will include MJHMP in General Plan Safety Element.	
MH-2 Identify and pursue funding opportunities to develop and implement local	✓ FEMA HMGP ✓ 2018-Awarded \$40,882 in recovery funds from Cal OES/FEMA	City Manager's Office	Ongoing	X	X	X	X	X	GR, HMGP, BRIC, PDM	H	L	H		Revised  Note: Ongoing – Cal OES and FEMA	



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
mitigation activities.	for Disaster #DR-4305														
MH-3 Hazard Mitigation Planning Subcommittee will continue to develop a sustainable process for implementing, monitoring, and evaluating regional mitigation activities.	○ Meet annually	HMS	Ongoing				X		GF	H	L	M			Revised
MH-4 Identify, improve, and sustain collaborative programs focusing on,	○ Cal Water – Palos Verdes Peninsula Water Reliability Project.	Community Development, City Manager's Office	Ongoing	X	X		X		GF, HMGP, BRIC, PDM	M	M	H			Revised  Note: Development of Public, Private Partnerships



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGF=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
public and private sector organizations, and individuals to avoid activity that increases risk to natural hazards.	<ul style="list-style-type: none"> <li>○ Southern California Edison PSPS</li> <li>○ Southern California Gas Company programs.</li> </ul>													(PPP) within community.  Note: Rate Payers possible source of funding.	
MH-5 Develop public and private partnerships to foster natural hazard mitigation program coordination and collaboration with the City's Hazard Mitigation Subcommittee.	<ul style="list-style-type: none"> <li>○ Continue Waste Management disposal of brush clearance material and curb side pickup of hazardous waste</li> </ul>	City Manager's Office	Ongoing	X	X		X		GF	M	L	M		Revised	



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
MH-6 Develop inventories of critical facilities and infrastructure.	<ul style="list-style-type: none"> <li>○ Assess structural vulnerability to the identified hazards and prioritize mitigation projects.</li> </ul>	Public Works, Building & Safety, City Manager's Office	Ongoing	X					X	GF	M	L	M		Revised
MH-7 Strengthen emergency management program with maintained plans, training, and exercises.	<ul style="list-style-type: none"> <li>○ Completion and ongoing review of our Continuity and Operations Plan</li> <li>✓ Development of Horse Census.</li> <li>✓ NIMS/SEMS training for staff and city council</li> </ul>	City Manager's Office	Ongoing					X	GF, HMGP, BRIC, PDM	H	L	H		Revised	



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	<ul style="list-style-type: none"> <li>✓ Disaster drills and exercises for staff.</li> <li>✓ Emergency operations training for staff.</li> <li>✓ Equine preparedness</li> <li>○ Development of Emergency Operations Plan and COOP.</li> <li>✓ CERT Trainings for community.</li> </ul>													
MH-8 Develop, enhance, and implement education programs aimed	✓ "Nextdoor" is a social network that enables neighbors to communicate	City Manager's Office	Ongoing	X	X	X	X	X	GF, HMGP, BRIC, PDM	H	L	H		Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals							Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services	Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation						
at mitigating natural hazards, and reducing the risk to citizens, public agencies, private property owners, businesses, and schools.	<ul style="list-style-type: none"> <li>with each other and allows the City to post important information during times of emergency.</li> <li>✓ Launched Social Media Platforms/City Accounts- FB, ND, IG, Twitter – (as above reasoning for use)</li> <li>✓ Annual Preparedness Expo – Large scale event promoting</li> </ul>														





Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
	<ul style="list-style-type: none"> <li>✓ emergency preparedness. Launched Mass Notification System – Nixle/Everbridge. Alert system used for urgent notifications &amp; advisories. Ability to apply IPAWS.</li> <li>✓ Setting up emergency webpage.</li> </ul>														
MH-9 Use updated technical knowledge and tools to inform	<ul style="list-style-type: none"> <li>✓ Safety Element Update, website, City newsletter</li> </ul>	Community Development, Public Works	Ongoing	X	X	X	X	X	GF, HMGP, BRIC, PDM	M	M	H		Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
the public of hazard potential.	<ul style="list-style-type: none"> <li>✓ Nixle / Everbridge – Mass Notification System.</li> <li>✓ Social Media Platforms (FB, ND, IG, Twitter)</li> <li>✓ E-notify (city e-mail list).</li> </ul>	City Manager's Office													
MH-10 Maintain hazard warning systems to ensure effectiveness and efficiency and increase coordination between local jurisdictions and emergency	<ul style="list-style-type: none"> <li>✓ Alert LA (Sheriff's Dept)</li> <li>✓ Los Angeles County Regional Interoperability Community System</li> </ul>	City Manager's Office	Ongoing	X				X	GF, HMGP, BRIC, PDM	H	M	M		Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
service providers.	<ul style="list-style-type: none"> <li>South Bay Alerts – Regional Multijurisdictional Notification System.</li> </ul>														
MH-11 Develop an Evacuation Plan as a Function-Specific Annex to the Emergency Operations Plan.	<ul style="list-style-type: none"> <li>Development of EOP</li> <li>Identifying exits and entrances of Peninsula.</li> </ul>	City Manager's Office, Public Works Department, LA County Sheriff, LA County Fire	Ongoing	X	X	X	X	X	GR, HMGP, BRIC, PDM	H	M	H		Revised	
MH-12 Develop Pre-Disaster Recovery Plan including priorities for restoration of the community's infrastructure	<ul style="list-style-type: none"> <li>Development of COOP (Continuity of Operations Plan).</li> </ul>	Public Works, Community Development Department, City Manager's Office	1-5 years	X	X		X	X	GF, HMGP, BRIC, PDM	M	M	H			



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
and vital public facilities following a disaster.															
MH-13 Adopt and implement State Building Code Chapter 34.	<ul style="list-style-type: none"> <li>Develop policy for government to determine what reconstruction criteria should be applied to structures damaged during a disaster. Develop additional zoning, building and reconstruction</li> </ul>	Building & Safety	5 years	X					GR, HMGP, BRIC, PDM	H	L	L		Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	n policies and requirements in the local government development and building codes for post-disaster situations (Post-Disaster Recovery Plan).													
MH-14 Develop and implement programs to coordinate maintenance and mitigation activities to reduce risk to	<ul style="list-style-type: none"> <li>○ Safety Element Update</li> <li>✓ Promote emergency preparedness through public awareness campaigns</li> </ul>	Public Works, Building & Safety  City Manager's Office	Ongoing	X	X	X	X	X	GR, HMGP, BRIC, PDM	H	L	H		Revised



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
public infrastructure.	(social media, annual emergency expo. And newsletters).														
MH-15 Maintain information on website and cable access channels to include information specific to residents, building code information, and educational information on damage prevention.	✓ Completed task; now maintaining.	City Manager's Office, Community Development, Building & Safety	Ongoing	X	X				GF, HMGP, BRIC, PDM	H	L	H		Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
MH-16 Establish policy to ensure mitigation projects are in place to safeguard critical facilities.		Public Works and Building & Safety Division	1-2 years	X				X						Deleted (redundant)
MH-16 Incorporate the building and infrastructure inventory into the Mitigation Plan update.	<ul style="list-style-type: none"> <li>✓ Completed 2012.</li> <li>○ Incorporate future building inventory revisions into future updates of the Mitigation Plan.</li> </ul>	Public Works, Building & Safety	Ongoing	X				X	GF, GF	H	L	H		Revised
MH-17 Educate City staff on federal cost-share & grant	<ul style="list-style-type: none"> <li>✓ Attend Cal OES and FEMA workshops</li> </ul>	City Manager's Office	Ongoing				X		GF, HMGP, BRIC, PDM	M	L	M		Revised



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
programs, and other related federal programs so the full array of assistance available is understood.	✓ and briefings including Notice of Interests (NOI). LA County programs – South Bay Cities Council of Governments Programs.														
MH-19 Determine the economic feasibility of mitigating natural hazards that can provide decision-makers with an understanding of		City Manager's Office	Ongoing	X											Deleted (redundant)





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the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.															
MH-18 Update Climate Action Plan.	<ul style="list-style-type: none"> <li>○ To be completed through the South Bay Cities Council of Governments.</li> <li>✓ Energy Efficiency CAP Completed in 2015; Complete CAP December 2017.</li> </ul>	City Manager's Office, Community Development			X	X	X		HMGP, BRIC, PDM	H	L	H	Y	Revised	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
MH-21 Prepare a cost analysis of replacing vulnerable public infrastructure, buildings and critical facilities		Planning and Building Safety Department	Ongoing	X					X					Deleted (redundant)	
MH-19 Update the Continuity of Operations Plan (COOP).	<ul style="list-style-type: none"> <li>✓ Continuity of Operations Plan completed in 2014</li> <li>✓ Update every 5 years</li> </ul>	City Manager's Office	3 years	X					X	GF, HMGP, BRIC, PDM	H	M	H		New
MH-20 Provide updated mobile communication devices for key personnel.	<ul style="list-style-type: none"> <li>○ Research and purchase updated equipment</li> <li>✓ Mobile devices and computer</li> </ul>	City Manager's Office	1 year	X					X	GF, GF	M	L	H		New



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
	tablets purchased for department heads, City Management, and key staff.														
MH-21 Solicit grant funds for emergency supplies. Solicit grant funds for emergency equipment and supplies caches including equine cache and supplies.	<ul style="list-style-type: none"> <li>Request for local funding submitted; Safety Element Update to address appropriate placement of supplies</li> <li>Request/solicit grant funding and use General Fund for emergency</li> </ul>	City Manager's Office	Ongoing	X	X			X	GF, HMGP, BRIC, PDM	H	L	H		New	



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	preparedness supplies and strategic caches.													
MH-22 Coordinate with the Los Angeles County Sanitation District to ensure that an appropriate mitigation action plan and disaster response plan is in place for the Palos Verdes Landfill.	○ Safety Element Update	City Manager's Office, Public Works	2 years	X			X		GR, HMGP, BRIC, PDM	M	M	H		New
MH-23 Identify neighborhoods in the City that	○ Assess neighborhoods that are	Public Works, Building and Safety,	5 years	X	X	X	X	X	GR, HMGP, BRIC, PDM	M	H	M	Y	New



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
are currently on septic tank systems. Using grant funds, tie into main line sewer system. Mitigation activity to reduce risk to public health, environment, and public/private property and/or infrastructure.	currently on septic systems.	Emergency Services													
MH-24 Purchase of an electric utility cart/ATV for City Maintenance Department. The electric	○ Research ATV/Utility vehicles with clean energy	Community Services, City Maintenance	2 years	X	X	X	X	X	GR, HMGP, BRIC, PDM	M	L	M			New



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
cart/ATV will be used for trail inspections includin: weed abatement, trail maintenance, delivery of supplies and tools in the event of an emergency or disaster.															
MH-25 Install curb and gutter systems in areas lacking adequate drainage to prevent flooding and ensure stormwater compliance.	<ul style="list-style-type: none"> <li>Storm drain tie into existing infrastructure.</li> </ul>	Public Works	1-5 years	X	X	X	X	X	GR, HMGP, BRIC, PDM	M	M	M	Y	New	



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
MH-26 Stabilization work of county sewer line in canyon area of Academy Hill	<ul style="list-style-type: none"> <li>○ Feasibility Study</li> <li>○ Partner with LA County Public Works</li> </ul>	Public Works, City Manager's Office	1-5 years	X	X	X	X	X	HMGP, BRIC, PDM	M	H	H	Y	New
MH-27 Continue to participate in the National Flood Insurance Program	Continue through the development review process and issuance of building permits.	Community Development, Building & Safety, Public Works	Ongoing	X	X	X	X	X	GF, GF	M	L	H		New
MH-28 Fund, Design, and Construct storm drainpipe repairs at 11 locations identified in major need of repair. Work includes relining 45 priority storm	<ul style="list-style-type: none"> <li>○ Storm drain assessment completed</li> <li>○ Relining of severe storm drains as first priority.</li> <li>○ Continue improvements</li> </ul>	Public Works	Ongoing	X		X		X	HMGP, BRIC, PDM	H	H	H		New



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
drains to ensure the integrity of the system for flooding purposes, and supports clean and efficient drainage to outlets.	<ul style="list-style-type: none"> <li>on assessed storm drains.</li> <li>○ Continue maintenance on storm drains and outlets.</li> </ul>														
<b>Earthquake Action Items</b>															
EQ-1 Integrate new earthquake hazard mapping data and improve technical analysis of earthquake hazards using GIS technology.	<ul style="list-style-type: none"> <li>○ Information to be generated through Safety Element Update and incorporated into City GIS</li> </ul>	Finance and IT Department, Community Development, City Manager's Office	2 Years	X	X	X		X	GF, HMGP, BRIC, PDM	L	M	H			Revised





Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGF=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
EQ-2 Encourage seismic strength evaluations of critical facilities and public infrastructure in the City to meet current seismic standards.	✓ Completed evaluation in 2006.	Building & Safety		X					X	GF, GF	M	L	M	Y	Completed
EQ-3 Encourage reduction of nonstructural and structural earthquake hazards in homes, businesses, and government offices through public awareness.	○ City Website ○ Social Media PSAs and Annual Emergency Preparedness Expo.	City Manager's Office	Ongoing	X	X					GF, GF	M	M	H	Y	Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, N/A=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
<b>Wildfire Action Items</b>															
WF-1 Encourage development and dissemination of information relating to the fire hazard to help educate and assist builders & homeowners in being engaged in wildfire mitigation activities, and to help guide emergency services during response.	<ul style="list-style-type: none"> <li>Materials developed and being distributed on an ongoing basis and posted on City website.</li> <li>2019 Natural Disaster Town Hall for Peninsula community – Assembly Member, LA County Fire, Cal OES, and Utility company presentations.</li> </ul>	LA County Fire, Building & Safety, City Manager's Office	Ongoing	X					GF, GF	H	L	H		Revised	



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	<ul style="list-style-type: none"> <li>○ Development of LA County's Ready, Set, Go campaign.</li> <li>○ Social Media PSAs.</li> <li>○ Prepared Peninsula Expo</li> <li>○ National Fire Prevention Week</li> </ul>													
WF-2 Continue communication, coordination & collaboration between wildland/urban interface property owners, local planners and fire	<ul style="list-style-type: none"> <li>○ Annual brush clearance coordinated by LA County Fire, LA County Ag Comm Weights and Measures, and City.</li> </ul>	LACoFD, City Maintenance	Ongoing	X	X		X	X	GF, HMGP, BRIC, PDM	H	L	H		Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services	Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation					
prevention crews & officials to address risks, existing mitigation measures, and federal assistance programs.														
WF-3 Encourage implementation of wildfire mitigation activities through enforcement in a manner consistent with the goals of promoting sustainable	<ul style="list-style-type: none"> <li>Plan Check for fire code compliance, and Planning Department Code Enforcement and Fire Department inspections.</li> </ul>	LACoFD, Community Development, LA County Building & Safety, Public Works	Ongoing			X			GF, GF	H	M	H		Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
ecological management & community stability.															
WF-4 Conduct Annual Fire Department Open House.	○ Annual Fire Department Open House at local station 106 – in coordination with City Emergency Preparedness Expo	LACoFD	Annual, Ongoing	X	X	X	X	X	GF, GF	M	L	M		New	
WF-5 Establish and implement Weed Abatement Enforcement Program.	○ Weed abatement notices were mailed to residents annually with information.	LACoFD, LA County Agricultural Commissioner Weights and Measures Department	Ongoing	X	X	X	X	X	GF, GF	H	M	H		New	



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	○ Properties inspected annually.													
WF-6 Defensible home and fuel modification model project that shows building changes residents can implement.	○ Shows landscape examples of what can be done to lower wildfire risk (defensible space) on City website.	LA County Fire – Forestry Division Los Angeles County Building and Safety/City Planning requirements	Ongoing	X	X		X		GF, GF	M	M	M		New
WF-7 Participation in the Alert Wildfire Camera program and Fire Detection Network in partnership with neighboring jurisdictions and		City Manager's Office	1-3 years	X	X	X	X	X	HMGP, BRIC, PDM	M	M	H	Y	New



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
outside research and/or utility companies.														
WF-8 Undergrounding of electrical utilities for wildfire prevention.		Public Works, City Manager's Office	1-5 years	X	X	X	X	X	HMGP, BRIC, PDM	H	H	H	Y	New
<b>Earth Movement Action Items</b>														
EM-1 Improve knowledge of landslide hazard areas and understanding of vulnerability and risk to life and property in hazard-prone areas.	<ul style="list-style-type: none"> <li>○ Safety Element Update</li> <li>○ Identified in GIS</li> </ul>	Community Development, Building & Safety Public Works	2 years	X	X	X			HMGP, BRIC, PDM	M	M	H	Y	Revised



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
EM-2 Address construction and subdivision design within steep slopes to reduce the potential adverse impacts from development.	<ul style="list-style-type: none"> <li>○ Safety Element Update</li> </ul>	Community Development, Building & Safety	2 years	X	X		X		HMGP, BRIC, PDM	M	M	H	Y	Revised	
EM-3 Regulate activities in identified potential and historical landslide areas.	<ul style="list-style-type: none"> <li>○ Safety Element Update</li> </ul>	Community Development, Building & Safety, Public Works	Ongoing	X	X				HMGP, BRIC, PDM	M	M	H		Revised	
EM-4 Develop public information programs regarding proper maintenance of	<ul style="list-style-type: none"> <li>○ Safety Element Update</li> <li>○ Sandbags</li> </ul>	Community Development, Building & Safety, Public Works	Ongoing	X	X				HMGP, BRIC, PDM	M	L	H		Revised	





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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
steep slopes and surface drainage structures located on private property.															
<b>Hazardous Material Action Items</b>															
HM-1 Continue to participate in household hazardous waste events and programs.	<ul style="list-style-type: none"> <li>✓ Publicize collection sites and events for hazardous materials monthly.</li> <li>✓ Participation in stormwater pollution programs (i.e. Clean Bay program).</li> </ul>	Sanitation Districts of Los Angeles County, Public Works, City Manager's Office, Community Development	Ongoing	X	X	X	X		GF	M	L	L		New	



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals					Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services						
	✓ Waste Management Services													
HM-2 Develop emergency plans and responses to hazardous material chemical releases.	<ul style="list-style-type: none"> <li>○ Create annex in Emergency Operations Plan.</li> <li>○ Create Standard Operating Procedure for emergency alerting authorities.</li> </ul>	LA County Fire, LA County Sheriff, City Manager's Office, South Coast Air Quality Management District, South Bay Regional Alerts Organization	1 year	X	X	X	X	X	GF, HMGP, BRIC, PDM	M	L	H		New
<b>Human-Caused Action Items</b>														
HC-1 Establish trainings in response to active shooter incidents.	✓ 2018 held a situational awareness training for public,	City Manager's Office, LA County Sheriff, LA County Fire	1-3 years	X	X		X	X	HMGP, BRIC, PDM	H	L	M		New



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
	<ul style="list-style-type: none"> <li>including active shooter component.</li> <li>○ Provide “stop the bleed” training for staff and public.</li> <li>○ Purchase of tourniquet kits for public facilities.</li> </ul>														
HC-2 Strengthen Cyber terrorism efforts to protect computer network, operations, and financial harm.	<ul style="list-style-type: none"> <li>✓ 24/7 cyber monitoring</li> <li>✓ Change out of hardware devices</li> <li>✓ Membership and information</li> </ul>	Administrative Services, US Department of Homeland Security, Federal Bureau of Investigations	Ongoing				X	X	GF, HMGP, BRIC, PDM	H	M	M		New	



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
	<ul style="list-style-type: none"> <li>○ sharing with (HSIN &amp; MISAC).</li> <li>○ Cyber security expert for evaluation of vulnerabilities (internal &amp; external)</li> <li>○ Future funding for trainings, malware protection, software and devices.</li> </ul>														
<b>Utility-Related Action Items</b>															
UR-1 Continue communication, coordination,	✓ Held education / awareness	Southern California Edison, City Manager's	Ongoing	X	X	X	X	X	HMGP, BRIC, PDM	M	M	M	Y	New	



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				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
and collaboration with Southern California Edison for Public Safety Power Shutoff (PSPS) program.	<ul style="list-style-type: none"> <li>○ meetings for PSPS.</li> <li>○ Ongoing vegetation management, system hardening, and aerial inspections.</li> <li>○ Create annex in Emergency Operations Plan.</li> <li>○ Create Standard Operating Procedure for emergency alerting authorities.</li> <li>○ Purchase of generators and</li> </ul>	Office, Public Works													



Action Item	Accomplishments (✓) and Ideas for Future Implementation (○)	Coordinating Organization	Timeline	Plan Goals						Funding Source/Planning Mechanism: GF=General Fund, HMGP=Hazard Mitigation Grant Program, BRIC=Building Resilient Infrastructure and Communities, PDM=Pre-Disaster Mitigation	Benefit (L=Low, M=Med, H=High)	Cost (L=Low, M=Med, H=High)	Ranking (L=Low, M=Med, H=High, n/a=not applicable)	Buildings & Infrastructure: Does the Action Item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	2020 Comments (Status – Completed, Revised, Deleted, New, and Deferred)
				Protect Life and Property	Public Awareness	Natural Systems	Partnerships and Implementation	Emergency Services							
	City maintenance equipment for vegetation management.														
UR-2 Development of White Paper for all utility companies.	<ul style="list-style-type: none"> <li>○ Ongoing education efforts of utility company preparedness plan and customer contact updates.</li> <li>○ Collaborate with other Peninsula cities and all utility companies for the development of a White Paper.</li> </ul>	City Manager's Office, City of RPV, RH, and PVE, SCE, CalWater, SoCal Gas, LA County Sanitation	1-2 years	X	X			X	GF, HMGP, BRIC, PDM	M	L	M		New	



# Plan Maintenance

The plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing a plan update every five years. This section describes how each city will integrate public participation throughout the plan maintenance process.

## Q&A | ELEMENT A: PLANNING PROCESS | A6a.

**Q:** Does the plan identify how, when, and by whom the plan will be **monitored** (how will implementation be tracked) over time? (Requirement §201.6(c)(4)(i))

**A:** See **Method and Scheduling of Plan Implementation** below.

## Method and Scheduling of Plan Implementation

The Planning Team that was involved in research and writing of the Plan will also be responsible for implementation. During implementation, each City will gather its own members of the Planning Team. The Planning Team Co-Chairs (RPV: Gabriella Yap – Administration – Deputy City Manager, and RHE Jessica Slawson – Administration - Administrative Analyst) who will be referred to as the Local Mitigation Officers.

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Monitoring</b>	X	X	X	X	X
<b>Evaluating</b>					X
Internal Planning Team Evaluation	X	X	X	X	X
Cal OES and FEMA Evaluation					X
<b>Updating</b>					X

## Monitoring and Implementing the Plan

### Plan Adoption

Each City Council will be responsible for adopting the Mitigation Plan. This governing body has the authority to promote sound public policy regarding hazards. Once the plan has been adopted, the Local Mitigation Officers will be responsible for submitting it to the State Hazard Mitigation Officer at California Office of Emergency Services (Cal OES). Cal OES will then submit the plan to the Federal Emergency Management Agency (FEMA) for review and approval. This review will address the requirements set forth in 44 C.F.R. Section 201.6 (Local Mitigation Plans). Upon acceptance by FEMA, both the City of Rancho Palos Verdes and the City of Rolling Hills Estates will gain separate eligibilities for Hazard Mitigation Grant Program funds.

### Local Mitigation Officer

Under the direction of the Local Mitigation Officers, the Planning Team will take responsibility for plan maintenance and implementation. The Local Mitigation Officers will facilitate the Planning Team meetings and will assign tasks such as updating and presenting the Plan to the members of the Planning Team. Plan implementation and evaluation will be a shared responsibility among all of the Planning Team members. The Local Mitigation Officers will coordinate with City leadership to ensure funding and support for 5-year updates to Plan as required by FEMA.



The Planning Team will be responsible for coordinating implementation of plan action items and undertaking the formal review process. The Local Mitigation Officers will be authorized to make changes in assignments to their representatives on the Planning Team.

The Planning Teams will meet separately no less than annually to review the status of the mitigation action items. Meeting dates will be scheduled once the final Planning Teams has been established. These meetings will provide an opportunity to discuss the progress of the action items and maintain the partnerships that are essential for the sustainability of the mitigation plan.

## Q&A | ELEMENT C. MITIGATION STRATEGY | C6a.

**Q:** Does the plan identify the local planning mechanisms where hazard mitigation information and/or actions may be incorporated? (Requirement §201.6(c)(4)(ii))

**A:** See **Implementation through Existing Program** below.

### *Implementation through Existing Programs*

The Cities of Rancho Palos Verdes and Rolling Hills Estates address statewide planning goals and legislative requirements through its General Plan, its Capital Improvement Plan, and the State's Building and Safety Codes. The Mitigation Plan provides a series of recommendations - many of which are closely related to the goals and objectives of existing planning programs. The Cities of Rancho Palos Verdes and Rolling Hills Estates will incorporate hazard information and implement recommended mitigation action items through existing programs and procedures.

The City of Rancho Palos Verdes Community Development Department and the Rolling Hills Estates Planning Department are responsible for adhering to the State of California's Building and Safety Codes. In addition, the Planning Team will work with other agencies at the state level to review, develop and ensure the adopted Building and Safety Codes are adequate to mitigate or prevent damage by hazards. This is to ensure that life-safety criteria are met for new construction.

Some of the goals and action items in the Mitigation Plan will be achieved through activities recommended in each city's CIP. Various of each city's departments develop their respective CIP and review it on an annual basis. Upon annual review of the CIP, the Planning Team will work with the various departments in each city to identify areas that the Mitigation Plan action items are consistent with CIP goals and integrate them where appropriate.

Upon FEMA approval, the Planning Team will begin the process of incorporating existing planning mechanisms at the city level. The meetings of the Planning Team will provide an opportunity for Planning Team members to report back on the progress made on the integration of mitigation planning elements into each city's planning documents and procedures.

Upon FEMA approval, the Planning Team will begin the process of incorporating risk information and mitigation action items into existing planning mechanisms including the General Plan, Capital Improvement Program, and other planning mechanisms (see Mitigation Action Matrix for links between individual action items and associated planning mechanism). The meetings of the Planning Team will provide an opportunity for Planning Team members to report back on the progress made on the integration of mitigation planning elements into city planning documents and procedures.





Specifically, the Planning Team will utilize the updates of the following documents to implement the Mitigation Plan:

- ✓ Risk Assessment, Community Profile, Planning Process (stakeholders) – General Plan Land Use Element, City’s Emergency Operations Plan
- ✓ Community Profile – General Plan Housing Element
- ✓ Risk Assessment, Hazard-Specific Sections, General Hazard Overviews – General Plan Safety Element
- ✓ Mitigation Actions Matrix – Annual Budget, Capital Improvement Program

***It’s important to note that since the approval and adoption of the 2014 Hazard Mitigation Plan, the City of Rancho Palos Verdes updated its Annual Budget and the General Plan. Information pertaining to hazards from the Mitigation Plan were incorporated into the General Plan. The City of Rolling Hills Estates updated the Annual Budget and General Plan. In both cases, although the Annual Budgets provided funding for a few of the mitigation action items, those items were not specifically identified as coming from the 2014 Hazard Mitigation Plan.***

### *Economic Analysis of Mitigation Projects*

FEMA's approach to identify the costs and benefits associated with hazard mitigation strategies, measures, or projects fall into two general categories: benefit/cost analysis and cost-effectiveness analysis.

Conducting benefit/cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster-related damages later.

Cost-effectiveness analysis evaluates how best to spend a given amount of money to achieve a specific goal. Determining the economic feasibility of mitigating hazards can provide decision-makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.

Given federal funding, the Planning Team will use a FEMA-approved benefit/cost analysis approach to identify and prioritize mitigation action items. For other projects and funding sources, the Planning Team will use other approaches to understand the costs and benefits of each action item and develop a prioritized list.

The “benefit”, “cost”, and overall “priority” of each mitigation action item was included in the Mitigation Actions Matrix located in Part III: Mitigation Strategies. A more technical assessment will be required in the event grant funding is pursued through the Hazard Mitigation Grant Program. FEMA Benefit-Cost Analysis Guidelines are discussed below.

### *FEMA Benefit-Cost Analysis Guidelines*

The Stafford Act authorizes the President to establish a program to provide technical and financial assistance to state and local governments to assist in the implementation of hazard mitigation measures that are cost effective and designed to substantially reduce injuries, loss of life, hardship, or the risk of future damage and destruction of property. To evaluate proposed hazard mitigation projects prior to funding FEMA requires a Benefit-Cost Analysis (BCA) to validate cost effectiveness. BCA is the method by which the future benefits of a mitigation project are estimated



and compared to its cost. The end result is a benefit-cost ratio (BCR), which is derived from a project's total net benefits divided by its total project cost. The BCR is a numerical expression of the cost effectiveness of a project. A project is considered to be cost effective when the BCR is 1.0 or greater, indicating the benefits of a prospective hazard mitigation project are sufficient to justify the costs.

Although the preparation of a BCA is a technical process, FEMA has developed software, written materials, and training to support the effort and assist with estimating the expected future benefits over the useful life of a retrofit project. It is imperative to conduct a BCA early in the project development process to ensure the likelihood of meeting the cost-effective eligibility requirement in the Stafford Act.

The BCA program consists of guidelines, methodologies and software modules for a range of major natural hazards including:

- ✓ Flood (Riverine, Coastal Zone A, Coastal Zone V)
- ✓ Hurricane Wind
- ✓ Hurricane Safe Room
- ✓ Damage-Frequency Assessment
- ✓ Tornado Safe Room
- ✓ Earthquake
- ✓ Wildfire

The BCA program provides up to date program data, up to date default and standard values, user manuals and training. Overall, the program makes it easier for users and evaluators to conduct and review BCAs and to address multiple buildings and hazards in a single BCA module run.

#### Q&A | ELEMENT A: PLANNING PROCESS | A6a.

**Q:** Does the plan identify how, when, and by whom the plan will be **monitored** (how will implementation be tracked) over time? (Requirement §201.6(c)(4)(i))

**A:** See **Evaluating and Updating the Plan** below.

#### Q&A | ELEMENT A: PLANNING PROCESS | A6c.

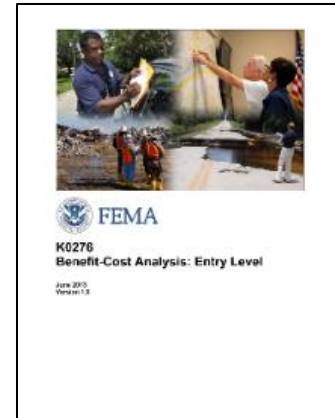
**Q:** Does the plan identify how, when, and by whom the plan will be **updated** during the 5-year cycle? (Requirement §201.6(c)(4)(i))

**A:** See **Evaluating and Updating the Plan** below.



## Evaluating and Updating the Plan

The Planning Team will be responsible for coordinating implementation of plan by monitoring the progress of the mitigation action items and documenting progress notes for each item. It will be up to the Local Mitigation Officers to hold either a live meeting versus tasking the coordinating agencies with status updates on their own assigned mitigation action items. The monitoring meetings will take place no less than quarterly. These meetings will provide an opportunity to discuss the progress of the action items and maintain the partnerships that are essential for the sustainability of the mitigation plan. See the **Quarterly Implementation Report** discussed below which will be a valuable tool for the Planning Team to measure the success of the Hazard Mitigation Plan. The focus of the quarterly meetings will be on the progress and changes to the Mitigation Action Items.



### Annual Implementation Report

The Annual Implementation Report is the same as the Mitigation Action Matrix but with a column added to the far right to track the quarterly status of each Action Item. Upon approval and adoption of the Plan, the entire Annual Implementation Report will be added to the Appendix of the Plan. Following is a view of the Annual Implementation Report:

**Insert annual matrix when finalizing plan**

An equal part of the monitoring process is the need to maintain a strategic planning process which needs to include funding and organizational support. In that light, at least one year in advance of the FEMA-mandated 5-year submission of an update, the Local Mitigation Officers will convene the Planning Team to discuss funding and timing of the update planning process. On the fifth year of the planning cycles, the Planning Team will broaden its scope to include discussions and research on all of the sections within the Plan with particular attention given to goal achievement and public participation.

### Q&A | ELEMENT A: PLANNING PROCESS | A6b.

**Q:** Does the plan identify how, when, and by whom the plan will be **evaluated** (assessing the effectiveness of the plan at achieving stated purpose and goals) over time? (Requirement §201.6(c)(4)(i))

**A:** See **Evaluation** below.

### Evaluation

At the conclusion of each of the Annual Report meetings, the Local Mitigation Officers will lead a discussion with their Planning Team on the success (or failure) of the Mitigation Plan to meet the Plan Goals. The results of that discussion will be added to the Annual Report and inclusion in the 5-year update to the Plan. Efforts will be made immediately by the Local Mitigation Officers to address any failed Plan Goals.



## Formal Update Process

The Mitigation Plan will be monitored on a quarterly basis to determine the effectiveness of mitigation action items and to reflect changes in land development or programs that may affect mitigation actions or their priorities. The evaluation process includes a firm schedule and timeline, and identifies the agencies and organizations participating in plan evaluation. The Local Mitigation Officers or designee will be responsible for contacting the Planning Team members and organizing the quarterly meeting. Planning Team members will also be responsible for participating in the formal update to the Plan every fifth year of the planning cycle.

The Planning Team will review the goals and mitigation action items to determine their relevance to changing situations in each city, as well as changes in State or Federal policy, and to ensure they are addressing current and expected conditions. The Planning Team will also review the Plan's **Risk Assessment** portion of the Plan to determine if this information should be updated or modified, given any new available data. The **coordinating organizations** responsible for the various action items will report on the status of their projects, including the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies should be revised. Amending will be made to the Mitigation Actions Matrix and other sections in the Plan as deemed necessary by the Planning Team.

### Q&A | ELEMENT A: PLANNING PROCESS | A5

**Q:** Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))

**A:** See **Continued Public Involvement** below.

### Continued Public Involvement

Both cities are dedicated to involving the public directly in the continual review and updates to the Mitigation Plan. Copies of the Plan will be catalogued and made available at each City Hall and at all city operated public libraries. The existence and location of these copies will be publicized in city newsletters and on the city website. This site will also contain an email address and phone number where people can direct their comments and concerns. Public meetings will also be held after each evaluation or when deemed necessary by the Planning Team. The meetings will provide the public a forum in which they can express their concerns, opinions, or ideas about the Plan.

The Local Mitigation Officers will be responsible for using each city's resources to publicize the annual public meetings and maintain public involvement through the public access channel, web page, and newspapers.



## PART IV: ATTACHMENTS

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FEMA Letter of Approval

City Council Staff Reports

City Council Resolutions

RPV Emergency Preparedness Committee Minutes (January 16, 2020)

**MINUTES  
EMERGENCY PREPAREDNESS COMMITTEE  
REGULAR MEETING  
January 16, 2020**

The meeting was called to order at 7:01 PM by Chair Feinberg at the City Hall Community Room/Emergency Operations Center, 30940 Hawthorne Boulevard, Rancho Palos Verdes, CA 90275.

**PRESENT:** Member Braswell, Member Robinson, Member Maizlish, Vice Chair Campbell, and Chair Feinberg

**ABSENT:** Member Boudreau and Member Foster

Staff present: Kit Fox, Interim Deputy City Manager; Shane Lee, Administrative Analyst, Interim City Manager Ara Mihranian



#### 4. Discussion of Draft 2019 RPV/RHE Joint Hazard Mitigation Plan

Administrative Analyst Lee provided a summary of the status of the RPV/RHE Joint Hazard Mitigation Plan and an update on the FEMA/California Office of Emergency Services (Cal-OES) process for the Plan. He shared that there can be a process for a preliminary review, where the Plan would be sent to Cal-OES as it is drafted and the EPC's recommendations can be included in the draft following its return.

Chair Feinberg suggested and Interim Deputy City Manager Fox agreed that the Committee's full overview of the Plan can be re-agendize for the next meeting.

Member Maizlish commented that he would like consultant Carolyn Harshman's feedback on the emergency communication method of using AM radio.

Chair Feinberg shared her concern over the consultant's rating method, in particular with the rating of earthquakes. She would like to include discussion of the impact of Senate Bill 99 for the next meeting.

The Committee gave consent to move forward with the plan to send the draft for preliminary review, with the understanding that there will be a discussion with the consultant regarding the earthquake ratings and emergency communications and the

use of radios. Motion to re-agendize this item to the next item and to incorporate the comments from Member Braswell.

Member Maizlish moved, seconded by Member Robinson, to receive and file the item. Motion passed, (5-0).





### Q&A | ELEMENT A: PLANNING PROCESS | A1a.

**Q:** Does the plan document the planning process, including how it was prepared (with a narrative description, meeting minutes, sign-in sheets, or another method)? (Requirement §201.6(c)(1))

**A:** See **Sign-In Sheets** below.

## Planning Team Sign-In Sheets

**Cities of Rancho Palos Verdes and Rolling Hills Estates  
Hazard Mitigation Planning Team Meeting #1  
April 11, 2019**

Name	Department
CAROLYN HARSHMAN	EMERGENCY PLANNING CONSULTANTS
Katie Lozano	RPV Recreation & Parks Dept
Vina Ramos	Finance RPV
Jackie Ruiz	Administration RPV
Jessica Slawson	RHE Admin
Natalie Chan	RPV PUBLIC WORKS
So Kim	CITY OF RPV - CDD
Jeannie Naughton	City of RHE Planning
ISRAEL ESTADA	EMERGENCY PLANNING CONSULTANTS



**Cities of Rancho Palos Verdes and Rolling Hills Estates  
 Hazard Mitigation Planning Team Meeting #2  
 May 30, 2019**

<b>Name</b>	<b>Department</b>
CAROLYN HARSAMAN	EMERGENCY PLANNING CONSULTANTS
Kati Wzans	Rec & Parks - RPV
Jackie Ruiz	Administration Department
Jessica Stawson	Admin. Dept.
Jeannie Naughton	Planning
Lukese Buchwald	IT
Natalie Chan	RPV - PW
So Kim	RPV - Planning
Octavio Silva	RPV - Planning





**Cities of Rancho Palos Verdes and Rolling Hills Estates  
Hazard Mitigation Planning Team Meeting #3  
June 26, 2019**

Name	Department
CAROLYN HARSHMAN	EMERGENCY PLANNING CONSULTANTS
Octavio Silva	City of RPU (CDD)
Jackie Ruiz	City of Rancho Palos Verdes (Administration)
Katie Lozano	City of RPV Rec & Parks
Jeannie Daughton	City of Rolling Hills Estates Planning
Jessica Stawson	City of Rolling Hills Estates.
Vina Ramos	City of RPV
Natalie Chan	RPV-PW



**Cities of Rancho Palos Verdes and Rolling Hills Estates  
Hazard Mitigation Planning Team Meeting #4  
September 30, 2019**

<b>Name</b>	<b>Department</b>
Jessica Slavson	CM office, RHE City
Jeannie Naughton	Community Development, RHE City
Alexa Lams	RHE Asst CM
Megan Barnes	Administration, RPV
GABRIELLA YAP	ADMINISTRATION, RPV DCM
Vina Ramos	Finance
Kate Cozaco	R&P
Octavio Silva	CDD



## Planning Team Agendas

### Q&A | ELEMENT A: PLANNING PROCESS | A1a.

**Q:** Does the plan document the planning process, including how it was prepared (with a narrative description, meeting minutes, sign-in sheets, or another method)? (Requirement §201.6(c)(1))

**A:** See **Planning Team Agendas** below.

#### Agenda Cities of Rancho Palos Verdes and Rolling Hills Estates Planning Team Meeting #1

1. Examine the purpose hazard mitigation.
2. Discuss the concepts and terms related to hazard mitigation planning.
3. Review the project schedule and public involvement during the plan writing phase.
4. Discuss initial results of Hazard Analysis and Rank Hazards.
5. Gather Updated Community Profile Data
  - a. History, Geography, Land Use, Demographics, CIP

#### Agenda Cities of Rancho Palos Verdes and Rolling Hills Estates Planning Team Meeting #2

1. Review examples of hazard mitigation activities.
2. Update Existing and Develop New Hazard Mitigation Action Items.
  - a. Action Item
  - b. Goals Achieved
  - c. Coordinating Agency
  - d. Timeline
  - e. Funding Source
  - f. Planning Mechanisms
  - g. Benefit, Cost, and Priority Ranking
  - h. Does action item apply to existing or future buildings or infrastructure?



**Agenda**  
**Cities of Rancho Palos Verdes and Rolling Hills Estates**  
**Planning Team Meeting #3**

1. **Continue to Develop Additional Mitigation Action Items - Review County of Los Angeles All-Hazard Mitigation Plan (Attachment: Mitigation Action Ideas).**

**Agenda**  
**Cities of Rancho Palos Verdes and Rolling Hills Estates**  
**Planning Team Meeting #4**

1. **Review First Draft Plan (distributed ahead of meeting to all members).**
2. **Discuss Strategy for Distributing Second Draft Plan to External Agencies and General Public. Also, discuss submission to Cal OES/FEMA for review and approval. Upon return of Approval Pending Adoption, updated Plan will be set for separate public meetings with both the City Councils for Plan adoption.**



## Web Postings and Notices

### Rancho Palos Verdes Noticing of Availability of Second Draft Plan

City website- <http://www.rpvca.gov/>

City "Notify Me" Breaking News list - <http://www.rpvca.gov/list.aspx?PRVMSG=274>

City Facebook - <https://www.facebook.com/CityofRanchoPalosVerdes/>

City Instagram - <https://www.instagram.com/ranchopalosverdescity/>

City Nextdoor- <https://nextdoor.com/agency-detail/ca/palos-verdes-peninsula/city-of-rancho-palos-verdes/>

City Twitter - <https://twitter.com/CityofRPV>

Winter 2019 City Newsletter, if timing coincides

Los Angeles County Disaster Management Area G - Jeff Robinson, Executive Director

Rancho Palos Verdes Emergency Preparedness Committee  
- <https://www.rpvca.gov/167/Emergency-Preparedness-Committee> Diana Feinberg, Chair

Rancho Palos Verdes Council of Homeowners Associations  
- <http://www.palosverdes.com/choa/> John Maniatakis, President

Palos Verdes Peninsula Land Conservancy - <https://pvplc.org/> Adrienne Mohan, Executive Director

Palos Verdes Peninsula Community Emergency Response Team  
- <http://www.pvpcert.org/> [pvpcert@palosverdes.com](mailto:pvpcert@palosverdes.com)

Legal notice in the Palos Verdes Peninsula News - <https://www.pvnews.com/> - Susan Pilgrim, Legals, Southern California News Group



City of Rancho Palos Verdes, CA - Official Website

rpvca.gov/CivicAlerts.aspx?AID=1475

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City Document Library  
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"OpenGov" Financial Data  
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**Spotlight**  
Posted on December 5, 2019  
**Draft Joint Hazard Mitigation Plan Available for Public Comment**  
**Joint Hazard Mitigation Plan now Available for Public Comment**

The 2019 draft Joint Hazard Mitigation Plan for the cities of Rancho Palos Verdes and Rolling Hills Estates is now available for review. The draft was developed through a series of meetings between the cities of Rancho Palos Verdes, Rolling Hills Estates and Emergency Planning Consultants.

The Hazard Mitigation Plan was prepared in response to Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 (also known as Public Law 106-390) requires state and local governments to prepare mitigation plans to document their mitigation planning process and identify hazards, potential losses, mitigation needs, goals, and strategies. This type of planning supplements the City's comprehensive land use planning and emergency management planning programs. This document is a federally-mandated update to the cities of Rancho Palos Verdes and Rolling Hills Estates 2014 Multi-Jurisdictional Hazard Mitigation Plan and ensures continuing eligibility for Hazard Mitigation Grant Program (HMGP) funding.

The Plan is designed to have the following benefits:

- Reduce loss of life and property, human suffering, economic disruption, and disaster costs.
- Prioritize hazard mitigation at the local level with increased emphasis on planning and public involvement, assessing risks, implementing loss reduction measures, and ensuring critical facilities/services survive a disaster.
- Promote education and economic incentives to form community-based partnerships and leverage non-federal resources to commit to and implement long-term hazard mitigation activities.

View the plan here: [Draft Joint Hazard Mitigation Plan](#)

Please forward comments to Senior Administrative Analyst Megan Barnes at [mbarnes@rpvca.gov](mailto:mbarnes@rpvca.gov) by December 20, 2019.

Megan Barnes  
Senior Administrative Analyst  
[mbarnes@rpvca.gov](mailto:mbarnes@rpvca.gov)

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Spotlight

facebook.com/CityofRanchoPalosVerdes/posts/2558886750855754

City of Rancho Palos Verdes, CA  
1 min

The City's Draft Joint Hazard Mitigation Plan is now available for public comment. Please submit comments to Megan Barnes at [mbarnes@rpvca.gov](mailto:mbarnes@rpvca.gov) by December 20. See the plan at [bit.ly/2Pq8Glz](http://bit.ly/2Pq8Glz)  
#PreparedPeninsula #RPV #FVPeninsula

**NOW OPEN**  
**Joint Hazard Mitigation Plan Comment Period**  
Deadline: December 20  
Rancho Palos Verdes - Rolling Hills Estates

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## Rolling Hills Estates Noticing of Availability of Second Draft Plan

City website: <https://www.ci.rolling-hills-estates.ca.us/how-do-i/find-out-about/emergency-preparedness>

City Facebook: [www.facebook.com/CityofRHE](http://www.facebook.com/CityofRHE)

City Instagram: [www.instagram.com/CityofRHE](http://www.instagram.com/CityofRHE)

City Nextdoor: <https://nextdoor.com/agency-detail/ca/palos-verdes-peninsula/city-of-rolling-hills-estates/>

City Twitter: <https://twitter.com/CityofRHE>

E-Newsletter, if timing coincides

Los Angeles County Disaster Management Area G Coordinator – Jeff Robinson, Executive Director

General Plan Advisory Committee Meeting – Safety Element

Neighborhood Watch Leadership Group

Palos Verdes Peninsula Land Conservancy – <https://pvplc.org/> Adrienne Mohan, Executive Director

Palos Verdes Peninsula Community Emergency Response Team –

<http://www.pvpcert.org/> [pvpcert@palosverdes.com](mailto:pvpcert@palosverdes.com)

Legal notice in the Palos Verdes Peninsula News – <https://www.pvnews.com/> - Susan Pilgrim, Legals, Southern California News Group



## Email Distribution to External Agencies

Agency	Name	Title
LA County Disaster Area G Management	Jeffrey Robinson	Disaster Management Area Coordinator
City of Lomita	Daniella Knighton	Administrative Analyst
City of Palos Verdes Estates	Marcelle Herrera	Community Relations Officer/Emergency Coordinator
City of Gardena	Vincete Osorio	Police Lieutenant
City of Manhattan Beach	Claudio Taniguchi	Emergency Services Coordinator
LA County Sheriff's Department	Tami Bouse	Community Relations Deputy
LA County Fire Department	Brian Bennett	Battalion Chief





## HAZUS Reports – City of Rancho Palos Verdes



FEMA

**RiskMAP**  
Increasing Resilience Together

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### Hazus: Earthquake Global Risk Report

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**Region Name:** RanchoPalosVerdes

**Earthquake Scenario:** M7.4-Palos Verdes v10

**Print Date:** June 01, 2019

**Disclaimer:**

*This version of Hazus utilizes 2010 Census Data.  
Totals only reflect data for those census tracts/blocks included in the user's study region.*

*The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific earthquake. These results can be improved by using enhanced inventory, geotechnical, and observed ground motion data.*



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## General Description of the Region

Hazus-MH is a regional earthquake loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The earthquake loss estimates provided in this report was based on a region that includes 1 county(ies) from the following state(s):

California

Note:

Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 27.04 square miles and contains 21 census tracts. There are over 33 thousand households in the region which has a total population of 87,982 people (2010 Census Bureau data). The distribution of population by Total Region and County is provided in Appendix B.

There are an estimated 31 thousand buildings in the region with a total building replacement value (excluding contents) of 14,941 (millions of dollars). Approximately 94.00 % of the buildings (and 90.00% of the building value) are associated with residential housing.

The replacement value of the transportation and utility lifeline systems is estimated to be 1,187 and 38 (millions of dollars) , respectively.



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## Building and Lifeline Inventory

### Building Inventory

Hazus estimates that there are 31 thousand buildings in the region which have an aggregate total replacement value of 14,941 (millions of dollars) . Appendix B provides a general distribution of the building value by Total Region and County.

In terms of building construction types found in the region, wood frame construction makes up 93% of the building inventory. The remaining percentage is distributed between the other general building types.

### Critical Facility Inventory

Hazus breaks critical facilities into two (2) groups: essential facilities and high potential loss facilities (HPL). Essential facilities include hospitals, medical clinics, schools, fire stations, police stations and emergency operations facilities. High potential loss facilities include dams, levees, military installations, nuclear power plants and hazardous material sites.

For essential facilities, there are 0 hospitals in the region with a total bed capacity of beds. There are 34 schools, 0 fire stations, 1 police stations and 0 emergency operation facilities. With respect to high potential loss facilities (HPL), there are no dams identified within the inventory. The inventory also includes 32 hazardous material sites, no military installations and no nuclear power plants.

### Transportation and Utility Lifeline Inventory

Within Hazus, the lifeline inventory is divided between transportation and utility lifeline systems. There are seven (7) transportation systems that include highways, railways, light rail, bus, ports, ferry and airports. There are six (6) utility systems that include potable water, wastewater, natural gas, crude & refined oil, electric power and communications. The lifeline inventory data are provided in Tables 1 and 2.

The total value of the lifeline inventory is over 1,225.00 (millions of dollars). This inventory includes over 100.66 miles of highways, 1 bridges, 1,188.06 miles of pipes.



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Table 1: Transportation System Lifeline Inventory

System	Component	# Locations/ # Segments	Replacement value (millions of dollars)
Highway	Bridges	1	0.8579
	Segments	124	1147.9863
	Tunnels	0	0.0000
	<b>Subtotal</b>		<b>1148.8442</b>
Railways	Bridges	0	0.0000
	Facilities	0	0.0000
	Segments	41	37.3909
	Tunnels	0	0.0000
	<b>Subtotal</b>		<b>37.3909</b>
Light Rail	Bridges	0	0.0000
	Facilities	0	0.0000
	Segments	0	0.0000
	Tunnels	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
Bus	Facilities	1	1.2862
	<b>Subtotal</b>		<b>1.2862</b>
Ferry	Facilities	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
Port	Facilities	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
Airport	Facilities	0	0.0000
	Runways	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
		<b>Total</b>	<b>1,187.50</b>



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Table 2: Utility System Lifeline Inventory

System	Component	# Locations / Segments	Replacement value (millions of dollars)
Potable Water	Distribution Lines	NA	19.1274
	Facilities	0	0.0000
	Pipelines	0	0.0000
	<b>Subtotal</b>		<b>19.1274</b>
Waste Water	Distribution Lines	NA	11.4764
	Facilities	0	0.0000
	Pipelines	0	0.0000
	<b>Subtotal</b>		<b>11.4764</b>
Natural Gas	Distribution Lines	NA	7.6510
	Facilities	0	0.0000
	Pipelines	0	0.0000
	<b>Subtotal</b>		<b>7.6510</b>
Oil Systems	Facilities	0	0.0000
	Pipelines	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
Electrical Power	Facilities	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
Communication	Facilities	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
	<b>Total</b>		<b>38.30</b>



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## Earthquake Scenario

Hazus uses the following set of information to define the earthquake parameters used for the earthquake loss estimate provided in this report.



Scenario Name	M7.4-Palos Verdes v10
Type of Earthquake	
Fault Name	NA
Historical Epicenter ID #	NA
Probabilistic Return Period	NA
Longitude of Epicenter	0.00
Latitude of Epicenter	0.00
Earthquake Magnitude	7.38
Depth (km)	0.00
Rupture Length (Km)	0.00
Rupture Orientation (degrees)	0.00
Attenuation Function	



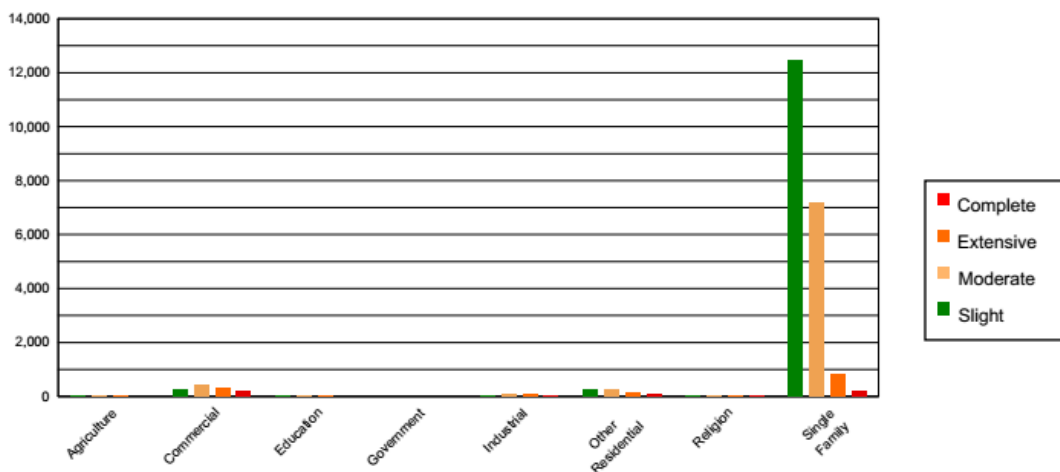
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**Direct Earthquake Damage**

**Building Damage**

Hazus estimates that about 9,920 buildings will be at least moderately damaged. This is over 32.00 % of the buildings in the region. There are an estimated 587 buildings that will be damaged beyond repair. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the Hazus technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 below summarizes the expected damage by general building type.

**Damage Categories by General Occupancy Type**



**Table 3: Expected Building Damage by Occupancy**

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
<b>Agriculture</b>	6.07	0.07	9.61	0.07	10.78	0.14	6.19	0.44	4.36	0.74
<b>Commercial</b>	152.76	1.85	246.82	1.89	400.79	5.05	297.50	21.36	186.13	31.70
<b>Education</b>	10.75	0.13	14.78	0.11	15.67	0.20	8.40	0.60	4.40	0.75
<b>Government</b>	1.88	0.02	2.98	0.02	4.94	0.06	4.21	0.30	3.00	0.51
<b>Industrial</b>	26.14	0.32	44.59	0.34	82.27	1.04	64.89	4.66	44.11	7.51
<b>Other Residential</b>	155.06	1.87	250.60	1.92	235.24	2.96	166.65	11.97	105.44	17.96
<b>Religion</b>	14.99	0.18	22.06	0.17	27.57	0.35	19.33	1.39	12.05	2.05
<b>Single Family</b>	7903.34	95.55	12481.85	95.48	7163.84	90.21	825.34	59.27	227.63	38.77
<b>Total</b>	<b>8,271</b>		<b>13,073</b>		<b>7,941</b>		<b>1,393</b>		<b>587</b>	





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Table 4: Expected Building Damage by Building Type (All Design Levels)

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Wood	8048.98	97.32	12759.01	97.60	7307.64	92.02	827.38	59.42	247.30	42.12
Steel	23.90	0.29	41.17	0.31	107.83	1.36	109.57	7.87	70.94	12.08
Concrete	41.23	0.50	69.92	0.53	93.87	1.18	75.15	5.40	50.17	8.55
Precast	27.11	0.33	48.92	0.37	104.98	1.32	78.87	5.66	46.23	7.87
RM	122.53	1.48	127.14	0.97	224.14	2.82	156.82	11.26	59.04	10.06
URM	5.01	0.06	11.21	0.09	25.69	0.32	23.98	1.72	30.96	5.27
MH	2.22	0.03	15.92	0.12	76.94	0.97	120.73	8.67	82.48	14.05
<b>Total</b>	<b>8,271</b>		<b>13,073</b>		<b>7,941</b>		<b>1,393</b>		<b>587</b>	

\*Note:  
 RM Reinforced Masonry  
 URM Unreinforced Masonry  
 MH Manufactured Housing



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**Essential Facility Damage**

Before the earthquake, the region had hospital beds available for use. On the day of the earthquake, the model estimates that only hospital beds (%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, % of the beds will be back in service. By 30 days, % will be operational.

Table 5: Expected Damage to Essential Facilities

Classification	Total	# Facilities		
		At Least Moderate Damage > 50%	Complete Damage > 50%	With Functionality > 50% on day 1
Hospitals	0	0	0	0
Schools	34	0	0	0
EOCs	0	0	0	0
PoliceStations	1	0	0	0
FireStations	0	0	0	0





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Table 6: Expected Damage to the Transportation Systems

System	Component	Locations/ Segments	Number of Locations			
			With at Least Mod. Damage	With Complete Damage	With Functionality > 50 %	
					After Day 1	After Day 7
Highway	Segments	124	0	0	123	123
	Bridges	1	0	0	1	1
	Tunnels	0	0	0	0	0
Railways	Segments	41	0	0	0	0
	Bridges	0	0	0	0	0
	Tunnels	0	0	0	0	0
	Facilities	0	0	0	0	0
Light Rail	Segments	0	0	0	0	0
	Bridges	0	0	0	0	0
	Tunnels	0	0	0	0	0
	Facilities	0	0	0	0	0
Bus	Facilities	1	1	0	1	1
Ferry	Facilities	0	0	0	0	0
Port	Facilities	0	0	0	0	0
Airport	Facilities	0	0	0	0	0
	Runways	0	0	0	0	0

Table 6 provides damage estimates for the transportation system.

Note: Roadway segments, railroad tracks and light rail tracks are assumed to be damaged by ground failure only. If ground failure maps are not provided, damage estimates to these components will not be computed.

Tables 7-9 provide information on the damage to the utility lifeline systems. Table 7 provides damage to the utility system facilities. Table 8 provides estimates on the number of leaks and breaks by the pipelines of the utility systems. For electric power and potable water, Hazus performs a simplified system performance analysis. Table 9 provides a summary of the system performance information.



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Table 7 : Expected Utility System Facility Damage

System	Total #	# of Locations			
		With at Least Moderate Damage	With Complete Damage	with Functionality > 50 %	
				After Day 1	After Day 7
Potable Water	0	0	0	0	0
Waste Water	0	0	0	0	0
Natural Gas	0	0	0	0	0
Oil Systems	0	0	0	0	0
Electrical Power	0	0	0	0	0
Communication	0	0	0	0	0

Table 8 : Expected Utility System Pipeline Damage (Site Specific)

System	Total Pipelines Length (miles)	Number of Leaks	Number of Breaks
Potable Water	594	432	108
Waste Water	357	217	54
Natural Gas	238	74	19
Oil	0	0	0

Table 9: Expected Potable Water and Electric Power System Performance

	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water	33,920	14,730	3,593	0	0	0
Electric Power		21,932	12,730	4,742	832	32



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## Induced Earthquake Damage

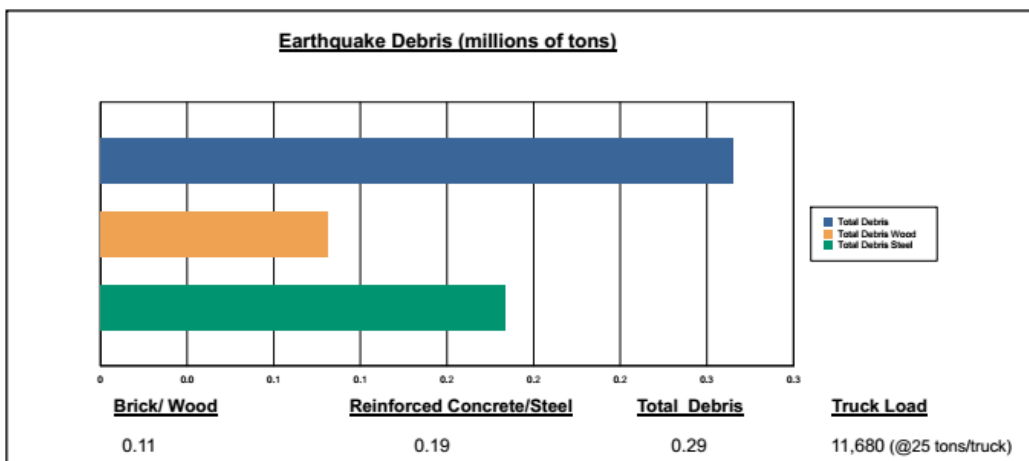
### Fire Following Earthquake

Fires often occur after an earthquake. Because of the number of fires and the lack of water to fight the fires, they can often burn out of control. Hazus uses a Monte Carlo simulation model to estimate the number of ignitions and the amount of burnt area. For this scenario, the model estimates that there will be 1 ignitions that will burn about 0.02 sq. mi 0.07 % of the region's total area.) The model also estimates that the fires will displace about 163 people and burn about 21 (millions of dollars) of building value.

### Debris Generation

Hazus estimates the amount of debris that will be generated by the earthquake. The model breaks the debris into two general categories: a) Brick/Wood and b) Reinforced Concrete/Steel. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 292,000 tons of debris will be generated. Of the total amount, Brick/Wood comprises 36.00% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 11,680 truckloads (@25 tons/truck) to remove the debris generated by the earthquake.



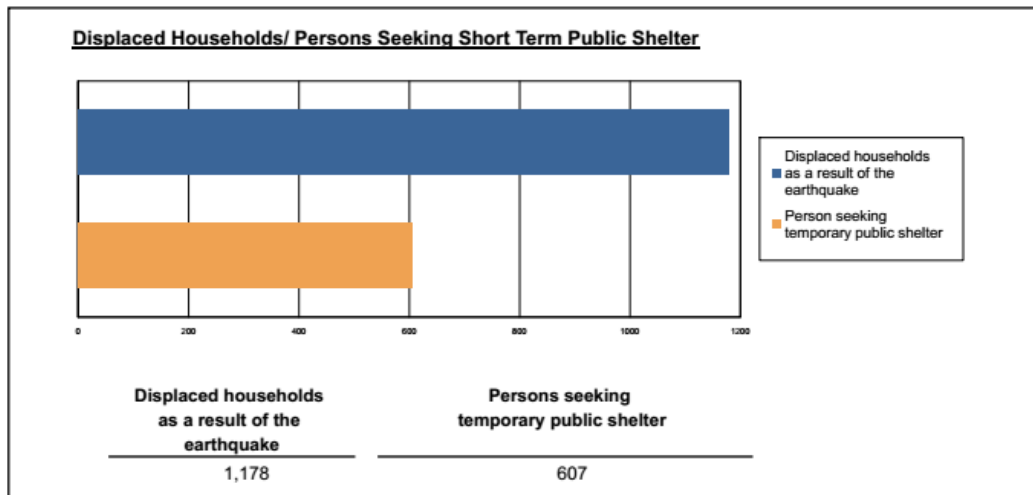


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## Social Impact

### Shelter Requirement

Hazus estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 1,178 households to be displaced due to the earthquake. Of these, 607 people (out of a total population of 87,982) will seek temporary shelter in public shelters.



### Casualties

Hazus estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four (4) severity levels that describe the extent of the injuries. The levels are described as follows;

- Severity Level 1: Injuries will require medical attention but hospitalization is not needed.
- Severity Level 2: Injuries will require hospitalization but are not considered life-threatening
- Severity Level 3: Injuries will require hospitalization and can become life threatening if not promptly treated.
- Severity Level 4: Victims are killed by the earthquake.

The casualty estimates are provided for three (3) times of day: 2:00 AM, 2:00 PM and 5:00 PM. These times represent the periods of the day that different sectors of the community are at their peak occupancy loads. The 2:00 AM estimate considers that the residential occupancy load is maximum, the 2:00 PM estimate considers that the educational, commercial and industrial sector loads are maximum and 5:00 PM represents peak commute time.

Table 10 provides a summary of the casualties estimated for this earthquake



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Table 10: Casualty Estimates

		Level 1	Level 2	Level 3	Level 4
<b>2 AM</b>	Commercial	9.44	2.75	0.45	0.88
	Commuting	0.01	0.01	0.02	0.00
	Educational	0.00	0.00	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	11.47	3.28	0.51	1.00
	Other-Residential	57.10	14.91	2.07	4.03
	Single Family	126.02	19.08	1.04	1.82
	<b>Total</b>	<b>204</b>	<b>40</b>	<b>4</b>	<b>8</b>
<b>2 PM</b>	Commercial	565.56	164.61	26.81	52.67
	Commuting	0.06	0.07	0.14	0.03
	Educational	155.53	45.35	7.55	14.78
	Hotels	0.00	0.00	0.00	0.00
	Industrial	84.52	24.12	3.75	7.29
	Other-Residential	13.24	3.46	0.49	0.91
	Single Family	31.62	4.83	0.30	0.45
	<b>Total</b>	<b>851</b>	<b>242</b>	<b>39</b>	<b>76</b>
<b>5 PM</b>	Commercial	390.49	113.31	18.52	35.93
	Commuting	1.03	1.21	2.23	0.42
	Educational	12.17	3.55	0.59	1.16
	Hotels	0.00	0.00	0.00	0.00
	Industrial	52.82	15.08	2.34	4.56
	Other-Residential	21.92	5.74	0.81	1.53
	Single Family	48.90	7.47	0.47	0.70
	<b>Total</b>	<b>527</b>	<b>146</b>	<b>25</b>	<b>44</b>





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## Economic Loss

The total economic loss estimated for the earthquake is 2,122.46 (millions of dollars), which includes building and lifeline related losses based on the region's available inventory. The following three sections provide more detailed information about these losses.

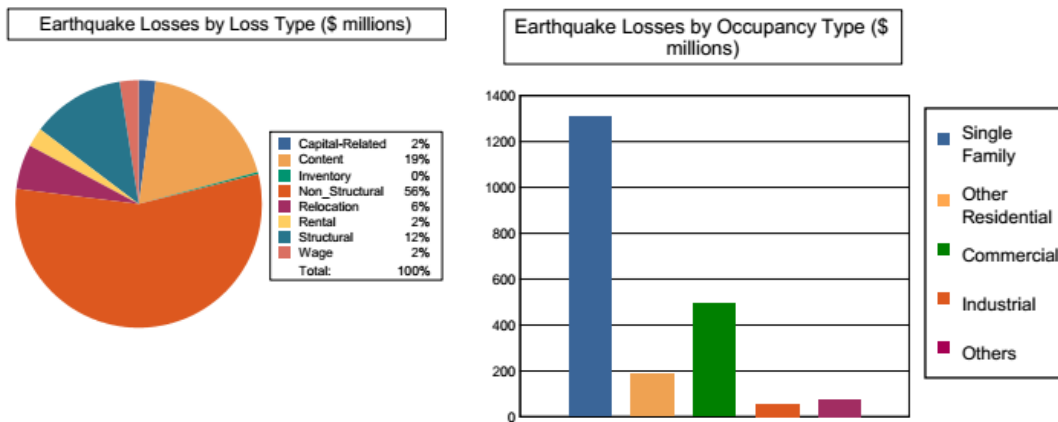


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**Building-Related Losses**

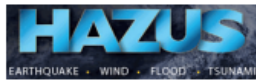
The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake.

The total building-related losses were 2,118.57 (millions of dollars); 13 % of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 70 % of the total loss. Table 11 below provides a summary of the losses associated with the building damage.



**Table 11: Building-Related Economic Loss Estimates**  
(Millions of dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
<b>Income Losses</b>							
	Wage	0.0000	1.7659	46.4318	0.8498	1.6829	50.7304
	Capital-Related	0.0000	0.7506	42.6733	0.5050	0.4804	44.4093
	Rental	20.2587	8.8392	20.9021	0.2908	1.0480	51.3388
	Relocation	73.9202	6.8010	32.1652	1.6175	7.9618	122.4657
	<b>Subtotal</b>	<b>94.1789</b>	<b>18.1567</b>	<b>142.1724</b>	<b>3.2631</b>	<b>11.1731</b>	<b>268.9442</b>
<b>Capital Stock Losses</b>							
	Structural	162.9327	19.7009	61.4312	7.4269	11.2211	262.7128
	Non_Structural	804.4038	119.5998	199.5253	27.1969	35.9045	1,186.6303
	Content	245.7565	27.9342	89.5244	16.9505	15.7754	395.9410
	Inventory	0.0000	0.0000	1.6292	2.5836	0.1251	4.3379
	<b>Subtotal</b>	<b>1213.0930</b>	<b>167.2349</b>	<b>352.1101</b>	<b>54.1579</b>	<b>63.0261</b>	<b>1849.6220</b>
	<b>Total</b>	<b>1307.27</b>	<b>185.39</b>	<b>494.28</b>	<b>57.42</b>	<b>74.20</b>	<b>2118.57</b>



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### Transportation and Utility Lifeline Losses

For the transportation and utility lifeline systems, Hazus computes the direct repair cost for each component only. There are no losses computed by Hazus for business interruption due to lifeline outages. Tables 12 & 13 provide a detailed breakdown in the expected lifeline losses.

Table 12: Transportation System Economic Losses  
(Millions of dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Highway	Segments	1147.9863	0.0000	0.00
	Bridges	0.8579	0.1327	15.47
	Tunnels	0.0000	0.0000	0.00
	Subtotal	<b>1148.8442</b>	<b>0.1327</b>	
Railways	Segments	37.3909	0.0000	0.00
	Bridges	0.0000	0.0000	0.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Subtotal	<b>37.3909</b>	<b>0.0000</b>	
Light Rail	Segments	0.0000	0.0000	0.00
	Bridges	0.0000	0.0000	0.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Subtotal	<b>0.0000</b>	<b>0.0000</b>	
Bus	Facilities	1.2862	0.4970	38.64
	Subtotal	<b>1.2862</b>	<b>0.4970</b>	
Ferry	Facilities	0.0000	0.0000	0.00
	Subtotal	<b>0.0000</b>	<b>0.0000</b>	
Port	Facilities	0.0000	0.0000	0.00
	Subtotal	<b>0.0000</b>	<b>0.0000</b>	
Airport	Facilities	0.0000	0.0000	0.00
	Runways	0.0000	0.0000	0.00
	Subtotal	<b>0.0000</b>	<b>0.0000</b>	
	<b>Total</b>	<b>1,187.52</b>	<b>0.63</b>	



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Table 13: Utility System Economic Losses  
(Millions of dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Potable Water	Pipelines	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Distribution Lines	19.1274	1.9455	10.17
	<b>Subtotal</b>	<b>19.1274</b>	<b>1.9455</b>	
Waste Water	Pipelines	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Distribution Lines	11.4764	0.9773	8.52
	<b>Subtotal</b>	<b>11.4764</b>	<b>0.9773</b>	
Natural Gas	Pipelines	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Distribution Lines	7.6510	0.3348	4.38
	<b>Subtotal</b>	<b>7.6510</b>	<b>0.3348</b>	
Oil Systems	Pipelines	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	<b>Subtotal</b>	<b>0.0000</b>	<b>0.0000</b>	
Electrical Power	Facilities	0.0000	0.0000	0.00
	<b>Subtotal</b>	<b>0.0000</b>	<b>0.0000</b>	
Communication	Facilities	0.0000	0.0000	0.00
	<b>Subtotal</b>	<b>0.0000</b>	<b>0.0000</b>	
	<b>Total</b>	<b>38.25</b>	<b>3.26</b>	



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**Appendix A: County Listing for the Region**

Los Angeles, CA



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**Appendix B: Regional Population and Building Value Data**

State	County Name	Population	Building Value (millions of dollars)		
			Residential	Non-Residential	Total
California	Los Angeles	87,982	13,519	1,422	14,941
Total Region		87,982	13,519	1,422	14,941



## HAZUS Reports – City of Rolling Hills Estates



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**RiskMAP**  
Increasing Resilience Together

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### Hazus: Earthquake Global Risk Report

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**Region Name:** RHE\_SP3

**Earthquake Scenario:** M7.4-Palos Verdes v10

**Print Date:** June 02, 2019

**Disclaimer:**

*This version of Hazus utilizes 2010 Census Data.*

*Totals only reflect data for those census tracts/blocks included in the user's study region.*

*The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific earthquake. These results can be improved by using enhanced inventory, geotechnical, and observed ground motion data.*



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## General Description of the Region

Hazus-MH is a regional earthquake loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The earthquake loss estimates provided in this report was based on a region that includes 1 county(ies) from the following state(s):

California

Note:

Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 16.56 square miles and contains 14 census tracts. There are over 22 thousand households in the region which has a total population of 58,256 people (2010 Census Bureau data). The distribution of population by Total Region and County is provided in Appendix B.

There are an estimated 20 thousand buildings in the region with a total building replacement value (excluding contents) of 9,584 (millions of dollars). Approximately 93.00 % of the buildings (and 88.00% of the building value) are associated with residential housing.

The replacement value of the transportation and utility lifeline systems is estimated to be 1,119 and 24 (millions of dollars) , respectively.



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## Building and Lifeline Inventory

### Building Inventory

Hazus estimates that there are 20 thousand buildings in the region which have an aggregate total replacement value of 9,584 (millions of dollars) . Appendix B provides a general distribution of the building value by Total Region and County.

In terms of building construction types found in the region, wood frame construction makes up 91% of the building inventory. The remaining percentage is distributed between the other general building types.

### Critical Facility Inventory

Hazus breaks critical facilities into two (2) groups: essential facilities and high potential loss facilities (HPL). Essential facilities include hospitals, medical clinics, schools, fire stations, police stations and emergency operations facilities. High potential loss facilities include dams, levees, military installations, nuclear power plants and hazardous material sites.

For essential facilities, there are 0 hospitals in the region with a total bed capacity of beds. There are 22 schools, 0 fire stations, 2 police stations and 0 emergency operation facilities. With respect to high potential loss facilities (HPL), there are no dams identified within the inventory. The inventory also includes 1 hazardous material sites, no military installations and no nuclear power plants.

### Transportation and Utility Lifeline Inventory

Within Hazus, the lifeline inventory is divided between transportation and utility lifeline systems. There are seven (7) transportation systems that include highways, railways, light rail, bus, ports, ferry and airports. There are six (6) utility systems that include potable water, wastewater, natural gas, crude & refined oil, electric power and communications. The lifeline inventory data are provided in Tables 1 and 2.

The total value of the lifeline inventory is over 1,143.00 (millions of dollars). This inventory includes over 95.07 miles of highways, 1 bridges, 758.69 miles of pipes.



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Table 1: Transportation System Lifeline Inventory

System	Component	# Locations/ # Segments	Replacement value (millions of dollars)
Highway	Bridges	1	0.8579
	Segments	112	1096.0731
	Tunnels	0	0.0000
	<b>Subtotal</b>		<b>1096.9310</b>
Railways	Bridges	0	0.0000
	Facilities	0	0.0000
	Segments	16	20.8393
	Tunnels	0	0.0000
	<b>Subtotal</b>		<b>20.8393</b>
Light Rail	Bridges	0	0.0000
	Facilities	0	0.0000
	Segments	0	0.0000
	Tunnels	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
Bus	Facilities	1	1.2862
	<b>Subtotal</b>		<b>1.2862</b>
Ferry	Facilities	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
Port	Facilities	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
Airport	Facilities	0	0.0000
	Runways	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
		<b>Total</b>	<b>1,119.10</b>



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Table 2: Utility System Lifeline Inventory

System	Component	# Locations / Segments	Replacement value (millions of dollars)
Potable Water	Distribution Lines	NA	12.2185
	Facilities	0	0.0000
	Pipelines	0	0.0000
	<b>Subtotal</b>		<b>12.2185</b>
Waste Water	Distribution Lines	NA	7.3311
	Facilities	0	0.0000
	Pipelines	0	0.0000
	<b>Subtotal</b>		<b>7.3311</b>
Natural Gas	Distribution Lines	NA	4.8874
	Facilities	0	0.0000
	Pipelines	0	0.0000
	<b>Subtotal</b>		<b>4.8874</b>
Oil Systems	Facilities	0	0.0000
	Pipelines	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
Electrical Power	Facilities	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
Communication	Facilities	0	0.0000
	<b>Subtotal</b>		<b>0.0000</b>
	<b>Total</b>		<b>24.40</b>





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## Direct Earthquake Damage

### Building Damage

Hazus estimates that about 7,229 buildings will be at least moderately damaged. This is over 36.00 % of the buildings in the region. There are an estimated 631 buildings that will be damaged beyond repair. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the Hazus technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 below summarizes the expected damage by general building type.

### Damage Categories by General Occupancy Type

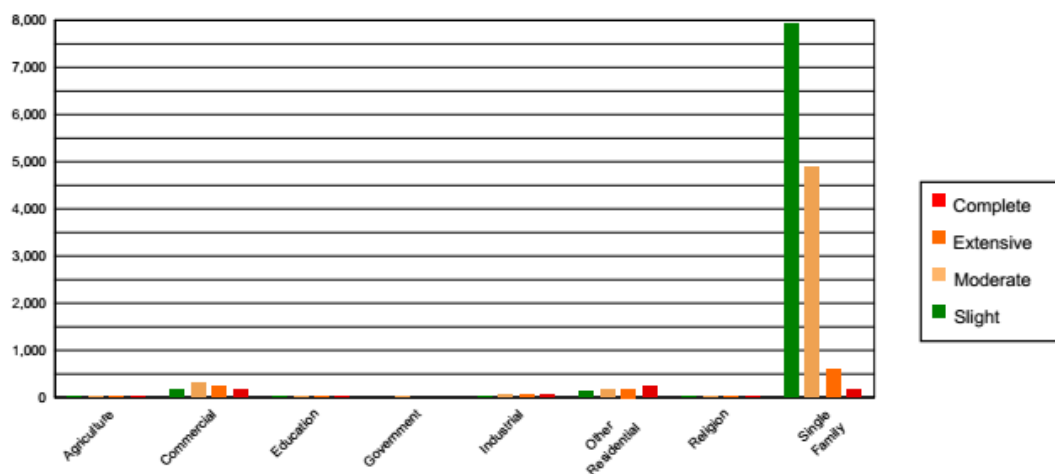


Table 3: Expected Building Damage by Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	5.63	0.12	9.79	0.12	11.44	0.21	6.87	0.61	5.28	0.83
Commercial	96.57	2.02	171.79	2.07	302.73	5.53	246.15	21.92	171.76	27.19
Education	7.29	0.15	11.12	0.13	12.42	0.23	7.05	0.63	4.12	0.65
Government	1.76	0.04	2.71	0.03	3.90	0.07	3.22	0.29	2.41	0.38
Industrial	15.21	0.32	29.73	0.36	60.31	1.10	52.44	4.67	40.31	6.38
Other Residential	78.12	1.64	142.05	1.71	162.16	2.96	184.67	16.45	225.00	35.61
Religion	10.22	0.21	16.67	0.20	21.94	0.40	16.53	1.47	11.65	1.84
Single Family	4558.29	95.50	7922.81	95.38	4899.73	89.50	605.89	53.96	171.28	27.11
<b>Total</b>	<b>4,773</b>		<b>8,307</b>		<b>5,475</b>		<b>1,123</b>		<b>632</b>	



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Table 4: Expected Building Damage by Building Type (All Design Levels)

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Wood	4641.25	97.24	8098.00	97.49	5005.23	91.43	613.35	54.63	188.80	29.88
Steel	14.59	0.31	28.01	0.34	79.09	1.44	88.51	7.88	65.33	10.34
Concrete	24.74	0.52	46.75	0.56	67.64	1.24	59.59	5.31	45.17	7.15
Precast	17.22	0.36	35.11	0.42	80.77	1.48	65.41	5.83	43.38	6.87
RM	71.94	1.51	83.95	1.01	159.39	2.91	122.22	10.88	54.02	8.55
URM	2.70	0.06	7.01	0.08	18.06	0.33	18.40	1.64	26.73	4.23
MH	0.63	0.01	7.85	0.09	64.45	1.18	155.35	13.84	208.37	32.98
<b>Total</b>	<b>4,773</b>		<b>8,307</b>		<b>5,475</b>		<b>1,123</b>		<b>632</b>	

\*Note:

- RM Reinforced Masonry
- URM Unreinforced Masonry
- MH Manufactured Housing



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**Essential Facility Damage**

Before the earthquake, the region had hospital beds available for use. On the day of the earthquake, the model estimates that only hospital beds (%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, % of the beds will be back in service. By 30 days, % will be operational.

Table 5: Expected Damage to Essential Facilities

Classification	Total	# Facilities		
		At Least Moderate Damage > 50%	Complete Damage > 50%	With Functionality > 50% on day 1
Hospitals	0	0	0	0
Schools	22	0	0	0
EOCs	0	0	0	0
PoliceStations	2	0	0	0
FireStations	0	0	0	0





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**Transportation Lifeline Damage**





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Table 6: Expected Damage to the Transportation Systems

System	Component	Locations/ Segments	Number of Locations			
			With at Least Mod. Damage	With Complete Damage	With Functionality > 50 %	
					After Day 1	After Day 7
Highway	Segments	112	0	0	103	103
	Bridges	1	0	0	1	1
	Tunnels	0	0	0	0	0
Railways	Segments	16	0	0	0	0
	Bridges	0	0	0	0	0
	Tunnels	0	0	0	0	0
	Facilities	0	0	0	0	0
Light Rail	Segments	0	0	0	0	0
	Bridges	0	0	0	0	0
	Tunnels	0	0	0	0	0
	Facilities	0	0	0	0	0
Bus	Facilities	1	1	0	1	1
Ferry	Facilities	0	0	0	0	0
Port	Facilities	0	0	0	0	0
Airport	Facilities	0	0	0	0	0
	Runways	0	0	0	0	0

Table 6 provides damage estimates for the transportation system.

Note: Roadway segments, railroad tracks and light rail tracks are assumed to be damaged by ground failure only. If ground failure maps are not provided, damage estimates to these components will not be computed.

Tables 7-9 provide information on the damage to the utility lifeline systems. Table 7 provides damage to the utility system facilities. Table 8 provides estimates on the number of leaks and breaks by the pipelines of the utility systems. For electric power and potable water, Hazus performs a simplified system performance analysis. Table 9 provides a summary of the system performance information.



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Table 7 : Expected Utility System Facility Damage

System	# of Locations				
	Total #	With at Least Moderate Damage	With Complete Damage	with Functionality > 50 %	
				After Day 1	After Day 7
Potable Water	0	0	0	0	0
Waste Water	0	0	0	0	0
Natural Gas	0	0	0	0	0
Oil Systems	0	0	0	0	0
Electrical Power	0	0	0	0	0
Communication	0	0	0	0	0

Table 8 : Expected Utility System Pipeline Damage (Site Specific)

System	Total Pipelines Length (miles)	Number of Leaks	Number of Breaks
Potable Water	380	0	0
Waste Water	228	0	0
Natural Gas	152	0	0
Oil	0	0	0

Table 9: Expected Potable Water and Electric Power System Performance

	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water						
Electric Power		15,665	9,390	3,663	669	22



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## Induced Earthquake Damage

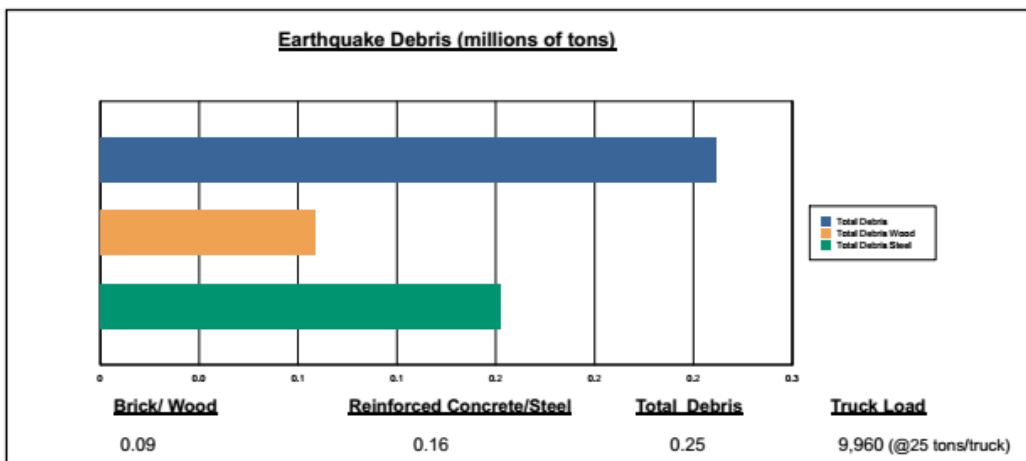
### Fire Following Earthquake

Fires often occur after an earthquake. Because of the number of fires and the lack of water to fight the fires, they can often burn out of control. Hazus uses a Monte Carlo simulation model to estimate the number of ignitions and the amount of burnt area. For this scenario, the model estimates that there will be 1 ignitions that will burn about 0.02 sq. mi 0.12 % of the region's total area.) The model also estimates that the fires will displace about 238 people and burn about 29 (millions of dollars) of building value.

### Debris Generation

Hazus estimates the amount of debris that will be generated by the earthquake. The model breaks the debris into two general categories: a) Brick/Wood and b) Reinforced Concrete/Steel. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 249,000 tons of debris will be generated. Of the total amount, Brick/Wood comprises 35.00% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 9,960 truckloads (@25 tons/truck) to remove the debris generated by the earthquake.



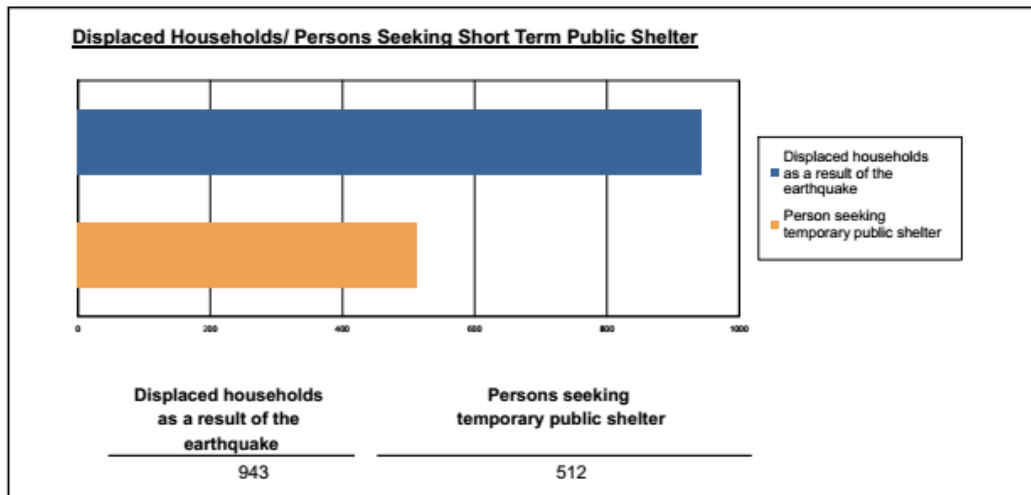


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## Social Impact

### Shelter Requirement

Hazus estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 943 households to be displaced due to the earthquake. Of these, 512 people (out of a total population of 58,256) will seek temporary shelter in public shelters.



### Casualties

Hazus estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four (4) severity levels that describe the extent of the injuries. The levels are described as follows;

- Severity Level 1: Injuries will require medical attention but hospitalization is not needed.
- Severity Level 2: Injuries will require hospitalization but are not considered life-threatening
- Severity Level 3: Injuries will require hospitalization and can become life threatening if not promptly treated.
- Severity Level 4: Victims are killed by the earthquake.

The casualty estimates are provided for three (3) times of day: 2:00 AM, 2:00 PM and 5:00 PM. These times represent the periods of the day that different sectors of the community are at their peak occupancy loads. The 2:00 AM estimate considers that the residential occupancy load is maximum, the 2:00 PM estimate considers that the educational, commercial and industrial sector loads are maximum and 5:00 PM represents peak commute time.

Table 10 provides a summary of the casualties estimated for this earthquake



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Table 10: Casualty Estimates

		Level 1	Level 2	Level 3	Level 4
<b>2 AM</b>	Commercial	7.55	2.25	0.37	0.73
	Commuting	0.01	0.01	0.02	0.00
	Educational	0.00	0.00	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	8.60	2.52	0.40	0.78
	Other-Residential	66.40	17.48	2.18	4.17
	Single Family	91.72	14.37	0.82	1.45
	<b>Total</b>	<b>174</b>	<b>37</b>	<b>4</b>	<b>7</b>
<b>2 PM</b>	Commercial	449.93	133.61	22.02	43.27
	Commuting	0.06	0.07	0.14	0.03
	Educational	123.97	36.88	6.21	12.16
	Hotels	0.00	0.00	0.00	0.00
	Industrial	63.37	18.52	2.93	5.70
	Other-Residential	15.40	4.05	0.51	0.94
	Single Family	22.59	3.56	0.23	0.35
	<b>Total</b>	<b>675</b>	<b>197</b>	<b>32</b>	<b>62</b>
<b>5 PM</b>	Commercial	310.62	91.95	15.20	29.51
	Commuting	1.03	1.21	2.23	0.42
	Educational	8.61	2.56	0.43	0.85
	Hotels	0.00	0.00	0.00	0.00
	Industrial	39.61	11.57	1.83	3.56
	Other-Residential	25.07	6.62	0.85	1.58
	Single Family	35.67	5.63	0.37	0.56
	<b>Total</b>	<b>421</b>	<b>120</b>	<b>21</b>	<b>36</b>



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## Economic Loss

The total economic loss estimated for the earthquake is 1,601.37 (millions of dollars), which includes building and lifeline related losses based on the region's available inventory. The following three sections provide more detailed information about these losses.

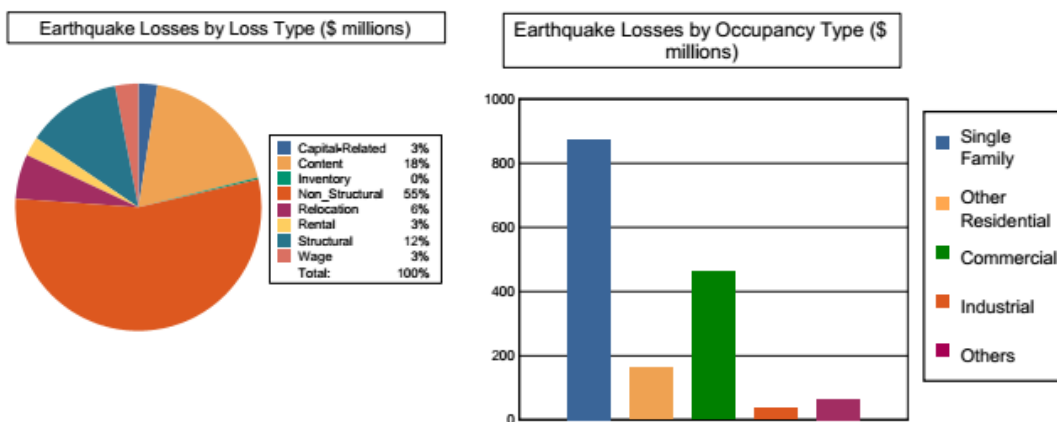


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**Building-Related Losses**

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake.

The total building-related losses were 1,600.74 (millions of dollars); 14 % of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 65 % of the total loss. Table 11 below provides a summary of the losses associated with the building damage.



**Table 11: Building-Related Economic Loss Estimates**  
(Millions of dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
<b>Income Losses</b>							
	Wage	0.0000	1.4413	44.5183	0.5422	1.6514	48.1532
	Capital-Related	0.0000	0.6131	40.5877	0.3221	0.4211	41.9440
	Rental	13.9775	7.3783	18.8418	0.1910	0.9003	41.2889
	Relocation	51.0275	6.3776	29.1200	1.0734	6.9449	94.5434
	<b>Subtotal</b>	<b>65.0050</b>	<b>15.8103</b>	<b>133.0678</b>	<b>2.1287</b>	<b>9.9177</b>	<b>225.9295</b>
<b>Capital Stock Losses</b>							
	Structural	109.7526	18.4048	57.0525	4.6021	10.1610	199.9730
	Non_Structural	536.5701	104.1194	186.6097	17.0374	32.2133	876.5499
	Content	162.5004	24.0092	83.8919	10.4331	14.3432	295.1778
	Inventory	0.0000	0.0000	1.6103	1.3679	0.1352	3.1134
	<b>Subtotal</b>	<b>808.8231</b>	<b>146.5334</b>	<b>329.1644</b>	<b>33.4405</b>	<b>56.8527</b>	<b>1374.8141</b>
	<b>Total</b>	<b>873.83</b>	<b>162.34</b>	<b>462.23</b>	<b>35.57</b>	<b>66.77</b>	<b>1600.74</b>





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**Transportation and Utility Lifeline Losses**

For the transportation and utility lifeline systems, Hazus computes the direct repair cost for each component only. There are no losses computed by Hazus for business interruption due to lifeline outages. Tables 12 & 13 provide a detailed breakdown in the expected lifeline losses.

**Table 12: Transportation System Economic Losses**  
(Millions of dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Highway	Segments	1096.0731	0.0000	0.00
	Bridges	0.8579	0.1327	15.47
	Tunnels	0.0000	0.0000	0.00
	<b>Subtotal</b>	<b>1096.9310</b>	<b>0.1327</b>	
Railways	Segments	20.8393	0.0000	0.00
	Bridges	0.0000	0.0000	0.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	<b>Subtotal</b>	<b>20.8393</b>	<b>0.0000</b>	
Light Rail	Segments	0.0000	0.0000	0.00
	Bridges	0.0000	0.0000	0.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	<b>Subtotal</b>	<b>0.0000</b>	<b>0.0000</b>	
Bus	Facilities	1.2862	0.4970	38.64
	<b>Subtotal</b>	<b>1.2862</b>	<b>0.4970</b>	
Ferry	Facilities	0.0000	0.0000	0.00
	<b>Subtotal</b>	<b>0.0000</b>	<b>0.0000</b>	
Port	Facilities	0.0000	0.0000	0.00
	<b>Subtotal</b>	<b>0.0000</b>	<b>0.0000</b>	
Airport	Facilities	0.0000	0.0000	0.00
	Runways	0.0000	0.0000	0.00
	<b>Subtotal</b>	<b>0.0000</b>	<b>0.0000</b>	
	<b>Total</b>	<b>1,119.06</b>	<b>0.63</b>	



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Table 13: Utility System Economic Losses  
(Millions of dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Potable Water	Pipelines	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Distribution Lines	12.2185	0.0000	0.00
	<b>Subtotal</b>	<b>12.2185</b>	<b>0.0000</b>	
Waste Water	Pipelines	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Distribution Lines	7.3311	0.0000	0.00
	<b>Subtotal</b>	<b>7.3311</b>	<b>0.0000</b>	
Natural Gas	Pipelines	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Distribution Lines	4.8874	0.0000	0.00
	<b>Subtotal</b>	<b>4.8874</b>	<b>0.0000</b>	
Oil Systems	Pipelines	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	<b>Subtotal</b>	<b>0.0000</b>	<b>0.0000</b>	
Electrical Power	Facilities	0.0000	0.0000	0.00
	<b>Subtotal</b>	<b>0.0000</b>	<b>0.0000</b>	
Communication	Facilities	0.0000	0.0000	0.00
	<b>Subtotal</b>	<b>0.0000</b>	<b>0.0000</b>	
	<b>Total</b>	<b>24.44</b>	<b>0.00</b>	



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**Appendix A: County Listing for the Region**

Los Angeles, CA



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**Appendix B: Regional Population and Building Value Data**

State	County Name	Population	Building Value (millions of dollars)		
			Residential	Non-Residential	Total
California	Los Angeles	58,256	8,423	1,160	9,584
Total Region		58,256	8,423	1,160	9,584