November 4, 2024

Credits

Q&A | ELEMENT A: PLANNING PROCESS | A1-a.
Q: Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved? (Requirement 44 CFR § 201.6(c)(1)) **A:** See **Hazard Mitigation Planning Team** below.

Hazard Mitigation Planning Team:

Name	*Department*	*Position*
City of Hermosa Beach		
Angela Crespi, Chair	City Manager's Office	Deputy City Manager
Margaret Talamantes	City Manager's Office	Senior Management Analyst (Former)
Israel Estrada	City Manager's Office	Emergency Management Coordinator (Former)
Doug Krauss	City Manager's Office	Environmental Programs Manager
Alexandria Hildebrand	City Manager's Office	GIS/IT Analyst
Sara Russo	City Manager's Office	Senior Management Analyst
Guillermo Hobelman	Community Development Department	Building & Code Enforcement Official
Joanne Loeza	Police Department	Management Analyst
Lucho Rodriguez	Public Works Department	City Engineer
John Cordova	Public Works Department	Public Works Superintendent
Ana Tenorio	Public Works Department	Assistant Public Works Superintendent
County of Los Angeles		
Brian Bennett	Los Angeles County Fire Department	Assistant Fire Chief
Brandy Villanueva	Los Angeles County DMAC	Disaster Management Area G Coordinator
Emergency Planning Consultants		
Carolyn J. Harshman	Emergency Planning Consultants	Principal Planner

Acknowledgements

City of Hermosa Beach

- ✓ Justin Massey, Mayor
- ✓ Dean Francois, Mayor Pro Tem
- ✓ Rob Saemann, Council Member
- ✓ Michael Detoy, Council Member
- ✓ Ray Jackson, Council Member

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Mapping

The maps in this plan were provided by the City of Hermosa Beach, 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 City of Hermosa Beach 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). The following is a sample marker:

EXAMPLE

Q&A | ELEMENT A: PLANNING PROCESS | A1-a.
Q Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved? (Requirement 44 CFR § 201.6(c)(1)) **A:**

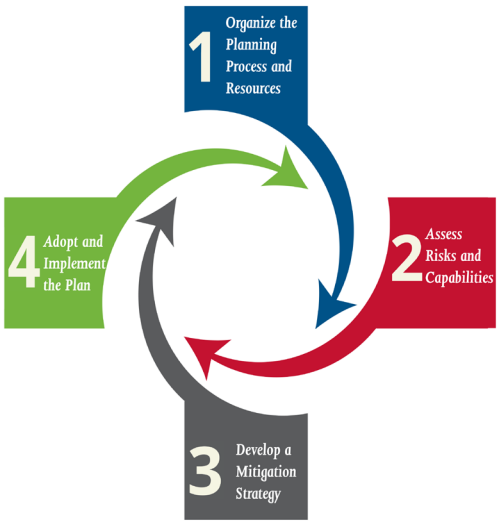
Table of Contents

Executive Summary

Hazard Mitigation Plans (HMP) are strategic frameworks designed to reduce the loss of life and property by lessening the impact of disasters. The primary goal of the HMP is to identify potential hazards, assess their risks, and implement long-term strategies to mitigate their effects on a community. This comprehensive plan involves a systematic process of identifying hazards, evaluating vulnerabilities, and developing actions to minimize the damage and disruption caused by natural hazard events.

Before we go into the details of the planning process, it's important to define hazard mitigation as actions taken to minimize or eliminate threats associated with hazards.

In 2019, the National Institute of Building Sciences issued an update to its landmark report "Natural Hazard Mitigation Saves". The study analyzed the benefit cost ratio of a range of mitigation activities including mitigation planning and building retrofits. The findings revealed a dramatic return on investment. For mitigation activities, every dollar spent yielded a six dollar return on avoided losses in the future. For building retrofits, every dollar spent yielded a four dollar return on avoided losses in the future.



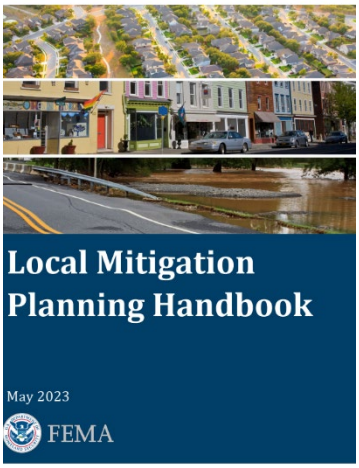
FEMA's mitigation website recommends 4 steps in the overall planning process: Step #1 is to organize the planning process and resources which includes creation of a Planning Team to assist with research and writing as well as the development of a Community Outreach Strategy. Step #2 is to assess risks and capabilities including a Risk and Vulnerability Assessment as well as a review of the city's capability to respond and recover from a major disaster. Step #3 is to develop a Mitigation Strategy which includes a comprehensive list of mitigation actions and projects. Step #4 is to Adopt and Implement the Plan which includes a formal review by Cal OES and FEMA and adoption by the City Council.

The tool used to judge the adequacy of a plan is referred to as the Plan Review Tool (PRT). Within the PRT, the plan requirements are divided into elements including planning process, hazard identification and Risk Assessment, mitigation strategy, plan maintenance, plan update, plan adoption, high hazard potential dams.

The City of Hermosa Beach's plan is displayed in seven chapters: planning process, community profile, risk assessment, vulnerability and impact assessment, mitigation strategy, plan maintenance, and plan review-adoption-approval. The chapters on risk and vulnerability and impact assessment focus on hazard events posing the greatest threat to the community. The chapter on mitigation strategy identifies current and future policies and projects to minimize or

eliminate threats associated with the prioritized hazards including earthquake, flooding, tsunami, drought, and pandemic.

The geographical setting, climate, demographic trends, economic conditions, transportation infrastructure, community assets, and efforts to address climate change were taken into consideration during the planning process and writing of the hazard mitigation plan.



The development of the plan was guided by FEMA's 2023 Local Mitigation Planning Policy Guide and 2023 Local Mitigation Planning Handbook. The documents contained updated official policy on and interpretation of applicable statues and mitigation planning regulations in 44 Code of Federal Regulations (CFR) Part 201, more commonly referred to as the Disaster Mitigation Act of 2000. FEMA is the sole entity allowed to approve a mitigation plan.

In developing the HMP, a Planning Team was formed to undertake a detailed analysis of the community's unique risks and challenges. The Team included department representatives from the City Manager's Office, Community Development Department, Police Department, Public Works Department and Los Angeles County Fire Department, and Los Angeles County Disaster Management Area G Coordinator's Office. The Team met a total of four times with the consultant and contributed to the Initial Draft Plan. In addition to the planning document itself, the Team developed and was actively involved in an aggressive community outreach strategy. As pointed out in the plan, people are the most important asset in need of protection.

The planning process involved collaboration among adjoining local governments and special districts, businesses organization, residents, socially vulnerable populations, and other stakeholders to gather data, assess vulnerabilities, and prioritize mitigation actions. The process ensured that the community is better prepared to respond to and recover from disasters, while enhancing overall resilience. Some of the stakeholders contributing to the plan's development included the Public Works Commission and the Emergency Advisory Board. Our thanks for their contributions.

The risk, vulnerability, and impacts assessment involved a comprehensive evaluation of the hazard events that could result in significant damage and loss of life. The assessment process involves four key steps: identifying hazards, profiling hazard events, inventory of assets, and estimation of potential human and economic losses.

Overall, the assessment underscores the importance of understanding and preparing for various hazards to mitigate their impact on the community's people, structures, economy, and valued resources. This comprehensive approach ensures that Hermosa Beach will be better equipped to handle potential emergencies and protect its residents and businesses from future hazard events. Additionally, the assessment discusses social vulnerability populations and underserved communities in Hermosa Beach. Studies on this topic commonly identify six categories as indicators of social vulnerability: socioeconomic status, age, gender, race and ethnicity, English language proficiency and medical issues and disability. These are the factors chosen by the Planning Team for consideration in the plan.

Key demographic vulnerabilities include the elderly population, which is concentrated in the northeast and south boundaries, and the young population under 18. Socioeconomic challenges are marked by a significant proportion of residents living below the poverty level, low educational attainment, and a high percentage of renter-occupied housing. Additionally, 0% of the population speaks a language other than English and does not speak English well. This relieves a common communications barrier during emergencies.

Throughout the entire planning process, the Planning Team kept the public and stakeholders informed of the Team's progress and opportunities to provide input. These outreach activities began with the City Council in November 2023, followed by press releases, social media postings, solicitations to participate in a public opinion survey, posting of a hazard mitigation overview video, and briefings at public forums.

The plan will go through a formal review by Cal OES and FEMA capped by FEMA's issuance of Approvable Pending Adoption. Once the plan is adopted by the City Council, FEMA will issue a Letter of Approval which will grant the city's eligibility for mitigation-related grants for a period of five years. The Planning Team will immediately begin the process of plan implementation which will continue with the tradition of sharing and incorporating input from the public and stakeholders.

Chapter 1: Planning Process

Q&A | ELEMENT A: PLANNING PROCESS | A1-b.

Q: Does the plan list the jurisdiction(s) participating in the plan that seek approval, and describe how they participated in the planning process? (Requirement 44 CFR § 201.6(c)(1))
A: See **Introduction** below.

Introduction

This Hazard Mitigation Plan (Mitigation Plan) was prepared in response to the Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 (also known as Public Law 106-390) since 2005 has required state and local governments (including special districts and joint powers authorities) 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. The city's most recent Hazard Mitigation Plan was approved by FEMA in 2018. The plan is required to be updated every five years. Once adopted by the City Council and approved by FEMA, the Plan will ensure eligibility for Hazard Mitigation Grant Program (HMGP) and other mitigation-related 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.

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."

Q&A | ELEMENT E: PLAN UPDATE | E2-c.

Q: Does the plan describe how jurisdictions integrated the mitigation plan, when appropriate, into other planning mechanisms? (Requirement 44 CFR § 201.6(d)(3))
A: See **Authority** below.

Authority

Federal Authority

The city is not required to prepare a Mitigation Plan, but state and federal regulations encourage it with financial incentives. The federal Robert T. Stafford Disaster Relief and Emergency Act, amended by the Disaster Management Act of 2000, creates a federal framework for local hazard mitigation planning. It states that jurisdictions that wish to be eligible for federal hazard mitigation grant funding must prepare a hazard mitigation plan that meets a certain set of guidelines and submit this plan to FEMA for review and approval. The following regulations and guidelines apply to this plan:

Federal Laws

- Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as amended.

Federal Regulations

- 44 CFR Part 201 Mitigation Planning.
- 44 CFR, Part 60, Subpart A, including § 60.3 Floodplain management criteria for flood-prone areas.
- 44 CFR Part 77 Flood Mitigation Grants.
- 44 CFR Part 206 Subpart N. Hazard Mitigation Grant Program.

Federal Guidance

- FEMA Local Mitigation Planning Policy Guide (FP 206-21-0002), effective April 19, 2023.

State Authority

California Government Code Sections 8685.9 and 65302.6

California Government Code Section 8685.9 (also known as Assembly Bill 2140) limits the State of California's share of disaster relief funds paid out to local governments to 75 percent of the funds not paid for by federal disaster relief efforts unless the jurisdiction has adopted a valid hazard mitigation plan consistent with the Disaster Management Act of 2000 and has incorporated the hazard mitigation plan into the jurisdiction's general plan. In these cases, the State may cover more than 75 percent of the remaining disaster relief costs.

All cities and counties in California must prepare a General Plan, including a Safety Element (Hermosa Beach refers to the document as the Public Safety Element) that addresses various hazard conditions and other public safety issues. The Element may be a stand-alone chapter or incorporated into another section, as the community wishes. California Government Code Section 65302.6 indicates that a community may adopt a mitigation plan into its Safety Element if the mitigation plan meets applicable state requirements. This allows communities to use the mitigation plan to satisfy state requirements for Safety Elements. As the General Plan is an overarching long-term plan for community growth and development, incorporating the mitigation plan into it creates a stronger mechanism for implementing the mitigation plan.

California Government Code Section 65302 (G)(4)

California Government Code Section 65302 (g)(4), (also known as Senate Bill 379), requires that the General Plan Safety Element address the hazards created or exacerbated by climate change. The Safety Element must identify how climate change is expected to affect hazard conditions in the community and include measures to adapt and be more resilient to these anticipated changes. Because the mitigation plan can be incorporated into the Safety Element, including these items in the mitigation plan can satisfy the state requirement. SB 379 requires that climate change be addressed in the Safety Element when the mitigation plan is updated after January 1, 2017, for

communities that already have a mitigation plan, or by January 1, 2022, for communities without a FEMA-approved mitigation plan.

Assembly Bill 2140
Passed in 2006, Assembly Bill 2140 allows California counties and cities to be considered for additional state cost-share on eligible Public Assistance projects by adopting their current, FEMA-approved local mitigation plans into the Safety Element of their General Plan. This adoption, along with other requirements, makes the county or city eligible to be considered for part or all of its local-share costs on eligible Public Assistance projects to be provided by the state through the California Disaster Assistance Act. AB 2140 compliance is not a requirement; however, if the city is compliant, it is eligible to be considered for up to an additional 6.25% local share to be funded by the state, essentially covering the entire local-share cost for eligible Public Assistance projects in the future. It's important to note that AB 2140 compliance expires when the 2018 HMP expired and in order to continue compliance, the city must adopt the 2024 HMP as well as adopt the HMP into the Public Safety Element of the General Plan each time the HMP is updated. Each time, the jurisdiction must provide the necessary documentation when seeking AB 2140 compliance – e.g. resolution(s) and direction to the appropriate section(s) of the Public Safety Element within the General Plan.

In order to issue a letter of AB 2140 compliance, Cal OES will review and verify that Hermosa Beach has performed the following:

- ✓ Has a current, FEMA-approved or approvable pending adoption (APA) LHMP.
- ✓ Formally adopted the LHMP via resolution.
- ✓ Formally adopted the most current, approved LHMP into the Public Safety Element of the General Plan via resolution.
- ✓ Included language within the Public Safety Element of the General Plan that references the HMP.
- ✓ Included a web link, appendix, or language within the Public Safety Element that directs the public to the most current, approved HMP in its entirety.
- ✓ E-mailed the link to the updated General Plan- Public Safety Element web page along with the signed, adoption resolution(s) to the Cal OES AB 2140 inbox ab2140@caloes.ca.gov for review and approval.

In closing, the Hermosa Beach 2024 HMP is consistent with current standards and regulations, as outlined by the California Office of Emergency Services (Cal OES) and FEMA. It uses the best available science, and its mitigation actions/strategies reflect best practices and community values. It meets the requirements of current state and federal guidelines and makes the city eligible for all appropriate benefits under state and federal law and practices. Note that while FEMA is responsible for reviewing and approving this mitigation plan, and Cal OES is responsible for conducting a preliminary review, it does not grant FEMA or Cal OES any increased role in the governance of the city or authorize either agency to take any specific action in the community.

Planning Approach Steps

Graphic 1.1: Planning Approach
Source: FEMA's Hazard Mitigation Planning Website

Step 1: Organize the Planning Process and Resources
At the start, a state, local, tribe, or territory government should focus on assembling the resources needed for a successful mitigation planning process. This includes securing technical expertise, defining the planning area, and identifying key individuals, agencies, neighboring jurisdictions, businesses, and/or other stakeholders to participate in the process. The planning process for local and tribal governments must include opportunities for the public to comment on the plan.

Step 2: Assess Risks and Capabilities
Next, the state, local, tribe, or territory government needs to identify the characteristics and potential consequences of hazards. It is important to understand how the hazards impact geographic areas so that we can better understand the vulnerabilities of people, property, or other assets. The four basic components of a risk assessment are:

- Hazard identification
- Profiling of hazard events
- Inventory of assets
- Estimation of potential human and economic losses based on the exposure and vulnerability of people, buildings, and infrastructure

Step 3: Develop a Mitigation Strategy
The state, local, tribal nation, or territorial government then sets priorities and develops long-term strategies for avoiding or minimizing the undesired effects of disasters. The strategy is based on an assessment of the unique set of regulatory, administrative, and financial capabilities to undertake mitigation. The mitigation strategy also includes a description of how the mitigation actions will be implemented and administered.

Step 4: Adopt and Implement the Plan
Once FEMA has issued a Letter of Approval, the state, local, tribal nation, or territorial government can bring the mitigation plan to life in a variety of ways, ranging from implementing specific

mitigation actions to changing aspects of day-to-day organizational operations. To ensure success, the plan must remain a relevant, living document through routine maintenance. The state, tribe, or local government needs to conduct periodic evaluations to assess changing risks and priorities and make revisions as needed.

Q&A | ELEMENT C: Mitigation Strategy | C2-a.
Q: Does the plan contain a narrative description or a table/list of their participation activities? (Requirement 44 CFR § 201.6(c)(3)(ii))
A: See **NFIP** 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 City of Hermosa Beach adopted a floodplain management ordinance and has Flood Insurance Rate Maps (FIRM) that show floodways, 100-year flood zones, and 500-year flood zones. The Director of Public Works is designated as floodplain administrator. Participation in NFIP is maintained through a review of every development permit. For information relating to Substantial Improvement/Substantial Damage, please see **Attachment: Floodplain Ordinance**.

NFIP Participation

The City of Hermosa Beach participates in NFIP and the FEMA FIRM maps for the City of Hermosa Beach were last updated April 21, 2021. 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 the FEMA FIRM map, the beach portion of the City of Hermosa Beach is designated a Special Flood Hazard Area (SFHA) Zone VE which indicates immediate danger from flooding caused by coastal flooding and storms waves. The remainder of Hermosa Beach is in Zone X.

The Hermosa Beach Municipal Code (HBMC) Chapter 8.52 outlines the City's Floodplain Management regulations and areas of special flood hazard were reviewed in preparation of the update to the mitigation plan. As the Floodplain Administrator, the Public Works Director is responsible for implementation of the code section and regulations contained therein and for maintaining a copy of the Flood Insurance Rate Maps (FIRM) and Flood Insurance Study (FIS) report at the Public Works Department counter for public access.

Although the City does not currently have any private development within a special flood hazard area, the FIRM are a benefit to the community as the maps identify the flood hazard areas and can be used to assess flood hazard risk, set flood insurance rates, and regulate construction practices. The City has adopted the current Building Codes to support long term risk reduction and reduce the loss of life and property. Permitting in the special flood hazard area would be handled jointly by the Community Development Department and the City's Public Works Department.

As directed by the HBMC, the Public Works Director (acting as Floodplain Administrator) developed the procedures for administering requirements for substantial improvement and

substantial damage, including defining "market value." To date the City hasn't had any NFIP claims, so no insured structures have been repetitively damaged by floods. See **Attachments**.

The Public Works Director is also responsible for development and management of the City's Capital Improvement Program (CIP) and the City's Storm Drain Master Plan. The Fiscal Year 2024-25 CIP includes $1.296M to design and construct storm drain improvements throughout the city per the Storm Drain Master Plan and other high priority locations; $285,000 to complete storm drain improvements to 5th Street and Ardmore Avenue, including the replacement of existing storm drain lateral and new connection to Los Angeles County's storm drain main line, new catch basin, new curb and gutter; and $458,000 to address localized flooding near the intersection of Bard Street and Oak Street.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-c.

Q: Does the Plan address NFIP-insured structures within each jurisdiction that have been repetitively damaged by floods? (Requirement 44 CFR § 201.6(c)(2)(ii))

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

Repetitive Loss Properties

Repetitive Loss Properties (RLPs) are most susceptible to flood damage; therefore, they have been the focus of flood hazard mitigation programs. Unlike a countywide program, a 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, none of the properties within the City of Hermosa Beach are designated as Repetitive Loss Property (RLPs).

Planning Process

Q&A | ELEMENT A: PLANNING PROCESS | A1-a.

Q: Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement 44 CFR § 201.6(c)(1))

A: See **Planning Process, Table 1.1** below.

Planning Area and Looking Back

Initial considerations included agreeing that the boundary of the City of Hermosa Beach will constitute the planning area and the City government itself served as what FEMA refers to as the "planning participant." Therefore, this is a single-jurisdiction plan.

Another important consideration is that the 2024 Plan will be an update to the City's 2018 FEMA-approved Hazard Mitigation Plan. An update to any strategic plan demands a look back to consider the possibility of improvements. In that regard, it was important for the Planning Team to review the previous plan with particular attention to the 2018 Plan Review Tool prepared by FEMA. The strengths and weaknesses identified by FEMA in the 2018 plan were discussed by the Planning Team. Following is a summary of the Element Strengths and Opportunities for Improvement along with Solutions implemented by the 2024 Planning Team.

Table 1.1: 2018 Plan Review Tool Strengths, Opportunities, and Solutions

Element	Strength	Opportunities for Improvement	2024 Solutions
A: Planning Process	1) The plan includes a good amount of supporting documentation of the planning process as well as public and stakeholder outreach activities. 2) The plan incorporates effective templates and schedules for future plan updates and maintenance activities. 3) The planning process contains diverse and effective methods of outreach that are consistent with normal departmental operations. 4) The planning team includes a variety of stakeholders from a number of local government departments and agencies involved with mitigation activities.	1) For the next plan update, consider obtaining increased participation from the local media to help increase public awareness and participation in the planning process. 2) Not all page numbers match up with those designated in the Table of Contents – this should be considered to improve navigability of the plan document.	1) Projects status reports and opportunities for involvement were posted on the community E-Newsletter, advertised on social media and flyers posted at all public forum locations. Emails and/or mail were used to inform the project stakeholders. 2) TOC is now updated automatically.
B: Hazard Identification and Risk Assessment	1) The plan provides a comprehensive explanation of how the hazards were identified and screened for incorporation within the plan, and why specific hazards impacting the region were omitted from the document. 2) The planning process not only took into account climate change and its effects on other hazards but also includes climate change as a profiled hazard. This provides context for future risks and promotes more meaningful mitigation actions. 3) The document presents the hazard profiles in a very succinct and thoughtful manner, presenting only information relevant to the hazard analysis. 4) The plan incorporated many comprehensive maps	1) Continue monitoring pertinent reports and studies pertaining to the planning area to ensure the most current information on selected hazards is incorporated and kept up-to-date. 2) A more comprehensive discussion of potential impacts and vulnerabilities of the identified hazards could be included in the next plan update. 3) The methodology on how loss estimates are projected could be expanded to give the reader a more informed perspective on how potential losses were determined.	1) A thorough review of hazard events was conducted between 2018-2024. 2) Chapter 4: Vulnerability and Impacts Assessment is a very detailed analysis for each of the identified hazards. 3) The 2024 planning process involved HAZUS which includes a detailed discussion on methodology used to determine potential losses.

	and figures to enhance the hazard profiles in order to enable readers to better understand the hazards and their potential impacts.		
C: Mitigation Strategy	1) The City of Hermosa Beach appears to have a clear vision of its future goals, strategies, and responsibilities to the regional area and for future considerations. 2) The capabilities assessment is comprehensive and presented in a succinct and easy-to-read and understand table. 3) Some of the mitigation actions (i.e., response) can be integrated with existing local authorities, policies, programs, plans, and resources, potentially making them easier to implement. 4) The mitigation strategy addresses all hazards profiled and provides a good template for future hazard mitigation efforts to expand upon.	1) Future iterations of the hazard mitigation plan for this jurisdiction should include additional potential implementation steps for prioritized mitigation actions.	1) Chapter 5: Mitigation Strategies contains a comprehensive list of mitigation action items by hazard. Each action item is tied to the source policy document (e.g., CIP) which provides additional details often including maps and designs.
D: Plan Update, Evaluation, and Implementation	1) The plan includes a thorough discussion of the process undertaken to update the previous version of the City's hazard mitigation plan. 2) The status of the previously recommended mitigation actions is incorporated into the plan document, which helps to set the stage for the current mitigation strategy.	1) The plan could discuss barriers or obstacles to the successful implementation or completion of mitigation actions, and could provide possible solutions for overcoming these and associated risks.	1) That information is now included at the end of the Chapter 1: Planning Process – Expanding and Improving Capabilities Assessment.

Organizing Resources

FEMA suggests that resources are the city's partners, data resources, plans and studies, and technical assistance. The planning process is powered by city staff, stakeholders and volunteers from across the private, public and non-governmental sectors.

Data resources, plans, and studies are discussed later in this Chapter under **Using Existing Data**. Also, FEMA's HAZUS loss projection software was utilized in the earthquake risk assessment. See the Risk Assessment – Earthquake Profile for HAZUS information and mapping.

The city's capabilities to support mitigation activities are discussed in this Chapter under **Capability Assessment**.

The planning team is the core group of people responsible for:

- Developing and reviewing drafts of the plan
- Informing the risk assessment
- Developing the mitigation goals and strategy
- Submitting the plan for local adoption

Adding in a diverse array of planning team members can create a comprehensive view of how threats and hazards affect:

- Economic development
- Housing, health and social services
- Infrastructure
- Natural and cultural resources
- Underserved communities
- Socially vulnerable populations

Hermosa Beach chose to build a Planning Team from city department staff and county with expertise about the community's assets as defined by FEMA to include people, structures, community lifelines, economy, and other assets. Other assets include natural, historic, and cultural resources as well as activities that have value to the community. The table below aligns the departments represented on the Planning Team with the assets:

Table 1.2: Planning Team Technical Expertise

	Assets				
	People	Structures	Community Lifelines	Economy	Other Assets
City of Hermosa Beach					
City Manager's Office	X	X	X	X	X
Community Development	X	X	X	X	X
Police	X		X		
Public Works	X	X	X	X	
Los Angeles County					
Fire Department	X	X	X		
Disaster Management Area G Coordinator	X	X	X		

The Planning Team worked with Emergency Planning Consultants to create the updated plan. Planning Team members were sent email invitations on August 1, 2023, announcing the purpose of the Team and overall schedule. The city department and county representatives on the Planning Team served as active stakeholders and contributors to the plan update. Throughout the plan development process, the Team confirmed the planning approach, drafted and reviewed content, made revisions, and engaged members of the public. As indicated below, the meetings were designed to maximize contributions from the Team. Insights, opinions, and facts were gathered ranging from hazard history and rankings, capabilities, ongoing and future mitigation activities, and opportunities to engage the public through existing venues and meetings.

Planning Team members participated in a total of 4 Planning Team meetings.

- Planning Team Meeting #1 was facilitated by the consultant who provided an overview of hazard mitigation planning and an initial hazard assessment. The meeting included a PowerPoint with hazard-related information from the City's General Plan and earthquake simulation videos. Also, the Planning Team identified the hazards to be included in the HMP and completed the Calculated Priority Risk Index for those hazards. The requirements for community outreach were discussed along with the use of existing venues and public forums including City Council, and Public Works Commission meetings, as well as Senior Center events, and scheduled street fairs. Also discussed was the need for a survey to gather information on knowledge of hazards and levels of preparedness. The final task was to review the 2018 Plan Review Tool's "Strengths and Opportunities for Improvement". Consideration was given to each comment and agreements made on moving forward. The agreements are identified as "2024 Solutions" on **Table 1.1**.

- Planning Team Meeting #2 was facilitated by the consultant who introduced the HAZUS maps and reports. Also, a PowerPoint was shared with the Planning Team on the categories of mitigation activities. A scoring system was shared with the Team for ranking "priority, benefit, and cost". The consultant led the Team through the 2018 Mitigation Action Items to capture updates and status. Consultant also shared draft of the "Capability Assessment" which was gathered from the city's website and budget. Additionally, the draft "Hazard Proximity to Critical Facilities" table was shared showing the hazard ratings for each facility. The consultant requested assistance on gathering information for each facility including number of buildings, staff assigned, property value, and content value.

- Planning Team Meeting #3 was facilitated by the consultant who shared the updated Mitigation Actions Matrix in advance of the meeting. The Planning Team continued in its update to the 2018 action items. Also, the consultant shared policies and actions out of the City's Capital Improvement Program and General Plan – Public Safety Element that related to hazard mitigation. The Planning Team selected the policies and actions they wanted included in the 2024 Mitigation Actions Matrix.

- Meeting #4 was facilitated by the consultant who shared a copy of the Initial Draft Plan in advance of the meeting. The Team was encouraged to read the entire document in advance of the meeting – particularly the Mitigation Action Matrix items assigned to their own department. The consultant encouraged comments, corrections, and overall thoughts on the document. The Team was told that the information would be gathered into the First Draft Plan which would be made available to the public and stakeholders during the community outreach process.

Table 1.3 below documents the project tasks and level of participation of each of the Planning Team members.

Table 1.3: Planning Team Level of Participation

Agency/Name	Research and Writing of Plan	Planning Team Meeting 1: September 7, 2023	Planning Team Meeting 2: October 12, 2023	Planning Team Meeting 3: October 18, 2023	Planning Team Meeting 4: November 15, 2023	Planning Team Commented on Initial Draft Plan	Outreach Strategy Meeting: November 30, 2023	Survey on Social Media, E-Newsletter and on Website	City Leadership Team Reviewed Initial Draft Plan	Community Forum: Public Works Commission	Post Hazard Mitigation Overview and First Draft Plan on Website	Distribute Invitation to Public and Stakeholders	Incorporate Input from Public and Stakeholders into the Second Draft Plan	Submit Second Draft Plan to Cal OES/FEMA for Approvable Pending Adoption	Post Final Draft Plan in Advance of City Council Meeting	Present Final Draft Plan to City Council at Public Meeting for Plan Adoption	Submit Proof of Adoption to FEMA for Final Approval	Incorporate FEMA Approval into Final Plan
Hermosa Beach Planning Team																		
Angela Crespi, Chair*	X				X	X	X		X	X	X	X	X					
Margaret Talamantes	X				X	X	X	X				X						
Brian Bennett	X				X	X												
John Cordova*	X	X							X									
Israel Estrada	X	X	X	X	X	X												
Alexandria Hildebrand*	X	X	X	X	X	X			X									
Guillermo Hobelman	X	X		X	X	X												
Doug Krauss*	X		X	X	X	X			X									
Joanne Loeza	X	X		X		X												
Lucho Rodriguez*	X	X	X		X	X			X	X								
Sara Russo*					X	X	X		X		X							
Brandy Villanueva	X	X			X	X												
Ana Tenorio					X	X												
* Indicates Planning Team members who also serve on the Hermosa Beach Leadership.																		
Hermosa Beach Leadership Team																		
Ann Yang									X									
Brian Sousa									X									
Carrie Tai									X									

Agency/Name	Research and Writing of Plan	Planning Team Meeting 1: September 7, 2023	Planning Team Meeting 2: October 12, 2023	Planning Team Meeting 3: October 18, 2023	Planning Team Meeting 4: November 15, 2023	Planning Team Commented on Initial Draft Plan	Outreach Strategy Meeting: November 30, 2023	Survey on Social Media, E-Newsletter and on Website	City Leadership Team Reviewed Initial Draft Plan	Community Forum: Public Works Commission	Post Hazard Mitigation Overview and First Draft Plan on Website	Distribute Invitation to Public and Stakeholders	Incorporate Input from Public and Stakeholders into the Second Draft Plan	Submit Second Draft Plan to Cal OES/FEMA for Approvable Pending Adoption	Post Final Draft Plan in Advance of City Council Meeting	Present Final Draft Plan to City Council at Public Meeting for Plan Adoption	Submit Proof of Adoption to FEMA for Final Approval	Incorporate FEMA Approval into Final Plan
Mick Gaglia									X									
Joseph San Clemente									X	X								
Landon Phillips									X									
Laura MeCoy									X									
Leo Zalyan									X									
Lisa Nichols									X									
Myra Maravilla									X									
Nick Shattuck									X									
Patrick Donegan									X									
Paul LeBaron									X									
Reanna Guzman									X									
Ryan Walker									X									
Suja Lowenthal									X									
Vanessa Godinez									X									
Viki Copeland									X									
Emergency Planning Consultants																		
Carolyn Harshman	X	X	X	X	X		X			X				X				
Jill Caputi	X																	

Q&A | ELEMENT A: PLANNING PROCESS | A1-a.

Q: Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved? (Requirement 44 CFR § 201.6(c)(1))

A: See **Table 1.4** below.

Table 1.4: Project Timeline

Tasks	September 2023	October	November	December	January 2024	February-August	September	October	November	December	January 2025	February	March
Planning/Development Process and Organize Resources													
Initial Draft, First Draft, Second Draft, Third Draft, Final Draft, Final	X	X	X	X	X	X	X	X	X	X	X	X	X
Planning Team Meeting #1 LHMP Overview and Initial Hazard Briefing	X												
Planning Team Meeting #2 HAZUS and Status of 2018 Mitigation Action Items		X											
Planning Team Meeting #3 Future Mitigation Action Items		X											
Planning Team Meeting #4 Review Initial Draft Plan			X										
Planning Team provides input to the Initial Draft Plan			X										
Outreach Strategy Meeting			X										
Encourage Public Participation in Household and Business Mitigation Activities (Social Media)				X									
Present Revised Initial Draft to City's Leadership Team				X									
Solicit General Public and External Organization input to First Draft Plan					X								
Posting of Hazard Mitigation Overview on Website					X								
Community Forum - Public Works Commission					X								
Risk Assessment													
Conduct Risk and Vulnerability Assessment	X												
Prepare HAZUS and Critical Asset Maps	X												
Prepare Capability Assessment	X												
Hazard Mitigation Strategy													
Update Mitigation Actions	X	X											
Prepare New Mitigation Actions	X	X											
Include Monitoring, Evaluating and Updating the Plan	X	X											
Plan Maintenance Process													
Submit Second Draft Plan to Cal OES/FEMA. Complete Mandated Revisions.									X	X	X	X	
Receive FEMA's Approvable Pending Adoption												X	
Post and Conduct City Council Meeting to Adopt the Final Draft Plan												X	
Submit Proof of Adoption to FEMA													X
Receive FEMA Final Approval													X
Incorporate FEMA Final Approval into Final Plan													X

Plan Writing

An Initial Draft Plan was prepared by the consultant with considerable input from the Planning Team. The Initial Draft Plan was distributed in advance of the fourth meeting of the Planning Team. The day of the meeting, the consultant facilitated a discussion of the Initial Draft Plan while soliciting input, corrections, and other suggestions from the Planning Team.

With amendments gathered from Planning Team Meeting #4, the First Draft Plan was ready for notice and distribution to the general public, external agencies, and other stakeholders. Input gathered during the community outreach took place during the Plan Writing Phase and was critical to ensuring as many perspectives as possible. Also, sharing and gathering input served as an excellent means to enlist local champions interested in mitigation opportunities regarding their own homes and businesses.

After documenting the community outreach efforts and information gathered on the First Draft Plan, the Second Draft Plan was ready for submission to Cal OES and FEMA along with a request for a formal review and a determination of "approvable pending adoption". Throughout the formal review process, the Planning Team and consultant completed amendments to the Plan as mandated by Cal OES and FEMA.

Upon receipt of FEMA's Approvable Pending Adoption notice, the Final Draft Plan will be posted in advance of the Hermosa Beach City Council public meeting. The purpose of the meeting will be to provide another public forum where additional comments can be gathered from the Council and attendees. The public meeting will include presentation of a staff report and a PowerPoint outlining the Planning Process and Benefits of Hazard Mitigation. Following discussion and adoption by the City Council, proof of adoption will be forwarded to FEMA along with a request for a Letter of Approval. The FEMA Letter of Approval will be included in the Final Plan. The planning process described above is portrayed below in **Table 1.5**:

Q&A | ELEMENT A: PLANNING PROCESS | A2-a.
Q: Does the plan identify all stakeholders involved or given an opportunity to be involved in the planning process, and how each stakeholder was presented with this opportunity? (Requirement 44 CFR § 201.6(b)(2)) **A:** See **Table 1.5** below.

Table 1.5: Summary of Plan Writing, Adoption, Approval, and Implementation

PLAN WRITING, ADOPTION, APPROVAL, AND IMPLEMENTATION				
Plan Writing (Initial Draft Plan & First Draft Plan)	**Plan Formal Review (Second Draft Plan)**	**Plan Adoption Phase (Final Draft Plan)**	**Plan Approval Phase (Final Plan)**	**Plan Implementation Phase**
• Based on research and input gathered during Planning Team meetings, consultant prepared the Initial Draft Plan • Input to the Initial Draft Plan from the Planning Team meeting #4 incorporated into the First Draft Plan • Public and stakeholders invited to provide input to the First Draft Plan via mail, email, web posting, and social media • Input from public and stakeholders incorporated into the Second Draft Plan	• Second Draft Plan was sent to Cal OES for formal review • Consultant and Planning Team addressed revisions mandated by Cal OES • Public and stakeholders invited to engage via posting of video and survey • Cal OES forwards the Plan to FEMA for review • FEMA issues Approvable Pending Adoption	• Post public notice of City Council meeting along with the access to the Final Draft Plan • Final Draft Plan distributed to City Council in advance of meeting • Staff Presents Final Draft Plan to City Council along with resolution for adoption • City Council adopts Final Draft Plan	• Submit Proof of Adoption to FEMA with request for final approval • Receive FEMA Letter of Approval • Incorporate FEMA approval and City Council resolution into the Final Plan	• Conduct annual Planning Team implementation meetings • Integrate mitigation action items into budget and other funding and strategic documents

Q&A | ELEMENT A: PLANNING PROCESS | A2-a.

Q: Does the plan identify all stakeholders involved or given an opportunity to be involved in the planning process, and how each stakeholder was presented with this opportunity? (Requirement 44 CFR § 201.6(b)(2))

A: See **Stakeholder Outreach** below.

Stakeholder Outreach

The planning process was powered by city staff, stakeholders and volunteers from across the private, public and non-governmental sectors. These resources were needed to assist with technical expertise, historical knowledge, and to provide insights on hazards and mitigation strategies. Below, the stakeholder categories are defined as in the Handbook. As they apply to Hermosa Beach, the specific engagements are indicated in *italics*:

- **Local and Regional Agencies Involved in Hazard Mitigation activities**. Examples include public works, emergency management, local floodplain administration and Geographic Information Systems (GIS) departments.

Planning Team invitations were sent to applicable City and County departments. The invitation included an overview of the role of the Team and the time requirements of 4 meetings as well as reviewing the Initial Draft Plan. Team members were also informed of the video posted and encouraged to participate in the survey. Also, they were encouraged to attend public forums including the Public Works Commission, and City Council meetings.

- **Agencies that have the Authority to Regulate Development**. Examples include zoning, planning, community and economic development departments, building officials, planning commission, and other elected officials.
  Planning Team invitations were sent to applicable City and County departments as well as several stakeholders. The Public Works Commission and City Council were informed of the planning process throughout the community outreach strategy with invitations to view the video and participate in the survey as well as to provide input on the Draft Plan prior to submission for formal review by Cal OES and FEMA. The same entities were also invited to provide input prior to the City Council adoption meeting.
- **Neighboring Communities**. Examples include adjacent local governments, including special districts, such as those that are affected by similar hazard events or may share a mitigation action or project that crosses jurisdictional boundaries. Neighboring communities may be partners in hazard mitigation and response activities, or maybe where critical assets, such as dams, are located.
  All neighboring communities and servicing special districts were informed of the planning process through the community outreach strategy with invitations to view the video and participate in the survey as well as to provide input on the First Draft Plan prior to submission for formal review by Cal OES and FEMA. The same entities were also invited to provide input prior to the City Council adoption meeting.
- **Businesses, Academia and other Private Organizations**. Examples include chambers of commerce, institutions of learning, private utilities or major employers that sustain community lifelines (providers of vital services in a community that when stabilized enable all other aspects of society to function). More information on "community lifelines" is available in this Chapter under **Capabilities Assessment**.
  These entities were informed of the planning process through the community outreach strategy with invitations to view the video and participate in the survey as well as to provide input on the Draft Plan prior to submission for formal review by Cal OES and FEMA. The same entities were also invited to provide input prior to the City Council adoption meeting.
- **Nonprofit Organizations and Community-Based Organizations.** These organizations work directly with and/or provide support to underserved communities and socially vulnerable populations, among others. It is key to bring partners to the table who can speak to the unique needs of these groups. Examples include housing, healthcare and social services agencies.
  Throughout the planning process, Planning Team representatives from the City Manager's Office provided insights and issues pertinent to vulnerable populations. With their assistance, the NPOs and CBOs were informed of the planning process through the community outreach strategy and invited to provide input to the First Draft Plan prior to submission for formal review by Cal OES and FEMA.

Stakeholder Engagement

Utilizing the FEMA stakeholder categories discussed above, the following table identifies the stakeholder categories and entities that were invited via email or mail to participate in the planning process. In addition to considerable outreach via social media, the stakeholders were invited to participate by: 1) reading and providing input on the First Draft Plan, and 2) viewing and sharing

the Hazard Mitigation Overview Video and completing the Hazard Mitigation Survey. Details on these engagement opportunities are discussed later in this chapter under "Community Outreach Strategy" and outreach materials can be found in the **Attachments**.

Q&A | ELEMENT A: PLANNING PROCESS | A3-a.
Q: Does the plan document how the public was given the opportunity to be involved in the planning process and how their feedback was included in the plan? (Requirement 44 CFR § 201.6(b)(1)) **A:** See **Public Engagement** below.

Public, Underserved Communities, and Socially Vulnerable Population Outreach

Public Engagement

Throughout the entire planning process, the departments represented on the Planning Team served as stakeholders while also making a concerted effort to gather input and ideas from other stakeholders and the public. Additionally, the Planning Team went out of its way to identify and include the needs of the City's underserved communities and socially vulnerable populations. Furthermore, special attention during the hazard research and mapping analysis was given to climate vulnerability and impacts on underserved communities and socially vulnerable populations.

The Planning Team developed a comprehensive Community Outreach Strategy that included a broad range of engagement venues and informative materials to gather information critical to the planning process and the writing of the plan.

Underserved Communities Engagement

Underserved communities are defined by federal Executive Order 13985 On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government. They are "populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life." As seen **in Map 1.1** below, there are no underserved communities located within Hermosa Beach.

Map 1.1: Hermosa Beach Underserved Communities
Source: Climate and Economic Justice Screening Tool

Socially Vulnerable Population Engagement
As detailed in Chapter 4: Vulnerability and Impacts, an individual's vulnerability to disaster is influenced by many factors. According to CDC's Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Group, the following six categories are among the most commonly accepted factors: socioeconomic status, age, gender, race and ethnicity, English language proficiency, and medical issues and disability. These categories were used to analyze the vulnerability of people in Hermosa Beach. The compounding effects of these factors will further impact an individual's ability to withstand the effects of disasters and other hazards.

Utilizing an online tool known as the Social Vulnerability Index developed by the CDC, the Planning Team was able to better understand the location and degree of social vulnerability of the entire community. The next step was to identify the proximity of the hazards to the most vulnerable population.

Map 1.2 below depicts the overall social vulnerability for the City of Hermosa Beach. The census tracts in Hermosa Beach are in the 10th percentile for overall SVI rating. This means that the census tracts are more vulnerable than only 10% of the other census tracts in California. This equates to Hermosa Beach having a low SVI rating.

Map 1.2: Hermosa Beach Social Vulnerability Index - High
Source: CDC/ATSDR Social Vulnerability Index, 2024

Table 1.6: Outreach Methods and Activities for Stakeholders, Public, and Socially Vulnerable Populations

Outreach Methods and Activities (specific dates identified in activity descriptions following Table 1.6)	**Stakeholder Categories**					**Public**	**Socially Vulnerable Populations**
	Local and Regional Agencies Involved in Hazard Mitigation	**Agencies with Authority to Regulate Development**	**Neighboring Communities (including adjacent local governments and special districts)**	**Businesses, Academia, and Community Lifelines**	**Nonprofit Organizations, Community-Based Organizations working with Socially Vulnerable Populations**		
Public Forums – City Council, Public Works Commission, City's Emergency Advisory Board (Note: all of these participants are Hermosa Beach residents)	X	X	X	X	X	X	X
Flyer – shared via Community E-newsletter, Social Media, and posted at: • City Hall Complex	X	X	X	X	X	X	X
Social Media – Facebook, X, and Instagram including announcement of the survey, First Draft Plan, and video.	X	X	X	X	X	X	X
E-Newsletter – Hermosa Beach weekly Monday newsletter.	X	X	X	X	X	X	X
Initial Draft Plan – Reviewed by Planning Team (November 2023). Updated version reviewed by City's Leadership Team (December 2023)	X	X	X	X	X	X	X
First Draft Plan – Email/mail sent to Stakeholder List directing to dedicated website (January 2024) along with invitation to read and provide suggestions and questions.	X	X	X	X	X	X	X

The following are details about the various outreach activities:

Survey, Video and First Draft Plan

Survey

During the first community outreach activity, the Planning Team announced the availability of the Preparedness & Mitigation Survey. The City's website, social media, and the community E-Newsletter were utilized to seek input from the public, and socially vulnerable populations. Also, emails or mailed invitations were sent to stakeholders. The survey was available from December 4-18, 2023. The survey flyer was posted at the following locations:

- Public Works
- Finance/Cashier's
- Community Development
- Police
- Los Angeles County – Hermosa Beach Branch Library
- Community Resources
- City Hall Bulletin Board

See **Attachments** for all outreach methods, survey, and survey results.

The survey was available both online and in paper form. The survey aimed to gauge community members' familiarity with natural hazards that could most significantly impact Hermosa Beach. Additionally, it inquired whether respondents identified as part of a social vulnerability group. Social media was sent to a total of 1,900 accounts. The community E-Newsletter was distributed on December 1, 2023, to 9,903 recipients with 3,503 opens. On December 15, 2023, the community's E-Newsletter was distributed to 10,008 with 5,430 opens. A total of 29 people responded to the survey. Below is a summary of the survey responses.

- The vast majority of respondents consider themselves somewhat prepared for a natural hazard.
- The largest number are concerned most about earthquakes followed by climate change.
- When asked about social vulnerability, the greatest number of responses was for children followed by individuals with a disability

First Draft Plan and Hazard Mitigation Overview Video

During the second community outreach, the First Draft Plan and Hazard Mitigation Overview Video were announced and posted on the City's website from January 16-February 5, 2024, along with a request to forward any comments or questions to the Planning Team Chair Angela Crespi. A hard copy of the First Draft Plan was available upon request. See **Attachments** for the Video slides and script.

Public Forums

City Council Meetings

On November 12, 2023, the City's Emergency Management Coordinator made a presentation to the Council on National Preparedness Month, including a status report on the HMP update process. On January 23, 2024, the City Manager's Update to City Council included an announcement that the First Draft Plan had been reviewed by the City's Leadership Team in December 2023 and was now ready for input from the public and stakeholders.

Public Works Commission Meeting
On January 17, 2024, EPC President Carolyn Harshman presented a Hazard Mitigation Overview PowerPoint including announcement of the availability of the First Draft Plan during a monthly meeting of the City's Public Works Commission. The purpose of the Public Works Commission is to consider and make recommendations to the City Council on all capital improvement projects, assist in the development and updating of design guidelines for public improvements, and address other matters referred to the Commission by the City Council. Five members are appointed by the City Council to stagger four-year terms. Comments received during and following the Commission meeting were included in the Second Draft Plan **Attachments – Public and Stakeholder Input to First Draft Plan**.

Q&A | ELEMENT C. MITIGATION STRATEGY | C1-a.
Q: Does the plan describe how the existing capabilities of each participant are available to support the mitigation strategy? Does this include a discussion of the existing building codes and land use and development ordinances or regulations? (Requirement 44 CFR § 201.6(c)(3)) **A:** See **Capability Assessment**, **Table 1.7** below.
Q&A | ELEMENT D: PLAN MAINTENANCE | D3-a.
Q: Does the plan describe each community will follow to integrate the ideas, information and strategy of the mitigation plan into other planning mechanisms? (Requirement 44 CFR § 201.6(c)(4)(ii)) **A:** See **Table 1.7** below.

Capability Assessment – Existing Processes and Programs

The City of Hermosa Beach 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 the City of Hermosa Beach's operational guidelines. 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.

The City will incorporate mitigation planning as an integral component of daily operations. This will be accomplished by the Planning Team members with their respective departments to integrate mitigation strategies into their planning documents and operational guidelines. FEMA identifies four types of capabilities: Planning and Regulatory, Administrative and Technical, Financial, and Education and Outreach. Following are explanations drawn from "Beyond The Basics" a website developed as part of a multi-year research study funded by the U.S. Department of Homeland Security, Coastal Resilience Center and led by the Center for Sustainable Community Design within the Institute for the Environment at the University of North Carolina at Chapel Hill and the Institute for Sustainable Coastal Communities at Texas A&M University. This excellent resource ties FEMA regulations together with best practices in hazard mitigation.

Planning and Regulatory
Planning and regulatory capabilities are based on the implementation of ordinances, policies, local laws and State statutes, and plans and programs that relate to guiding and managing growth and development. Examples of planning capabilities that can either enable or inhibit mitigation include comprehensive land use plans, capital improvements programs, transportation plans, small area development plans, disaster recovery and reconstruction plans, and emergency preparedness and response plans. Plans describe specific actions or policies that support community goals and drive decisions. Likewise, examples of regulatory capabilities include the enforcement of zoning ordinances, subdivision regulations, and building codes that regulate how

and where land is developed and structures are built. Planning and regulatory capabilities refer not only to the current plans and regulations, but also to the community's ability to change and improve those plans and regulations as needed.

Administrative and Technical
Administrative and technical capability refers to the community's staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions. It also refers to the ability to access and coordinate these resources effectively. Think about the types of personnel employed by each jurisdiction, the public and private sector resources that may be accessed to implement mitigation activities in your community, and the level of knowledge and technical expertise from all of these sources. These include engineers, planners, emergency managers, GIS analysts, building inspectors, grant writers, floodplain managers, and more. For jurisdictions with limited staff resources, capacity should also be considered; while staff members may have specific skills, they may not have the time to devote themselves to additional work tasks.

The planning team can identify resources available through other government entities, such as counties or special districts, which may be able to provide technical assistance to communities with limited resources. For example, a small town may turn to county planners, engineers, or a regional planning agency to support its mitigation planning efforts and provide assistance. For large jurisdictions, reviewing administrative and technical capabilities may involve targeting specific staff in various departments that have the expertise and are available to support hazard mitigation initiatives. The degree of intergovernmental coordination among departments also affects administrative capability.

Financial
Financial capabilities are the resources that a jurisdiction has access to or is eligible to use to fund mitigation actions. The costs associated with implementing mitigation activities vary. Some mitigation actions, such as building assessment or outreach efforts, require little to no costs other than staff time and existing operating budgets. Other actions, such as the acquisition of flood-prone properties, could require substantial monetary commitment from local, state, and federal funding sources. Some local governments may have access to a recurring source of revenue beyond property, sales, and income taxes, such as stormwater utility or development impact fees. These communities may be able to use the funds to support local mitigation efforts independently or as the local match or cost-share often required for grant funding.

Education and Outreach
This type of capability refers to education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information. Examples include fire safety programs that the Los Angeles County Fire Department delivers to students at local schools; and participation in community programs, such as Firewise and StormReady.

Table 1.7 below includes a broad range of capabilities within the City of Hermosa Beach to successfully accomplish mitigation.

Table 1.7: Capability Assessment - Existing Processes and Programs (Source: City of Hermosa Beach Website, 2023)

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
City of Hermosa Beach Departments					
X	X			City Attorney	Appointed by the Hermosa Beach City Council, the City Attorney functions as legal counsel for civil matters, providing legal advice to the City Council and operating departments. The City of Hermosa Beach contracts with the law firm Best, Best & Krieger for City Attorney legal services
X	X			City Prosecutor	The City Prosecutor prosecutes criminal misdemeanor cases occurring within the city limits of Hermosa Beach and interacts with the Police Department regarding potential cases.
X	X		X	City Clerk	The City Clerk administers Federal, State, and Local procedures through which local government representatives are selected. Assists candidates in meeting their legal responsibilities before, during, and after an election. From election pre-planning to certification of election results and filing of final campaign disclosure documents, the Clerk manages the process, which forms the foundation of our democratic system of government. Additionally, the Clerk prepares the legislative agenda, verifies legal notices have been posted or published, and completes the necessary arrangements to ensure an effective meeting. The Clerk is entrusted with the responsibility of recording the decisions of the legislative body. The Clerk also oversees the preservation of the public record.
X	X	X	X	City Manager	The City Manager is appointed by the City Council and is the Chief Executive of City operations. Key responsibilities are to manage all municipal activities, advise the City Council on the City's financial and capital improvement needs, enforce all laws and ordinances, manage the City's properties, appoint department heads and classified civil service employees, represent management in employer employee relations, and coordinate intergovernmental relations.
X	X			City Treasurer	The City Treasurer administers the City's investment portfolio, currently $36.1 million dollars, including investment of idle funds and bond proceeds, in compliance with the City's Investment Policy which is adopted by the City Council, and places emphasis on safety and liquidity.
X	X		X	Community Development	The Community Development Department is comprised of the Building & Safety Division, Code Enforcement, and the Planning Division. The Department administrates regulations relating to property development, land use, and property maintenance, to ensure community safety and well-being.
	X		X	Community Resources - Parks and Recreation	It is the mission of the Community Resources Department to be the steward of parks, open space and natural resource lands and waterways which are designated for the use and enjoyment of the public for recreation and leisure activities; to provide recreational resources, programs, and activities throughout the City of Hermosa Beach and promote preservation and

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
					interpretation of historical, cultural resources, the natural environment and human resources.
X	X	X	X	Public Works	The Public Works Department Administration and Engineering Division is based at City Hall and is responsible for engineering and oversight of the City's Capital Improvement Program, public counter services including plan check and permit issuance, inspection of construction in the public right of way, contracts and work order management, grant management, special event coordination and other services. Staff also supports the City's Public Works Commission.
	X	X	X	Finance	The Finance Business Unit is responsible for managing the City's financial operations in accordance with generally accepted accounting principles, laws and established policies and plans. The department consists of two divisions to accomplish its objectives: Finance Cashier, Finance Administration
X	X		X	GIS/IT Analyst	GIS and IT services are managed by the GIS/IT Analyst assigned to the City Manager's Office.
	X			Human Resources	The Human Resources Department is responsible for the recruitment of City employees, the maintenance of employee benefits, and labor relations. Along with supporting the City's Civil Service Board, the Human Resources Department also administers the Risk Management program for the City. The Risk Management function includes public liability and workers' compensation claims administration.
X	X		X	Police	The men and women of the Hermosa Beach Department proudly serve the City of Hermosa Beach and are committed to provide excellent service with every contact. The Police Department's mission statement, "We exist so Hermosa Beach can be the safest little beach city through partnerships, integrity and excellent service" is highlighted in the Police Department web page. The Police Department looks forward to partnering with the community to keep Hermosa Beach safe.
X	X		X	Office of Emergency Management	The purpose of the Office of Emergency Management is to prepare city staff, residents, businesses and visitors in emergency preparedness to decrease the impacts of potential disasters in the community. The Office of Emergency Management is managed by the full-time Emergency Services Coordinator who reports directly to the City Manager.
City of Hermosa Beach Commissions					
X	X		X	Planning Commission	The Planning Commission performs duties as prescribed by applicable state and local laws. The primary purpose of the Commission is to maintain and enhance the environment of the community, which entails advance or long-range planning (updating of the General Plan and specific elements), current planning (short-range projects), and land use controls (administering to the code and review of all subdivisions and zoning petitions). The Commission serves as an advisory board to the City Council on all matters pertaining to

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
					zoning, conditional use permit process, etc. The Planning Commission is staffed by the Community Development Department.
X	X	X		Public Works Commission	The Public Works Commission reviews and makes recommendations to the City Council on all capital improvement projects, assists in the development and updating of design guidelines for public improvements, and addresses other matters referred to the Commission by the City Council. Five members are appointed by the City Council to stager four-year terms. Members must be qualified electors of the City. The Commission is staffed by the Public Works Department.
X	X		X	Parks, Recreation & Community Resources Advisory Commission	The Parks, Recreation and Community Resources Advisory Commission: • Serves in an advisory capacity to the City Council in all matters pertaining to the Community Resources Department; • Cooperates with other governmental agencies and civic groups on the advancement of sound leisure, cultural, social services and educational programming; • Provides guidance and approvals for certain special events held within the City; and • Formulates policies on the services, programs and lease agreements of the Department, subject to approval of the City Council.
X	X		X	Emergency Preparedness Advisory Board	Work with City to take whole community approach to community emergency preparedness. Promote community readiness (e.g., shelter-in-place/evacuation procedures, preparation of emergency preparedness kits/go-bags, networking for households with elderly or disabled individuals and/or pets, and training/involvement opportunities - First Aid/CPR, Hermosa Beach Community Emergency Response Team, etc.).
City of Hermosa Beach Plans and Policies					
X	X	X		Capital Improvement Program	The Capital Improvement Program (CIP) is the City's comprehensive plan to develop and maintain the City's capital facilities and infrastructure. Capital projects are usually of high cost, take a year or more to complete, and result in the creation of a capital asset. Included in the budget document is the detailed 2023-24 Capital Improvement Program, along with the high-level Five-Year Capital Improvement Program.
	X	X	X	Annual Budget	The Annual Budget and its associated review, update, and approval process provide a plethora of opportunities to explain detailed tasks, priorities, and spending allocations for the projects, programs, and equipment supporting the efforts of the city. Many of the ongoing mitigation items in the plan are supported through the Annual Budget.

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
X	X			Municipal Code	The Municipal Code is a complete set of City local regulations ranging from streets to police to parks to private development.
X	X			Zoning Ordinance	The Zoning Ordinance includes zoning laws and land use permits processes.
X	X		X	General Plan (General Plan)	The General Plan serves as the blueprint for planning and development in the City and indicates the community's vision for the future. Of particular importance to the HMP is the Public Safety Element which outlines the hazards posing significant threats as well as goals and policies to manage the threats. General Plan also includes the Housing Element, which contains policies for meeting the City's housing needs including permanent homes, group homes, and emergency shelters.
X	X		X	Emergency Operations Plan	The City of Hermosa Beach has updated its Emergency Operations Plan (EOP) to ensure the most effective and economical allocation of resources for the maximum benefit and protection of life, property, and the environment during an emergency
City of Hermosa Beach Community Lifelines (External)					
X			X	Beach Cities Transit	Beach Cities Transit provides fixed route and dial-a-ride transit service in the South Bay. BCT Line 109 connects Riviera Village, Hermosa, Manhattan, El Segundo, Green Line Stations, and the LAX Bus Center.
X			X	Torrance Transit	Torrance Transit operates one bus route through Hermosa Beach. Torrance Transit Line 13 operates between Redondo Beach Pier and Artesia A (Blue) Line Station, serving major destinations that include Hermosa Beach Pier, South Bay Galleria, Harbor Gateway Transit Center, Dignity Health Sports Park, and California State University, Dominguez Hills.
X			X	LA Metro	LA Metro provides local and regional rail and bus services to the Los Angeles region.
X			X	Caltrans	Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans carries out its mission with six primary programs: Aeronautics, Highway Transportation, Mass Transportation, Transportation Planning, Administration, and the Equipment Service Center.
X	X		X	Waste Collection – Athens Service	Contracted provider of residential and commercial waste collection and recycling services.
X	X	X	X	Los Angeles County	Provides a range of county-wide services including public health, transportation, animal control, courts, public records, property assessments, flood control, etc.
X	X	X	X	Adjoining Jurisdictions	Los Angeles County City of Redondo Beach City of Manhattan Beach
			X	School Districts	Hermosa Beach City School District (K-8) Redondo Beach Unified School District Manhattan Beach Unified School District

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
	X		X	American Red Cross	American Red Cross volunteers and staff work to deliver vital services – from providing relief and support to those in crisis, to helping others be prepared to respond in emergencies.
X	X		X	Southern California Edison	Provides the power grid to the Los Angeles region including generation systems, transmission systems, and distribution systems. Also, has power to initiate a Public Safety Power Shutoff.
	X		X	Southern California Gas Company	Southern California Gas Company is the natural gas provider for the area
	X		X	California Water Service	California Water Service is the water provider for the area.
				Safety and Security	
X	X		X	Los Angeles County Fire Department	Los Angeles County Fire Department provides contracted fire and emergency medical services (EMS) to the City of Hermosa Beach. Other services include business inspections and fire life and safety plan check assistance coordinated with the Community Development Department; special event inspections and film permit review coordinated with the Community Resources Department; and community and school event participation.
X	X		X	McCormick Ambulance Services	The City of Hermosa Beach has contracted with McCormick Ambulance, which works in partnership with Los Angeles County Fire Department to provide quick, efficient and effective emergency medical transportation services
				Food, Water Shelter	
				Food (Commercial Food Distribution, Commercial Food Supply Chain, Food Distribution Programs (e.g., Food Banks)	None
				Agriculture (Animals and Agriculture)	None
	X		X	Water (Drinking Water Utilities (intake, treatment, storage, and distribution), Wastewater Systems,	See California Water Service and Public Works

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
				Commercial Water Supply Chain)	
			X	Shelter (Housing (e.g., homes, shelters), Commercial Facilities (e.g., hotels)	Housing – See General Plan above Commercial (Hotels): Holiday Inn Express & Suites Hermosa Beach 125 CA-1, Hermosa Beach (310) 798-9898 Sea Sprite Hotel 1016 The Strand, Hermosa Beach (310) 376-6933 SW Beach Hotel 66 11th St, Hermosa Beach (310) 921-8637 ITS Surf City Hostel Hermosa Beach 26 Pier Ave, Hermosa Beach (310) 798-2323 Beach House 1300 The Strand, Hermosa Beach (310) 374-3001 Grandview Inn 55 14th St, Hermosa Beach (310) 374-8981 H2O Hermosa 1429 Hermosa Ave, Hermosa Beach (310) 442-2370 Hampton Inn and Suites Hermosa Beach 1530 Pacific Coast Hwy, Hermosa Beach (310) 318-7800 Quality Inn & Suites Hermosa Beach 901 Aviation Blvd, Hermosa Beach (310) 374-2666 Hotel Hermosa 2515 CA-1, Hermosa Beach (310) 318-6000
				Health and Medical	
X	X		X	Medical Care (Hospitals, Dialysis, Pharmacies, Long-Term Care Facilities, VA Health System, Veterinary Services, Home Care)	Veterinary Services: VCA Hermosa Animal Hospital 560 Pacific Coast Hwy, Hermosa Beach (310) 376-8819 VCA Coast Animal Hospital 1560 CA-1, Hermosa Beach (310) 372-8881 Home Health Care: A Precious Elder Home Care 2447 Pacific Coast Hwy #222, Hermosa Beach (310) 571-5852

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
					1Heart Caregiver Services 2447 Pacific Coast Hwy 2nd Floor, Hermosa Beach (310) 773-7207 Bright Horizons Home Health 1601 CA-1 #290, Hermosa Beach (800) 655-3666 Home Care Assistance Hermosa Beach 950-F, Aviation Blvd, Hermosa Beach (310) 857-4586 Assisted Living: Sunrise of Hermosa Beach 1837 East Pacific Coast Highway, CA-1, Hermosa Beach
X	X		X	Patient Movement (Emergency Medical Services)	See Los Angeles County Fire Department and McCormick Ambulance Services
				Fatality Management (Mortuary and Post-Mortuary Services)	
X	X		X	Public Health (Epidemiological Surveillance, Laboratory, Clinical Guidance, Assessment / Interventions / Treatments, Human Services, Behavior Health)	Public Health – see Los Angeles County above.
	X		X	Medical Supply Chain (Blood / Blood Products, Manufacturing of pharmaceutical, device, medical gases, Distribution, Critical Clinical Research, Sterilization, Raw Materials)	Blood / Blood Products – See American Red Cross above.
				Energy	

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
X	X		X	Power Grid (Generation Systems, Transmission Systems, Distribution Systems)	Power Grid – See Southern California Edison above.
				Communications	
				Alerts, Warnings, and Messages (Local Alert, Warning Ability, Access to IPAWS including WEA, EAS, NWR, and NAWAS Terminals)	ALERT South Bay (local) and FEMA IPAWS (regional / state)
				911 and Dispatch (Public Safety Answering Points, Dispatch)	See Police above
				Transportation	
				Highway / Roadway / Motor Vehicle (Roads, Bridges)	See Caltrans above See Los Angeles County above
				Mass Transit (Bus, Rail, Ferry)	See Beach Cities Transit, Torrance Transit, LADOT Commuter Express above
				Railway (Freight, Passenger)	None

Q&A | ELEMENT C: MITIGATION STRATEGY | C1-b.

Q: Does the plan describe each participant's ability to expand and improve the identified capabilities to achieve mitigation? (Requirement 44 CFR § 201.6(c)(3))

A: See **Expanding and Improving Capabilities** below.

Expanding and Improving Capabilities

Planning and Regulatory Capabilities – The City builds and maintains its own buildings and infrastructure and regulates all construction within the community as per the International Building Code. Development areas are identified in the General Plan Development Protocols, such as development review, are in place that ensure future development projects satisfy "substantial conformance" requirements with the General Plan and Zoning Ordinance. The City also has a Capital Improvement Program for public improvements. Some of the funding of future construction relies on successful bond measures where plans and justifications are shared with the public. See **Mitigation Actions Matrix** column "Expanding and Improving on Capabilities".

Administrative and Technical - Existing capabilities are typical for a medium-sized local government. The City already has grant writing and GIS capabilities along with mutual aid agreements, and a warning/notification system. Grant writing capabilities will continue to be especially important once the mitigation plan is approved by FEMA. That approval will trigger eligibility for a range of federal and state grants. Also, the City Council could task a sub-committee dedicated to land use matters and mitigation plan implementation. The Plan's opportunities for success will be increased by the Council's involvement. See **Mitigation Actions Matrix** column "Expanding and Improving on Capabilities".

Finance - All local governments have a broad range of funding sources. Taxation, impact fees, bonds, grants, in-kind donations, and philanthropic donations are included in the spectrum. As such, the City needs to keep these resources in mind for future mitigation activities. See **Mitigation Actions Matrix** column "Expanding and Improving on Capabilities".

Education and Outreach – Utilize existing community groups, local citizen groups, and non-profit organizations to support and encourage mitigation as well as home and business mitigation. Enlist the City Manager and Public Information Officer in learning and talking about the Hazard Mitigation Plan. See **Mitigation Actions Matrix** column "Expanding and Improving on Capabilities".

Q&A | ELEMENT A: PLANNING PROCESS | A4-a.

Q: Does the plan document what existing plans, studies, reports, and technical information were reviewed for the development of the plan, as well as how they were incorporated into the document? (Requirement 44 CFR § 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 Hermosa Beach Website

https://www.hermosabeach.gov/home
Applicable Incorporation: Department Information for Capability Assessment, City Profile, Budget

City of Hermosa Beach Hazard Mitigation Plan (2018)
https://www.hermosabeach.gov/home/showpublisheddocument/10608/637001018228830000
Applicable Incorporation: Information contributed to the City Profile and Hazard-Specific Sections

City of Hermosa Beach General Plan (2017)
https://www.hermosabeach.gov/our-government/community-development/plan-hermosa
Applicable Incorporation: Information about hazards contributed to the Community Profile, and Hazard-Specific Sections.

County of Los Angeles General Plan (2015)
Applicable Incorporation: Information about the planning area and geography used in Chapter 2: Community Profile and Hazard-Specific Chapters.

County of Los Angeles All-Hazards Mitigation Plan (2020)
Applicable Incorporation: Information about hazards in the County contributed to the Hazard-Specific Chapters.

State of California Hazard Mitigation Plan (2018)
Applicable Incorporation: Hazard identification information used in Chapter 2: Risk Assessment – Hazard Identification.

HAZUS Maps and Reports
Created by Emergency Planning Consultants
Applicable Incorporation: Numerous HAZUS maps and reports have been included in the Hazard-Specific Chapters.

National Flood Insurance Program
Applicable Incorporation: Community status used in Chapter 5: Urban Flood.

Local Flood Insurance Rate Maps
Applicable Incorporation: Information about FIRM included in Chapter 5: Urban Flood.

California Department of Forestry and Fire Protection (CAL FIRE)
Applicable Incorporation: Wildland fire hazard map in Chapter 7: Wildfire.

California Department of Conservation
Applicable Incorporation: Seismic hazards mapping used in Chapter 4: Earthquake.

U.S. Geological Survey (USGS)
Applicable Incorporation: Earthquake records and statistics used in Chapter 4: Earthquake.

Using HAZUS for Mitigation Planning (2018)
Applicable Incorporation: HAZUS information used in Chapter 3: Risk Assessment.

California's Fourth Climate Change Assessment: Los Angeles Region Report (2019)
Applicable Incorporation: Climate information used in Chapter 2: Community Profile.

Weather Spark
Applicable Incorporation: Weather information used in Chapter 2: Community Profile.

The Fifth National Climate Assessment (2023)
Applicable Incorporation: Climate considerations in each Hazard-Specific Chapter.

Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Groups (2015)
Applicable Incorporation: Social vulnerability information used in Chapter 2: Community Profile.

Guide to Expanding Mitigation: Making the Connection to Equity (2020)
Applicable Incorporation: Social vulnerability information used in Chapter 2: Community Profile.

How Climate Change Impacts each Type of Natural Disaster (2022)
Applicable Incorporation: Climate considerations in each Hazard-Specific Chapter.

Proceedings of the National Academy of Sciences (2021)
Applicable Incorporation: Probability findings included in Chapter 8: Epidemic / Pandemic / Vector-Borne Diseases

Federal Guidelines for Dam Safey (2004)
Applicable Incorporation: Dam Hazard Potential Classification

National Inventory of Dams (2024)
Applicable Incorporation: Dam Failure Local Conditions

Public Broadcasting Service (2022)
Applicable Incorporation: Earthquake Local Conditions

NOAA/National Weather Service: U.S. Tsunami Warning System
Applicable Incorporation: Tsunami Characteristics

Chapter 2: Community Profile

According to the City's website, the first official land survey was made in the year 1901 for the boardwalk on the Strand between Hermosa Avenue and Santa Fe Avenue; work on these projects commenced soon after. The boardwalk on the Strand was constructed of planks. The walk extended the entire length of the two-mile Strand. High tides sometimes washed away portions of this walkway. In 1914 part of it was replaced with cement. The remaining two thousand feet on the north end was finally completed with cement in 1926.

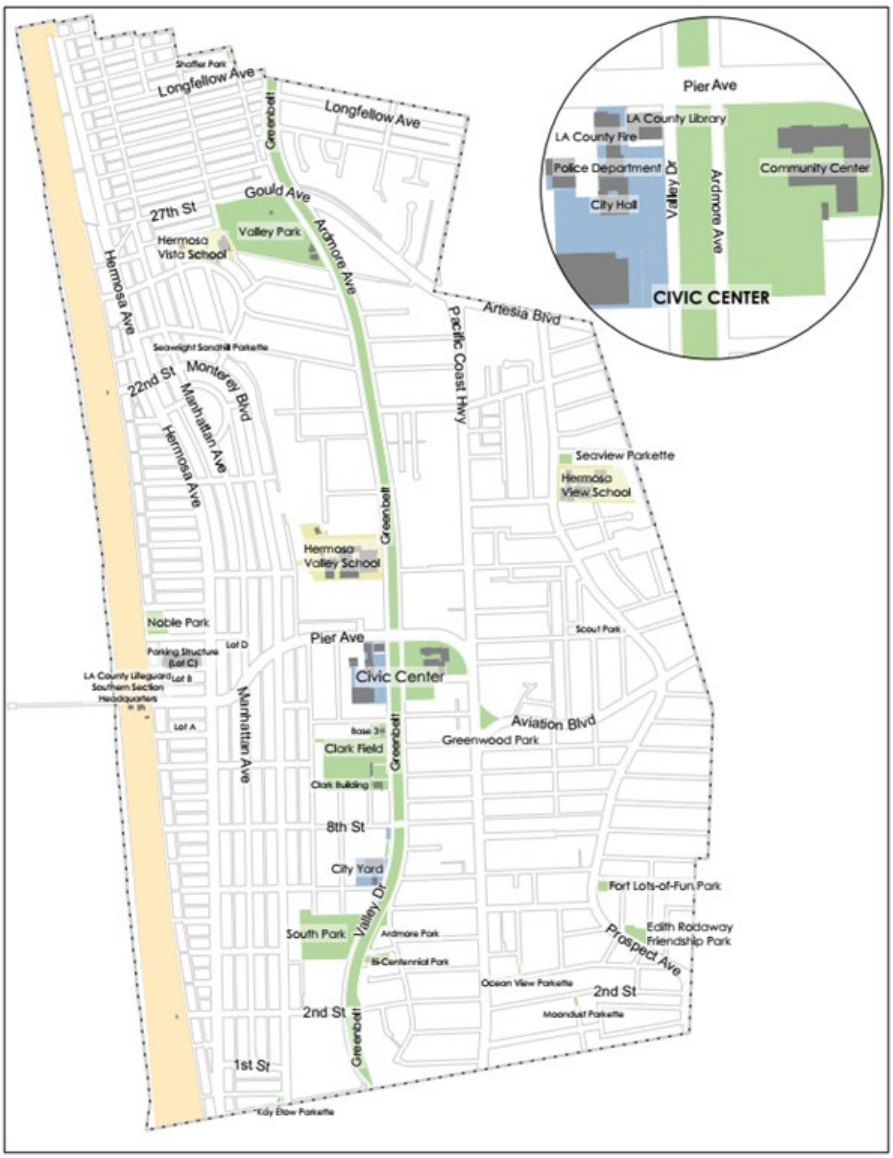
In 1904 the first pier was built. It was constructed entirely of wood, even the pilings and it extended five hundred feet out into the ocean. The pier was constructed by the Hermosa Beach Land and Water Company. In 1913 this old pier was partly washed away and later torn down and a new one built to replace it.

The first city election for city officers was held on December 24, 1906. The town incorporated and its charter was obtained from the state on January 14, 1907. At this time the City acquired ownership of its two mile stretch of ocean frontage. This was included in an original deed to the City from the Hermosa Beach Land and Water Company but it did not include the two hundred and ten feet on each side of the pier. The deed stated that it was to be held in perpetuity as a beach playground, free from commerce, and for the benefit not only the residents of Hermosa, but also for the sea lovers of Southern California. Hermosa Beach's original ideals are still reflected along the Strand and beach with ample public space for bike riding and beach play.

Geography and the Environment

Hermosa Beach is located along the southern end of Santa Monica Bay in Los Angeles County. Regional topographic features including the Santa Monica Bay and Mountains and the Palos Verdes Peninsula, serve as the backdrop to Hermosa Beach. The Pacific Ocean serves as the western city boundary, while the city is bordered by Manhattan Beach to the north, and Redondo Beach to the south and east. Hermosa Beach is located approximately 17 miles southwest of downtown Los Angeles and 14 miles northwest of Long Beach. Hermosa Beach covers an area of 1.4 square miles. Hermosa Beach includes nearly two miles of shoreline and varies in width between one-half mile and approximately one mile inland.

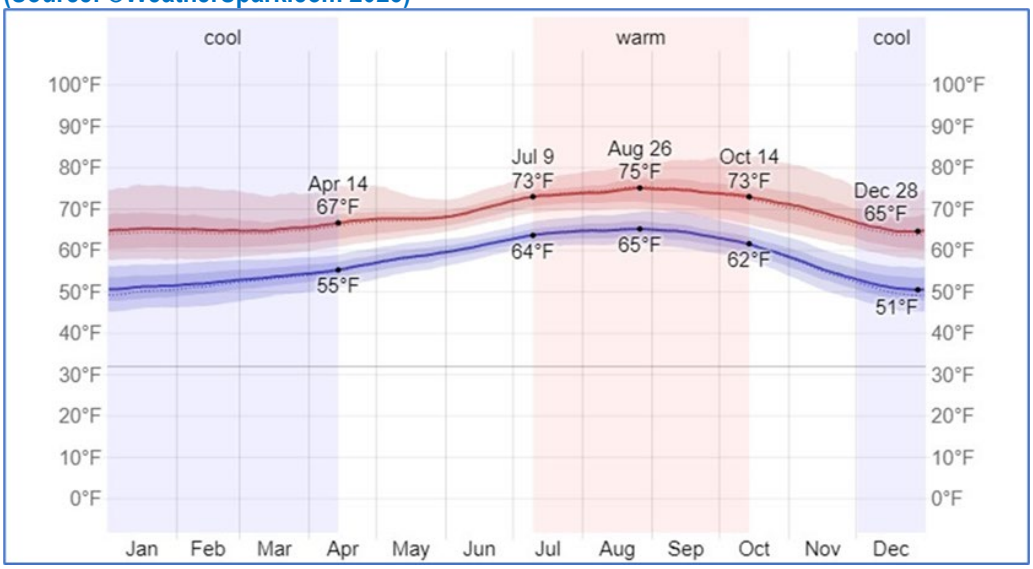
Map 2.1: City of Hermosa Beach
(Source: Hermosa Beach Website, 2023)



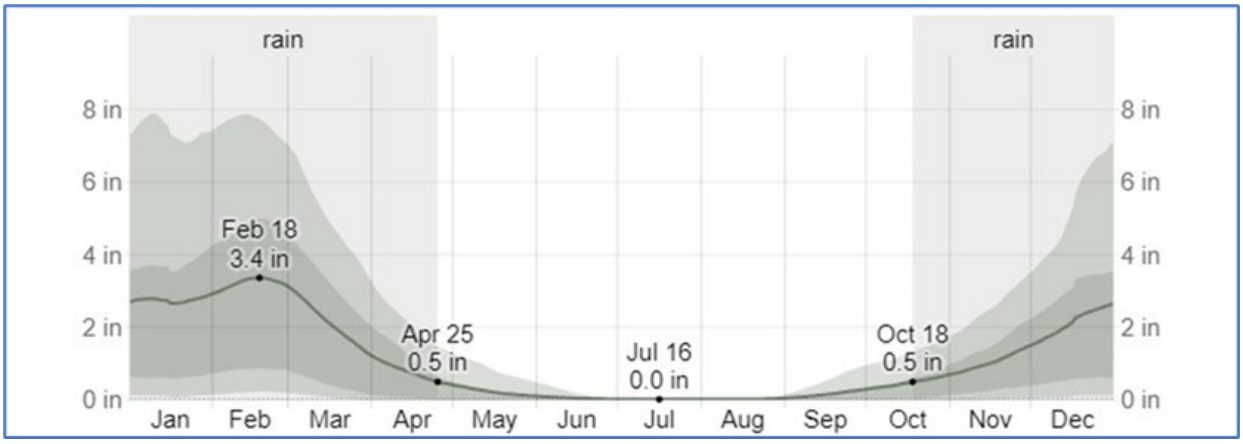
Climate

According to the National Weather Service, the area's climate is Mediterranean, like the rest of the Southern California region, with moderate temperatures, rainy winters and dry summers, supporting a wide range of imported vegetation.

Graph 2.1: Average High and Low Temperature for the City of Hermosa Beach (Source: ©WeatherSpark.com 2023)



Graph 2.2: Average Monthly Rainfall for the City of Hermosa Beach (Source: Weather Spark, 2023)



Population and Demographics

According to Housing Element (2023), the city was incorporated in 1907 with a very slow population growth. In the 1990s the population of Hermosa Beach was 18,219. According to the 2020 American Community Survey, the city's population is 19,728. Most of the growth that has recently occurred has consisted of density increases on existing parcels, through demolition and replacement of existing homes. From 2000 to 2012 the city's population increased by about 5%, which was partially attributable to an increase in average household size. This is in contrast with Los Angeles County, which grew by 7.4% between 1990 and 2000, and an additional 3.8% from 2000 to 2012. As an essentially built-out city, there continue to be few opportunities for growth, except through redevelopment/infill on existing parcels.

According to General Plan (2017), the City is primarily a residential community, with 67% of its land zoned for single and multiple family housing uses. Approximately 43% of the total land area in Hermosa Beach is located within the Coastal Zone, the boundaries of which are defined by the

Coastal Act. The coastal zone in Hermosa Beach spans the entire length of the city from north to south and extends from the mean high tide line inland to Ardmore Avenue with two exclusions: the area from Hermosa Avenue to Valley Drive between Longfellow Avenue and 31st Place; and the area east of Park Avenue or Loma Drive between 25th Street and 16th Street.

Major business sectors include Leisure, Education, Professional, Retail, Finance, public, construction, wholesale, transportation, information and manufacturing. (Source: Profile of the City of Hermosa Beach – SCAG, 2019; and General Plan)

Housing assistance programs in the City include residential critical maintenance, rental rehabilitation, and first-time homebuyer programs. The City supports the South Bay Regional Housing Trust Fund and makes County and regional housing assistance resources known. In most cases, public/private partnerships are formed. Also, housing assistance programs are managed by Los Angeles County and available to eligible City residents.

Principal Employers

According to the city's Annual Comprehensive Financial Report (2023), the following are the principal employers:

	2023	
Employer	**Number of Employees**	**Percent of Total Employment**
City of Hermosa Beach	168	4.59%
Von's	121	3.30%
Lazy Acres	107	2.92%
Trader Joe's	94	2.57%
Hermosa Beach School District	90	2.46%
Sunrise Assisted Living	86	2.35%
Hennessey's Tavern	61	1.67%
The Beach House	54	1.47%

Transportation and Commuting Patterns

According to the General Plan, Hermosa's transportation infrastructure supports a local economy characterized by small scale business and commercial uses that serve the needs of the city. Residents and visitors of Hermosa currently enjoy a well-connected mobility network that effectively circulates people across multiple modes, including opportunities to walk, roll, ride a bicycle, take transit, and drive to the rich selection of destinations and commerce across the city and into the surrounding region. Historically, Hermosa Beach's circulation system has been successful in sustaining past and current mobility demands, but as a beach city, Hermosa's growing popularity continues to attract a high volume of visitors from surrounding areas seeking to enjoy the community's distinct cultural charm and amenities. As Hermosa forges ahead into the future, the City recognizes the need to evaluate, re shape, and redevelop a comprehensive framework and vision to address changing mobility demands and increasingly complex

transportation needs of residents, visitors and local businesses. In order to promote continued economic vitality and quality of life within a sustainable framework, improving city streets and public rights-of-way to better accommodate all people, regardless of their mode of travel, will ensure a high level of access, mobility, and quality for residents and visitors of all ages, physical abilities, and income levels.

The ways in which people get around are important indicators of the success of a transportation system, shedding light on which modes are most popular, convenient, and safe. Currently, the City of Hermosa Beach is fully developed with established traffic patterns. In the United States, commuting makes up approximately 20% of all trips taken. Accordingly, the choice of which mode to use, as well as the direction and distance traveled to get to and from work, influences travel patterns, traffic congestion, and time spent commuting to work.

The US Census Bureau's Longitudinal Employer Household Dynamics program combines federal, state, and Census Bureau data to provide local labor market information on where workers live and work. Of the 9,282 employed residents of Hermosa Beach, 95 percent leave the city every day to go to work. Residents commute in large numbers along the Pacific Coast Highway corridor toward El Segundo and Culver City, up to Santa Monica and Beverly Hills, and inland to Torrance, Burbank, and Downtown Los Angeles. Conversely, 90% of the 4,893 people employed in Hermosa Beach, live outside of the city. Employees generally commute shorter distances from nearby jurisdictions within the South Bay region, including Redondo Beach, Manhattan Beach, Torrance, Lawndale, Hawthorne, Lomita, and other nearby locales

Q&A | ELEMENT B: RISK ASSESSMENT | B1-e.
Q: Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards? (Requirement 44 CFR § 201.6(c)(2)(i)) **A:** See **Climate Change Vulnerability and Adaptation** below.

Climate Change Vulnerability and Adaptation

The following content is from the General Plan Public Safety Element – Climate Change Impacts and Adaptation. Goals, Policies, and Implementation Actions relating to mitigation have been incorporated into the **Mitigation Actions Matrix**, as appropriate.

While climate change will not create new types of disasters in Hermosa Beach, it may instead make existing hazards become more severe or occur more frequently. While many of the City's existing disaster and emergency preparedness policies and programs are already in place to address disasters like coastal flooding, heat events, or severe weather, the intent of highlighting them here is to bring attention to a likely future change in the frequency or severity of these conditions and identify hazards that may require additional study, policy, or attention.

Sea Level Rise

Sea Level Rise Sea level rise is largely a result of warming ocean waters and melting ice caps. It is among the most certain consequences of climate change and will affect the severity of most other coastal hazards in Hermosa Beach.

Over the past century, sea level has risen by approximately 7 inches along the California coast, which is consistent with the observed global average. A 2012 study by the National Research Council, commissioned by the States of California, Oregon, and Washington to assess the state of sea level rise science for the West Coast, projected that sea levels along Southern California's coast will rise approximately 12 inches by 2030, 2 feet by 2050, and 5.5 feet by 2100. While there remain scientific uncertainties around these "best estimates," the consensus among experts expressed in the NRC report is that the rate of sea level rise over the next several decades may be as much as four to nine times larger than that observed over the 20th century.

Along the coast of Hermosa Beach and nearby portions of Los Angeles County, sea level rise could lead to the following impacts:

- Increased erosion of beaches that are either already retreating or are maintained in place by sand replenishment.
- Coastal flooding with higher storm surges and flood elevations during coastal storms. Permanent inundation of the few remaining or restored coastal wetlands, as well as beaches and other low-lying areas.
- Reduced capacity to absorb increased runoff and drain it away from inland areas as sea level rise elevates coastal groundwater levels.
- Increased risk of liquefaction, leading to elevated coastal groundwater levels.
- Saltwater intrusion into coastal groundwater basins from which freshwater is drawn to serve regional (residential and commercial) water users.

The United States Geological Survey (USGS) has developed the Coastal Storm Modeling System (CoSMoS) to make detailed predictions (meter-scale) of storm-induced coastal flooding, erosion and cliff failures over large geographic scales. This model has been refined for coastal areas in Los Angeles county to consider various sea level rise, storm, and erosion scenarios.

Within Hermosa Beach, the 100-year flood zone is projected to increase by about 300% under a scenario of 150 cm of sea level rise (from 0.034 square miles at present to 0.1 square miles with 55 inches of sea level rise). The projected flood zone extends beyond the sandy beach into developed portions of the Coastal Zone, encompassing more than 200 buildings, including 143 residential structures, and about 1,000 residents. The potential extent of flooding that may occur with 150 cm of sea level rise and various storm scenarios - no storm, annual storm, 100-year storm - is depicted in General Plan Figures 6.4, 6.5, and 6.6. Since there is still some degree of uncertainty as to the timing and extent of possible flooding, the topography of Hermosa Beach serves as an outer limit of flooding potential, with the maximum flooding potential under a 150 cm sea level rise scenario depicted in.

Extreme Heat

Since the early 20th Century, average surface temperatures worldwide have risen at an average rate of 0.15°F per decade (1.5°F per century). In the U.S. average surface temperatures have risen more quickly since the late 1970s (0.36 to 0.55°F per decade), with seven of the top ten warmest years on record since 1998. Scientists predict that over the next century, global temperatures will increase between 2.5°F and 10.4°F. For Hermosa Beach, scientists expect average temperatures to increase between 3.2°F and 5.6°F as shown in General Plan Figure 6.5.

Along with changes to average annual temperature, climate change is expected to alter seasonal temperatures, where average July temperatures may increase by as much as 7°F.

With these changes in average temperatures, Hermosa Beach is likely to see a significant increase in the number of days when temperature exceeds the extreme heat threshold of 84°F. Between 1950 and 2011, the average number of extreme heat days was four per year. In Hermosa Beach, the number of extreme heat days could increase to more than 30 per year by mid-century, and 50 per year by the end of the century.

Climate change, particularly extreme heat events, present serious health risks to California's most vulnerable populations. The effects of extreme heat (over 84°F) on human health are well documented. Increased temperature or extended periods of elevated temperatures can increase heat-related mortality, cardiovascular-related mortality, respiratory mortality, and heart attacks, while increasing hospital admissions and emergency room visits. Extreme heat can also affect a person's ability to thermo-regulate, causing heat stress and sometimes leading to death.

While there is no universal definition of extreme heat, California guidance documents define extreme heat as temperatures that are hotter than 98 percent of the historical high temperatures for the area, as measured between April and October of 1961 to 1990. Days that reach this level are called extreme heat days. In Hermosa Beach, the extreme heat threshold is 101.9 degrees Fahrenheit (°F). An event with five extreme heat days in a row is called a heat wave.

Health impacts are the primary concern with this hazard, though economic impacts are also an issue. Extreme heat events are dangerous because people exposed to extreme heat can suffer a number of heat-related illnesses, including heat cramps, heat exhaustion, and (most severely) heat stroke. Very high temperatures can harm plants and animals that are not well adapted to them, including natural ecosystems. Extreme heat can increase the temperature of water in lakes, streams, creeks, and other water bodies, especially during drought events when water levels are lower. Indirectly, extreme heat puts more stress on power lines, causing them to run less efficiently. The heat also causes more demand for electricity (usually to run air conditioning units), and in combination with the stress on the power lines, it may lead to brownouts and blackouts.

Additional Climate Change Hazards

Climate change may also create a variety of changes for California and have direct or indirect effects on Hermosa Beach, including:

- Public health: Climate change is expected to exacerbate some forms of air pollution, increase extreme heat days, affect the timing or severity of allergens, and potentially increase incidences of infectious disease, particularly vector-, water-, and food-borne illness.
- Precipitation: Research suggests that in California, annual precipitation amounts are likely to decrease by more than 15% by the end of the 21st century. Seasonal precipitation will change more significantly with March and April receiving less rainfall than in the past, likely resulting in longer periods of drought, as the summer dry season starts earlier in the spring and extends later into the fall.
- Water: Regional population growth is likely to increase water demand as temperatures rise, while sea level rise threatens aging coastal water infrastructure.

- Biological resources: Two-thirds of California's native flora will experience a greater than 80% reduction in suitable climate range.
- Agriculture: May very likely see significantly declining yields due to warming.
- Marine resources: Marine biological systems are strongly influenced by climate conditions including currents, winds, and temperatures, as well as ocean acidification. Changes to climatic and environmental conditions affect the specific ranges of plants and animals, threatening the ability of species to survive.
- Energy sector: Higher temperatures combined are expected to increase demand for energy. Energy generation at hydroelectric plants may be reduced with changes in snowpack and precipitation.

In California, studies predict that conditions will become hotter and drier, with decreased snow levels and accelerating rates of sea-level rise. California should also expect an increase in the intensity of extreme weather events, such as heat waves, droughts, and floods. California's extreme warm temperatures, which have historically occurred in July and August, will most likely extend into June and September.

Chapter 3: Risk Assessment

What is a Risk Assessment?

Conducting a risk assessment can provide information regarding: the types of hazards a jurisdiction is exposed to; the location where the hazard might occur; the history of the hazard in the City of Hermosa Beach and surrounding area; and the future risk they pose. Specifically, the four levels of a risk assessment are as follows:

1. *Asset Identification**
2. *Hazard Identification*
3. *Profiling Hazard Events*
4. *Estimation of Potential Human and Economic Losses Based on the Exposure and Vulnerability of People, Buildings, and Infrastructure*

*Note: Asset Identification is located in Chapter 4: Vulnerability and Impact Assessment

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.
Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i)) **A:** See **Hazard Identification, Table 3.1, Table 3.2** below.
Q&A | ELEMENT B: RISK ASSESSMENT | B1-d.
Q: Does the plan include the history of previous hazard events for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i)) **A:** See **Federal Disaster Declarations, Table 3.2** below.

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. To determine the hazard with significant potential to impact the Planning Team examined three resources: California's 2023 State Hazard Mitigation Plan, 2019 County of Los Angeles All-Hazards Mitigation Plan, and the City's 2022 Public Safety Element. The Planning Team reviewed these existing documents to determine which of the hazards posed the most significant threat to the planning area and its ability to deliver services. In other words, which hazard would likely result in a local declaration of emergency. See **Table 3.1** for the range of hazards reviewed by the Planning Team. The table outlines the source that included the hazard, if the hazard is included in the Local Hazard Mitigation Plan, and if the hazard is not included, why it is not included.

Additionally, the Planning Team reviewed Federal Disaster Declarations for Los Angeles County. Since the approval of the City's 2018 Mitigation Plan, Los Angeles County experienced 15 federal disaster declarations from 2018 – 2023. **Table 3.2** outlines those disaster declarations.

Table 3.1: Planning Team Hazard Source Review and Reason for Inclusion/Omission (Source: California State Hazard Mitigation Plan [SHMP]; Los Angeles County All-Hazards Mitigation Plan, [AHMP]; Public Safety Element [PSE], National Risk Index [NRI]))

Hazard	Source	Included in HMP	Reason for Inclusion/Omission
Avalanche	NRI, SHMP	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Coastal Flooding	NRI, AHMP, PSE	Y	
Cold Wave	NRI, SHMP	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Drought	NRI, SHMP, AHMP, PSE	Y*	Based on the historical cycles of drought in California, the Planning Team assigned "medium" as the hazard priority ranking.
Earthquake	NRI, SHMP, AHMP, PSE	Y*	The Planning Team assigned "high" as the hazard priority ranking.
Hail	NRI	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Heat Wave	NRI, SHMP,	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Hurricane	NRI	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Ice Storm	NRI	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Landslide	NRI, SHMP, AHMP	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Lighting	NRI	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Riverine Flooding	NRI, SHMP, AHMP	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Strong Wind	NRI, SHMP	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Tornado	NRI	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Tsunami	NRI, SHMP, AHMP, PSE	Y*	The Planning Team assigned "medium" as the hazard priority ranking.
Volcanic Activity	NRI, SHMP	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.

Hazard	Source	Included in HMP	Reason for Inclusion/Omission
Wildfire	NRI, SHMP, AHMP	Y*	The Planning Team assigned "low" as the hazard priority ranking. Although wildfire was considered and analyzed, the hazard was not profiled in the HMP.
Winter Weather	NRI	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Dam Failure	SHMP, AHMP	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Levee Failure	SHMP	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Subsidence	SHMP, PSE	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Climate Change	AHMP, PSE	N	Based on review of the PSE, the Planning Team determined that this hazard does not pose a significant threat to the community.
Fires	PSE	N	Based on review of the City's General Plan – Public Safety Element, the Planning Team determined that this hazard does pose a threat to the community but is not a natural hazard and therefore not included in the HMP.
Diseases	SHMP (Other hazards)	Y*	The Planning Team assigned "medium" as the hazard priority ranking.
***Hazard Priority Ranking is a combination of probability and magnitude. See Table 3.3 and 3.4 for an explanation of the ranking process.**			

Table 3.2: Federal Disaster Declarations 2018-2023 Los Angeles County
(Source: FEMA website State and County Disaster Declarations, 2024; Cal OES Open State of Emergency Proclamations, 2024)

Year	Federal Declaration Number	State of Emergency Declaration Issued by California	Declaration Title
2023	DR-4699-CA	Yes	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, and Mudslides
2023	EM-3591-CA	Yes	Severe Winter Storms, Flooding, and Mudslides
2023	EM-3592-CA	Yes	Severe Winter Storms, Flooding, Landslides, and Mudslides
2022	NA	Yes	Extreme Heat
2022	NA	Yes	Tropical Storm Kay
2021	DR-4569-CA		Wildfires
2021	FM-5381-CA		Blue Ridge Fire

2021	NA	Yes	Winter Storms
2021	NA	Yes	Drought
2020	DR-4482-CA		Covid-19 Pandemic
2020	EM-3428-CA		Covid-19
2020	NA	Yes	Extreme Heat Event
2018	EM-3409-CA		Wildfire
2023	DR-4683-CA		Severe Winter Storms, Flooding, Landslides, and Mudslides
2020	FM-5374-CA		Bobcat Fire
2019	FM-5297-CA		Getty Fire
2019	FM-5296-CA		Wildfires
2019	FM-5293-CA		Saddleridge Fire
2018	DR-4407-CA		Wildfires
2018	DR-5280-CA	Yes	Woolsey Fire
2018	DR-4353-CA		Wildfires, Flooding, Mud Flow, Debris Flow

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.

Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))

A: See **Table 3.3** and **Table 3.4** below.

Next, the Team utilized FEMA's Calculated Priority Risk Index (CPRI) ranking technique to quantify the probability, magnitude/severity, warning time and duration for each of the hazards. The hazard ranking system is described below.

Table 3.3: 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 damage (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 3.4: Calculated Priority Risk Index Ranking for the City of Hermosa Beach (Source: Hermosa Beach Planning Team)

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	Hazard Priority Ranking * (H-High, M-Medium, L-Low)
Earthquake	3	1.35	4	1.20	4	.60	1	.10	3.25	**H**
Flood	2	.90	3	.90	3	.45	2	.20	2.45	**M**
Tsunami	2	.90	3	.90	3	.45	2	.20	2.45	**M**
Drought	2	.90	3	.90	3	.45	2	.20	2.45	**M**
Pandemic	2	.90	3	.90	3	.45	2	.20	2.45	**M**
Wildfire	1	.45	2	.60	3	.45	2	.20	1.70	**L**

***Hazard Priority Ranking**
High=CPRI score for probability + magnitude/severity (impact) = 6 or higher
Medium=CPRI score for probability + magnitude/severity (impact) = 5
Low=CPRI score for probability + magnitude/severity (impact) = 3 or 4
N/A=CPRI score for probability + magnitude/severity (impact) = 2

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.

Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Hazard Profile, Table 3.5** below

Hazard Profiles

This process describes the causes and characteristics of each hazard. Any discussion on hazards must include mention of "scope and scale". As the Planning Team analyzed the hazards, the consultant emphasized the importance to agree on a particular hazard-specific event (e.g., M7.8 San Andreas Fault). The point of a hazard analysis is to establish a "maximum credible event" then determine loss projections based on that particular event.

The Planning Team chose to profile only those with a Hazard Priority Ranking of "high" or "medium". It's important to mention that while the State of California has identified earthquake, flooding, and wildfire as the three highest priority hazards for the state, the planning team deemed that wildfires pose only a low-risk threat to Hermosa Beach and therefore the hazard was not profiled. Each of the hazards profiled are discussed in detail within Chapter 3: Risk Assessment and Chapter 4: Vulnerability & Impacts. **Table 3.5** indicates a generalized perspective of the community's vulnerability of the various hazards according to extent (or degree), location, and probability, and previous significant event for Hermosa Beach.

Table 3.5: Hazard Profile of Location, Extent, Probability, Previous Significant Event (Source: Public Safety Element, Planning Team)

Hazard	Location (Where)	Extent (How Big an Event)	Probability (How Often) *	Previous Significant Event
Earthquake	Citywide	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. Earthquake would most likely originate from the San Andreas fault.	Likely	The most recent damaging earthquake was the M6.7 Northridge Earthquake in 1994.
Flood	Coastal and Urban Flooding	Hermosa Beach is subject to heavy precipitation, thunderstorms, hailstorms, and tropical systems. Seasonal events include La Nina and El Niño. Storm surge from tropical systems could result in coastal flooding. During extreme rain events combined with blocked storm drains could result in urban flooding.	Possible	On August 21, 2023, Tropical Storm Hilary brought heavy rainfall and tropical storm conditions to Southern California.
Tsunami	Coastline and parcels along Hermosa Avenue	The extent of a tsunami is dependent on offshore earthquake magnitude. During a high magnitude offshore earthquake, the tsunami wave can cause severe to catastrophic damage to the coastal areas.	Possible	No recent tsunami of significance.
Drought	Citywide	Droughts in urban areas vary considerably in scope and intensity. Likely emergency water shortage regulations would restrict such activities as watering of landscape, washing of cars, and other non-safety related activities.	Possible	The City adopted a Water Conservation and Drought Management Ordinance in 2010. (Source: General Plan)
Pandemic	Citywide	The extent of a pandemic is dependent on means and how easily it is spread. Protective measures such as vaccinations, personal protective equipment, and proper hygiene can help to slow the spread of disease. In severe cases, a disease outbreak can result in death and severe sickness.	Possible	2020 COVID-19 Pandemic caused severe local and global impacts. Locally, Los Angeles County had 3,603,982 cases and 34,947 deaths related to COVID-19.
* 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				
[1] Uniform California Earthquake Rupture Forecast				

Earthquake

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.
Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i)) **A:** See **Description** below.

Description

An earthquake is a sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of the Earth's tectonic plates. The effects of an earthquake can be felt far beyond the site of its occurrence. They usually occur without warning and, after just a few seconds, can cause massive damage and extensive casualties. Common effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure.

Ground Shaking

Ground shaking is the motion felt on the earth's surface caused by seismic waves generated by the earthquake. It is the primary cause of earthquake damage. The strength of ground shaking depends on the magnitude of the earthquake, the type of fault, and distance from the epicenter (where the earthquake originates). Buildings on poorly consolidated and thick soil will typically see more damage than buildings on consolidated soils and bedrock.

Liquefaction

Liquefaction is a phenomenon in which the strength and stiffness of the 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 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 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.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-c.
Q: Does the plan describe the extent for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i)) **A:** See **Table 3.6, Map 3.2-3.4** below.

Mercalli Scale and Peak Ground Acceleration Comparison

One tool used to describe earthquake intensity is the Magnitude Scale. The Magnitude Scale is sometimes referred to as the Richter Scale. The two are similar but not exactly the same. The Magnitude Scale was devised as a means of rating earthquake strength and is an indirect measure of seismic energy released. The Scale is logarithmic with each one-point increase corresponding to a 10-fold increase in the amplitude of the seismic shock waves generated by the earthquake. In terms of actual energy released, however, each one-point increase on the Richter scale corresponds to about a 32-fold increase in energy released. Therefore, a Magnitude 7 (M7) earthquake is 100 times (10 X 10) more powerful than a M5 earthquake and releases 1,024 times (32 X 32) the energy. **Table 3.6** summarizes the Mercalli Scale and Peak Ground Acceleration Comparison.

Table 3.6: Mercalli Scale and Peak Ground Acceleration Comparison (Source: USGS)

Modified Mercalli Scale	Perceived Shaking	Potential Structure Damage		Estimated PGA[a] (%g)
		Resistant Buildings	Vulnerable Buildings	
I	Not Felt	None	None	<0.17%
II-III	Weak	None	None	0.17% - 1.4%
IV	Light	None	None	1.4% - 3.9%
V	Moderate	Very Light	Light	3.9% - 9.2%
VI	Strong	Light	Moderate	9.2% - 18%
VII	Very Strong	Moderate	Moderate/Heavy	18% - 34%
VIII	Severe	Moderate/Heavy	Heavy	34% - 65%
IX	Violent	Heavy	Very Heavy	65% - 124%
X – XII	Extreme	Very Heavy	Very Heavy	>124%

a. PGA = peak ground acceleration. Measured in percent of g, where g is the acceleration of gravity
Sources: USGS, 2008; USGS, 2010

Q&A | ELEMENT B: RISK ASSESSMENT | B1-b.

Q: Does the plan include information on the location of each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Local Conditions** and **Liquefaction Area** below.

Local Conditions

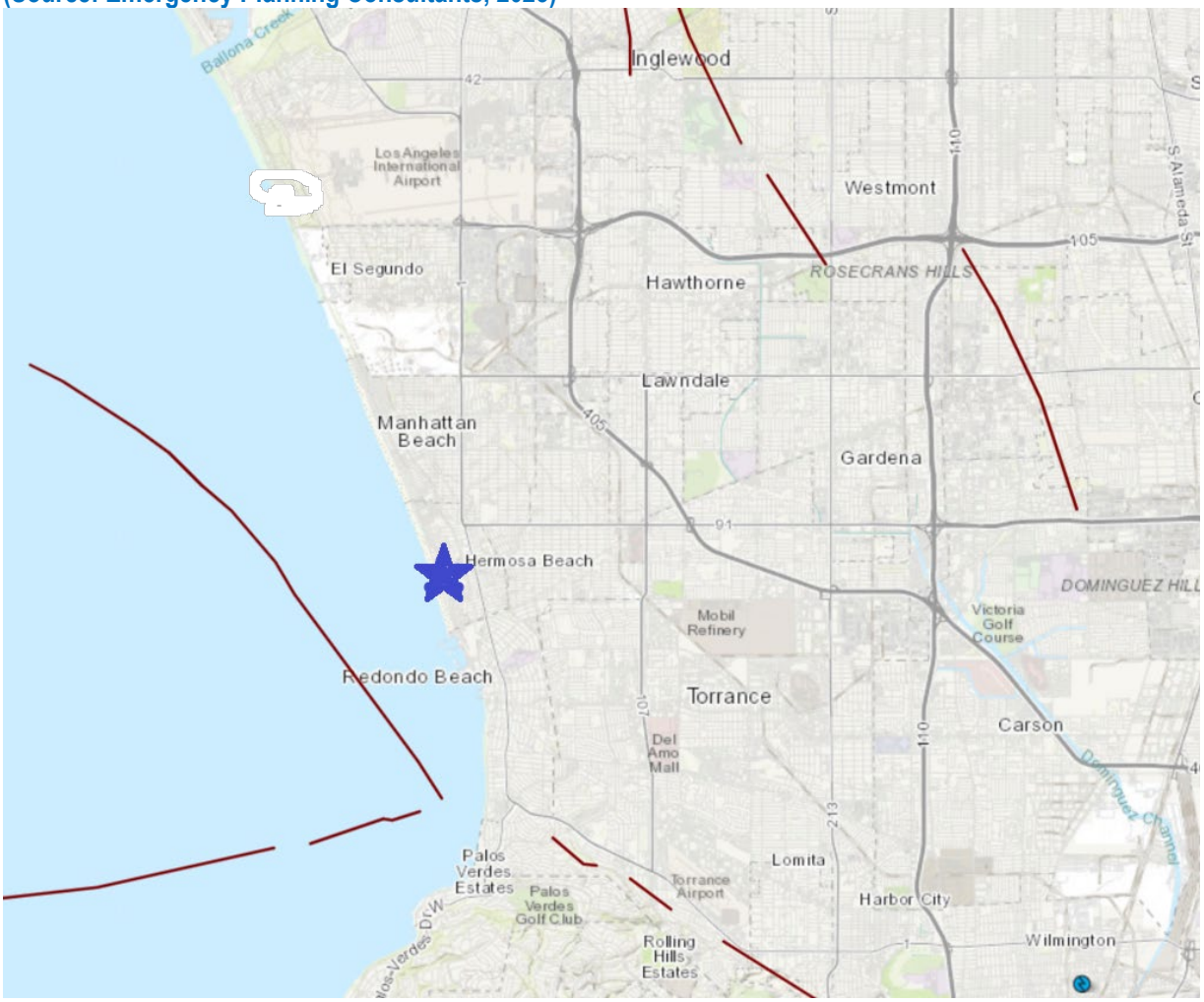
According to the General Plan Public Safety Element, Hermosa Beach is located in a seismically active region; however, there are no known active faults the run through the city and the city is not susceptible to fault rupture. There are three active faults near the city that can cause ground shaking in Hermosa Beach. These faults include Newport-Inglewood, Palos Verdes, and Redondo Canyon faults.

Landslides and liquefaction are the other hazards related to earthquakes. A landslide is the downhill movement of masses of earth material under the force of gravity. Factors contributing to landslide potential include steep slopes, unstable terrain, and proximity to earthquake faults. In Hermosa Beach, landslide hazards are limited to an area along the eastern city limit between 7th Place and 8th Street, an area above Gould Terrace, part of South Park, and properties located south of the park on Culper Court in the Coastal Zone.

Additional geologic conditions within the Coastal Zone include expansive soils, corrosive soils, and subsidence. Soil and bedrock throughout Southern California have varying degrees of sulfate and corrosion potential. Corrosion of infrastructure can result in weakening of metal and resultant leaks into the environment. Expansive, collapsible, and corrosive soils are known to occur within Hermosa Beach.

According to the Southern California Earthquake Data Center, the region has several active faults and therefore is subject to the risks and hazards associated with earthquakes. **Map 3.1: Earthquake Faults** shows the geographic relationship of the city to surrounding active and potentially active faults. No active faults have been identified at the ground surface within city limits, nor have any Alquist-Priolo Earthquake Fault zones been designated.

Map 3.1: Earthquake Faults
(Source: Emergency Planning Consultants, 2023)



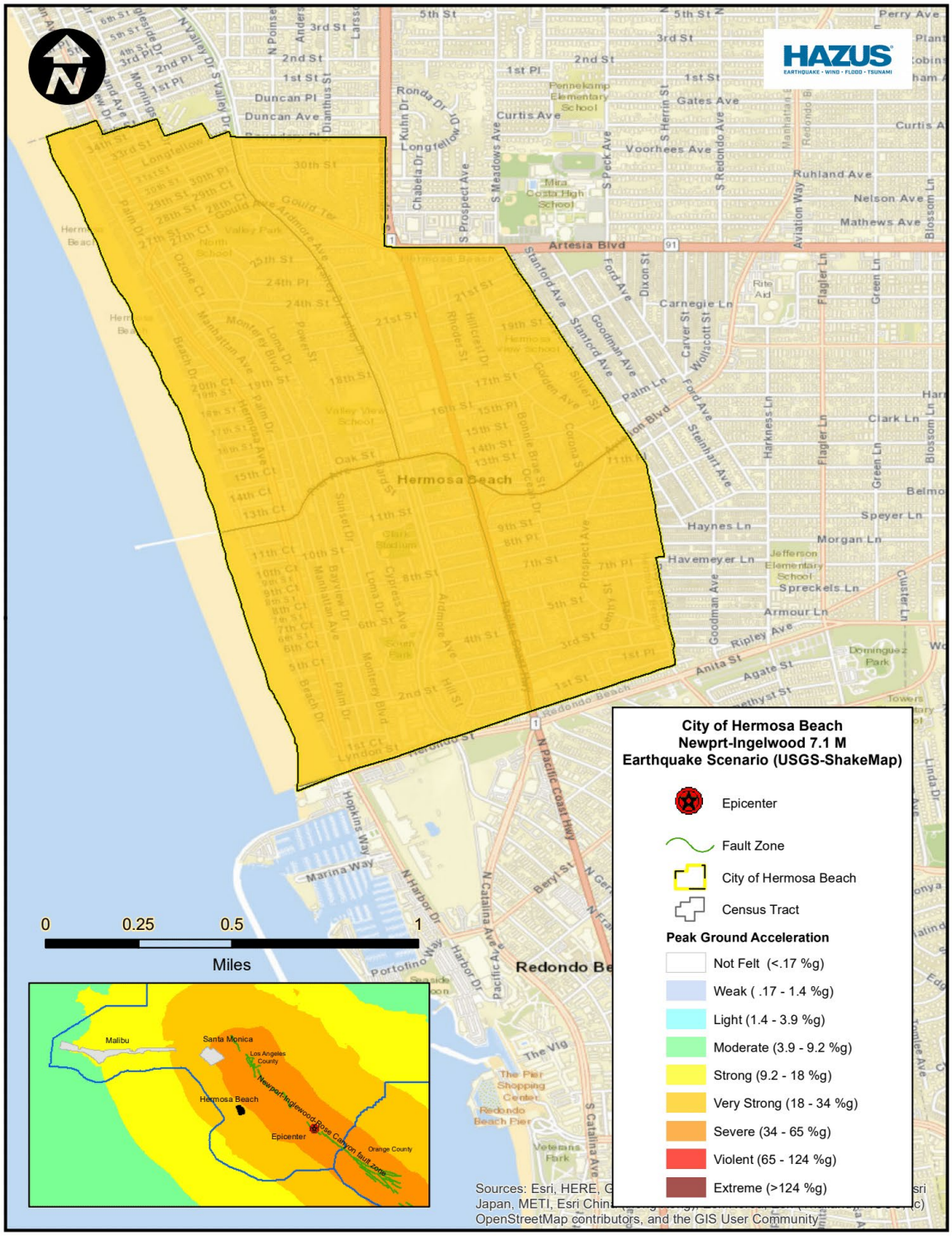
The faults in the Los Angeles Basin are very active and have the potential to cause massive destruction if the City is unprepared. After 1993, building codes were changed to ensure that new construction would be safer in the event of an earthquake. The older buildings in the City have a higher risk of being damaged in an earthquake since they were built prior to the new codes.

Newport-Inglewood Fault

The Newport-Inglewood Fault runs about 75 km (46 mi) near the communities of Culver City, Inglewood, Gardena, Compton, Signal Hill, Long Beach, Seal Beach, Huntington Beach, Newport Beach, Costa Mesa. This fault is responsible for the 1933 Long Beach Earthquake. The Long beach earthquake was a magnitude 6.4 and resulted in 120 deaths and over $50 million in property damage.

Map 3.2 depicts the shaking intensity for a 7.1 magnitude earthquake along the Newport-Inglewood fault. The entire city could experience severe shaking intensities ranging from 18 to 34%g.

Map 3.2: HAZUS – Newport-Inglewood 7.1M
(Source: Emergency Planning Consultants, 2023)

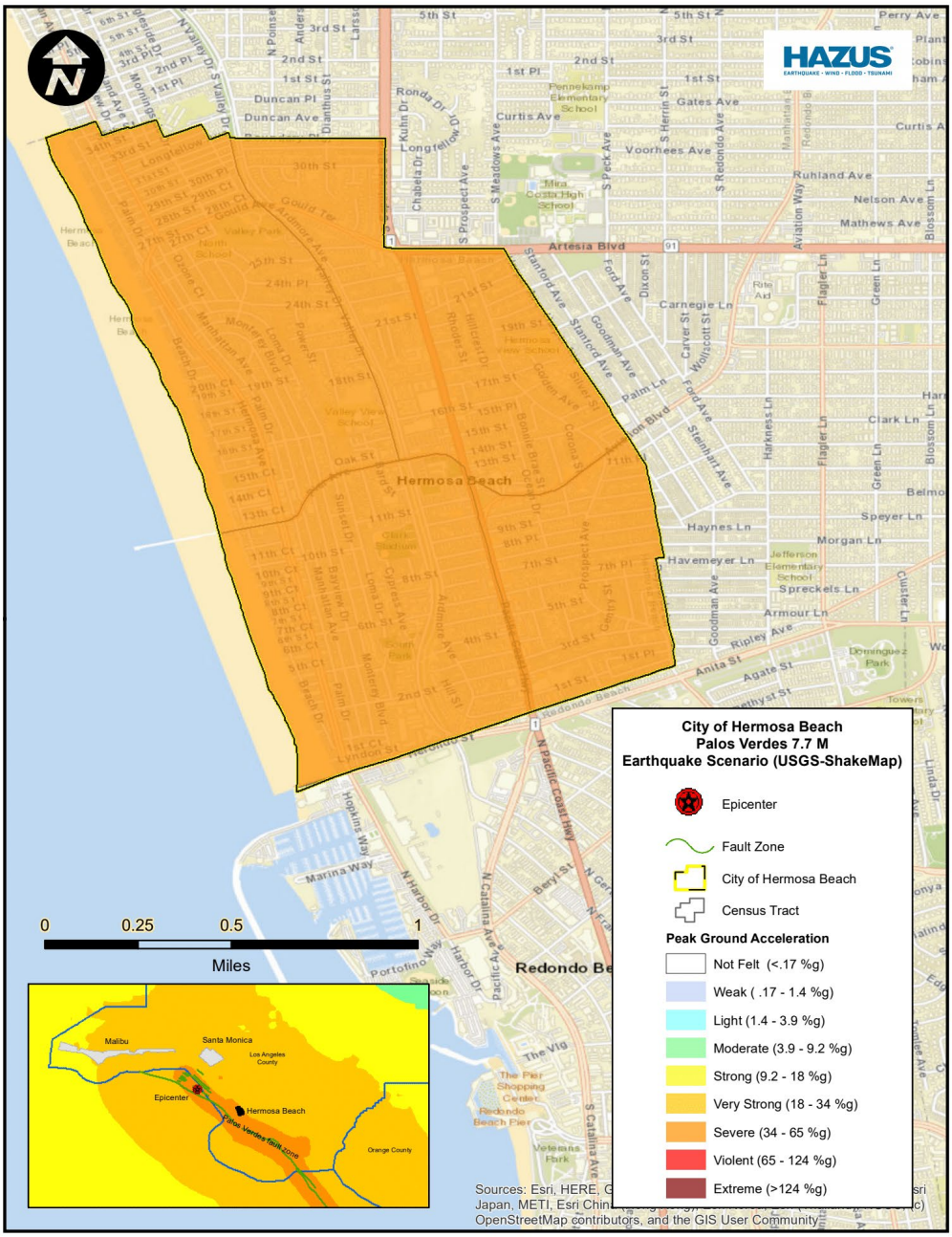


Palos Verdes Fault

The Palos Verdes Fault runs about 80 km (50 mi) near the communities of San Pedro, Palos Verdes Estates, Torrance, and Redondo Beach. This fault has a slip rate between 0.1 and 3.0 mm/year. It is estimated that this fault could generate a quake of Mw6.0–7.0 on the moment magnitude scale. This fault spits into a second branch heading southward offshore as the Palos-Coronado Bank Fault.

Map 3.3 depicts the shaking intensity for a 7.7 magnitude earthquake along the Palos Verdes fault. The entire city could experience strong shaking intensities ranging from 34 to 65 %g.

Map 3.3: HAZUS – Palos Verdes M7.7
(Source: Emergency Planning Consultants, 2023)

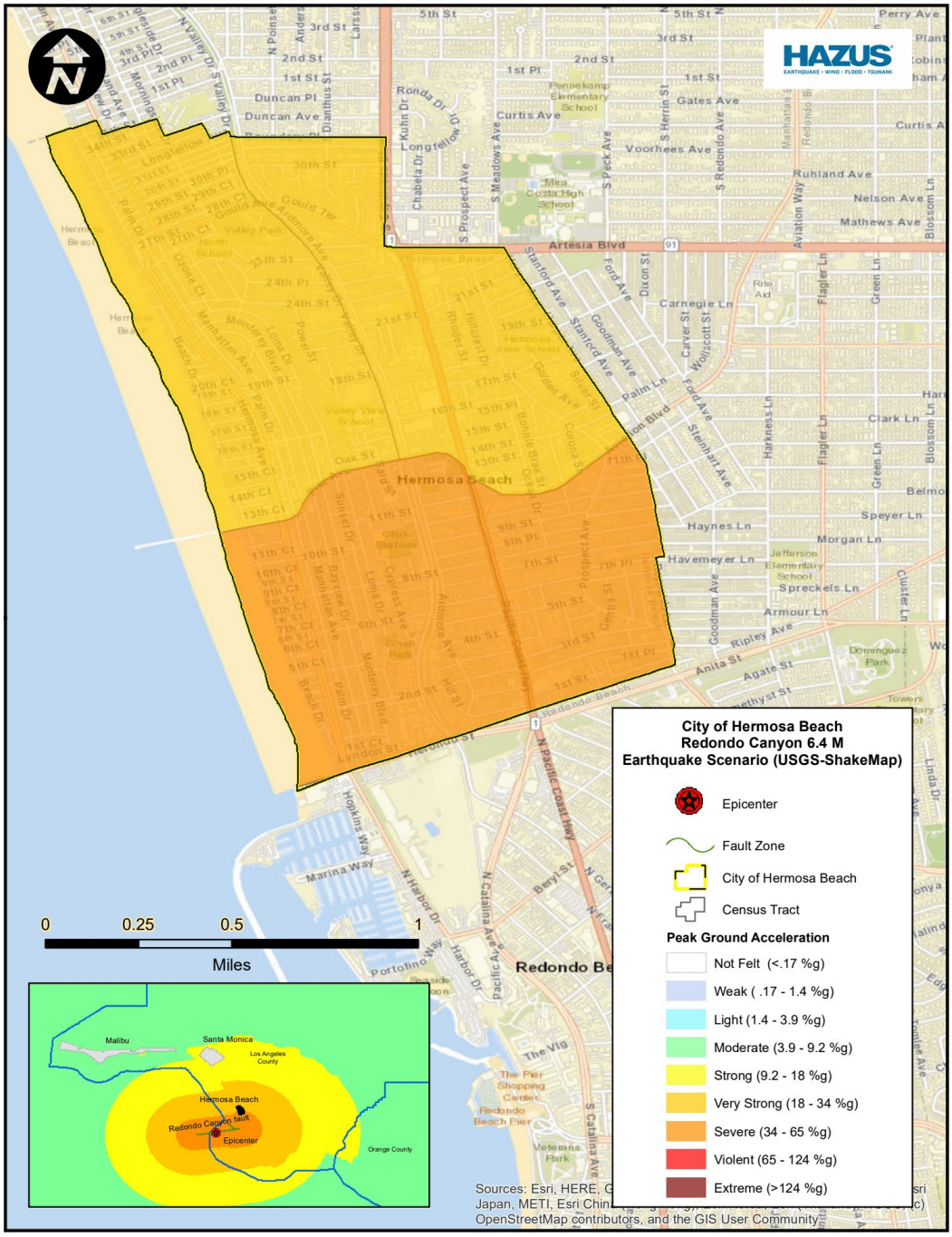


Redondo Canyon Fault

The Redondo Canyon is a 11-kilometer (7 mi) right-reverse fault that runs near the communities of Palos Verdes Estates, Redondo Beach. The fault has an unknown slip rate. It is estimated that this fault could generate a quake of Mw5.8–6.5 on the moment magnitude scale.

Map 3.4 depicts the shaking intensity for a 6.4 magnitude earthquake along the Whittier Fault. The entire city could experience very strong (9.2 – 18 %g) to severe (34 – 65 %g) shaking intensities.

Map 3.4: HAZUS – Redondo Canyon M6.4
(Source: Emergency Planning Consultants, 2023)

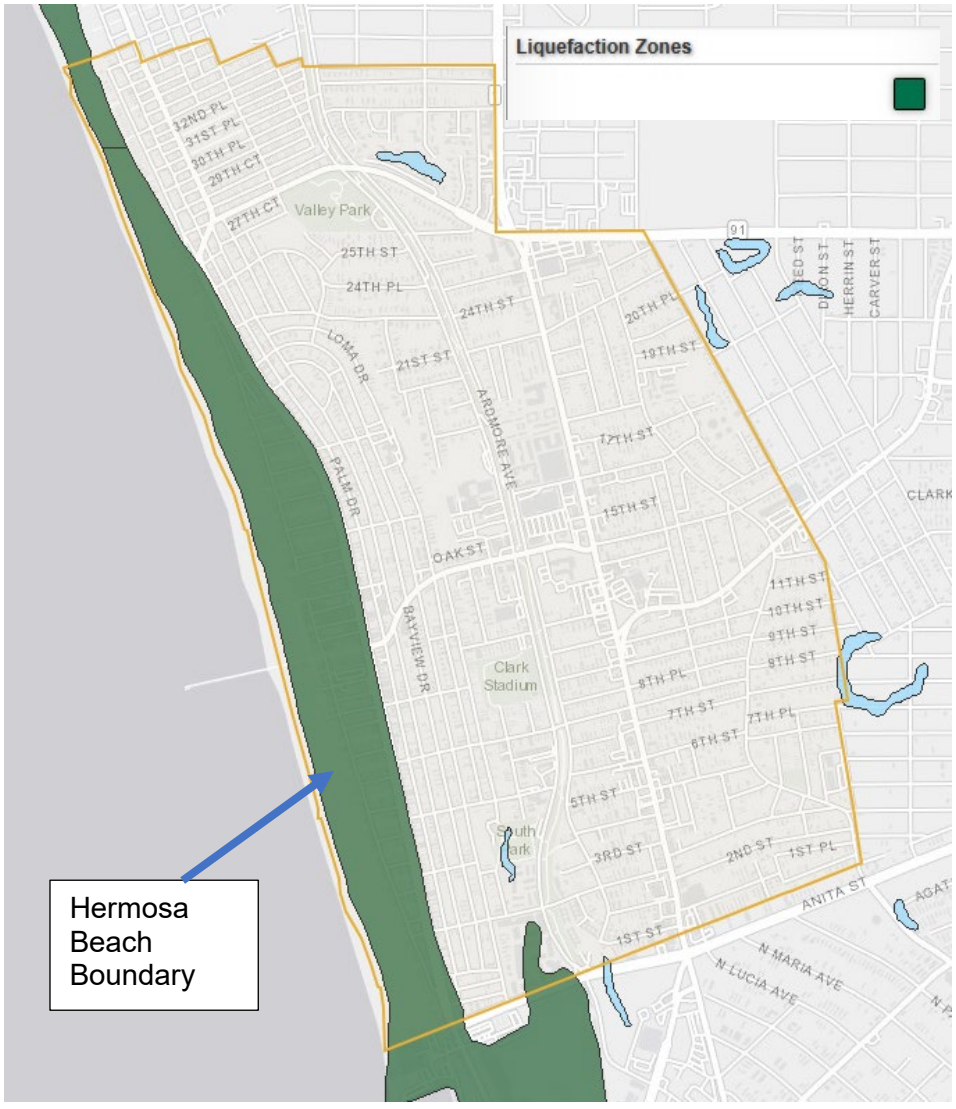


Liquefaction Area

Liquefaction is a phenomenon where soil behaves as a liquid during an earthquake. Liquefaction occurs primarily in saturated and loose, fine to medium-grained soils, in areas where the groundwater table lies within 50 feet of the ground surface. Much of the area west of Hermosa Avenue and an area along 2nd Street between Monterey Boulevard and Valley Drive are located atop soils susceptible to liquefaction, all within the Coastal Zone. Because liquefaction potential is related to groundwater depth, the number and size of areas subject to potential liquefaction could become larger as sea level rises and causes groundwater tables to rise. (See Map: Liquefaction below).

Map 3.5 depicts the liquefaction areas in Hermosa Beach. The area at risk of liquefaction is along the coast.

Map 3.5: Liquefaction Areas
(Source: MyPlan CalOES, 2024)
Note: Faults shown in yellow, Liquefaction shown in green



Q&A | ELEMENT B: RISK ASSESSMENT | B1-d.

Q: Does the plan include the history of **previous** hazard events for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Previous Hazard Events of Earthquakes in the City of Hermosa Beach, Previous Hazard Events of Earthquakes in Los Angeles County,** and **Table 3.7** below.

Previous Hazard Events of Earthquakes in the City of Hermosa Beach

According to the General Plan Public Safety Element, the city has experienced ground shaking form a number of seismic events over the last century and a half. The most recent earthquake event that caused damage to the city was the Northridge Earthquake in 1994. Damage to City-owned facilities was minimal.

Since the writing of the 2018 HMP, there have been no federal disaster declarations relating to earthquakes in Hermosa Beach.

Previous Hazard Events of Earthquakes in Los Angeles County

According to the County of Los Angeles All-Hazards Mitigation Plan (2019), significant earthquakes in the county over the past 50 years included the following:

Table 3.7: Previous Hazard Events of Earthquakes in Los Angeles County (Source: County of Los Angeles AHMP; FEMA Disaster Declaration, 2024)

Date	Location	Federal Declaration	Impact
July 6, 2019	Ridgecrest (M 7.1)	NA	fires reported as a result of gas leaks no reported major injuries, deaths or major building damage
March 28, 2014	La Habra (M 5.1)	NA	few injuries and $10 million dollars in damages
July 29, 2008	Chino Hills (M 5.5)	NA	8 injuries and limited damages
January 17, 1994	Northridge (M 6.7)	DR-1008-CA	57 deaths, 8,700 injuries and up to $40 billion dollars in damages
June 28, 1991	Sierra Madre (M 5.6)	NA	1 death, 100+ injuries and up to $40 million dollars in damages
February 28, 1990	Upland (M 5.7)	NA	30 injuries and $12.7 million dollars in damages
October 1, 1987	Whitter (M 5.9)	DR-799-CA	8 deaths, 200 injuries and $358 million in damages
February 9, 1971	San Fernando (M 6.6)	DR-299-CA	58 – 65 deaths, 200 – 2,000 injuries and up to $553 million in damages

Q&A | ELEMENT B: RISK ASSESSMENT | B1-e.

Q: Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Probability of Future Earthquakes** and **Climate, Population, and Land Use Change Considerations** below.

Probability of Future Earthquakes

Earthquakes occur every day throughout California. However, earthquakes that cause widespread catastrophic damage do not happen often. When conducting the risk assessment, the planning team determined that the probability of a catastrophic earthquake affecting Hermosa Beach is likely with an annual probability of occurrence being between 1 in 10 and 1 in 100 years.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Climate, Population, and Land Use Change Considerations** below.

Climate Change Considerations

According to an article published by PBS (See **Attachments**), "The connection between earthquakes and climate change is slightly less straightforward, and certainly less influential. Most earthquakes occur when tectonic plates within the Earth's crust change or move. Many things can lead to this, but where climate change comes into play is once again related to water. Earthquakes can be triggered or prevented by variability in stress on a fault between tectonic plates. Stress on these faults is impacted by surface water from rain or snow. When there is heavier rainfall, this precipitation and any subsequent flooding increases stress and decreases seismicity. When the season dries up and there's less water, the weight on the Earth's crust decreases and this can lead to micro-seismicity.

As of now, the majority of the connection between earthquakes and climate change is with micro-seismicity, or tiny earthquakes, which have magnitudes of less than zero and are so small that humans can't feel them. While additional connections can be made, such as impacts from pumping groundwater during droughts, connections between larger earthquakes and climate change have largely not been proven, though the rapid movement of glaciers has also been shown to cause glacial earthquakes."

Population Change Considerations

According to the General Plan Housing Element, Hermosa Beach has had an annual growth rate of 0.3% from 2000 to 2020. As an essentially built-out city, there continue to be few opportunities for growth, except through redevelopment/infill on existing parcels. The City's anticipated residential/population growth over the next five years will have no effect on the impacts of earthquake.

Q&A | ELEMENT E. PLAN UPDATE | E1-a.
Q: Does the plan describe the changes in development that have occurred in hazard-prone areas that have increased or decreased each community's vulnerability since the previous plan was approved? (Requirement 44 CFR § 201.6(d)(3))
A: See **Land Use Development Considerations** below.

Land Use Development Considerations

According to the General Plan, "vacant land accounts for less than 0.5% of the land area in Hermosa Beach. Of the vacant land, the majority of parcels are currently zoned for residential uses, placing greater pressure on underutilized commercial land to redevelop or densify. While redevelopment of underutilized spaces is a viable option, consideration of context and community character need to be considered so that new uses and development are consistent with the existing or preferred urban form of the city."

With no significant alterations to the development pattern of Hermosa Beach, the vulnerability and impact of earthquake is unchanged.

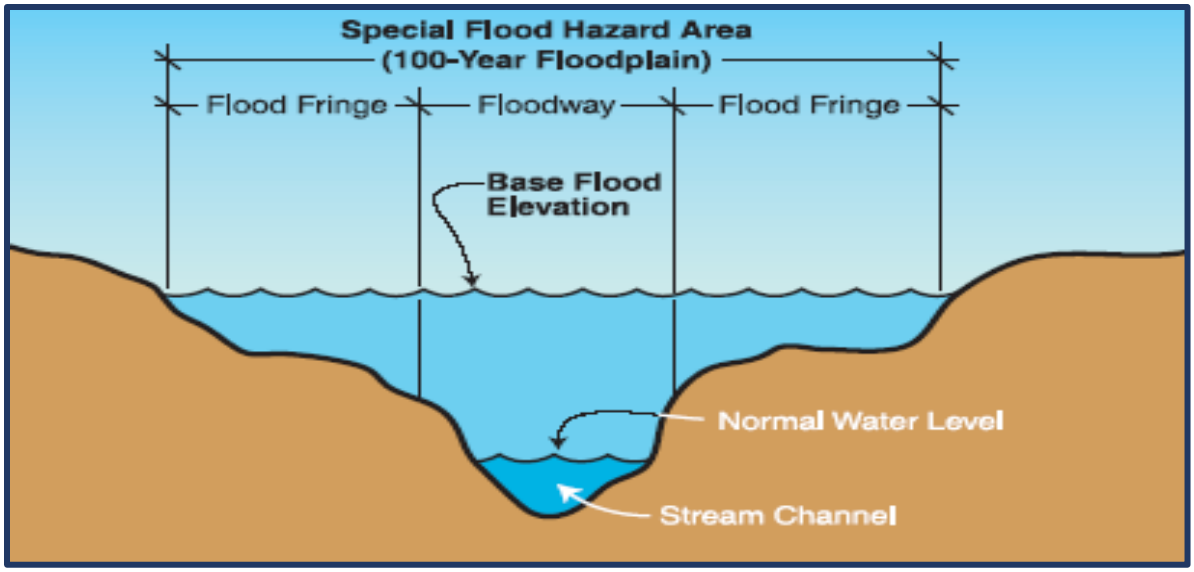
Flood

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.
Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Description** below.

Description

A floodplain is a land area adjacent to a river, stream, lake, estuary, or other water body that is subject to flooding. This area, if left undisturbed, acts to store excess flood water. The floodplain is made up of two sections: the floodway and the flood fringe. The 100-year flooding event is the flood having a one percent chance of being equaled or exceeded in magnitude in any given year. Contrary to popular belief, it is not a flood occurring once every 100 years. The 100-year floodplain is the area adjoining a river, stream, or watercourse covered by water in the event of a 100-year flood. **Figure 3.1: Floodplain and Floodway** shows the relationship of the floodplain and the floodway.

Figure 3.1: Floodplain and Floodway
(Source: FEMA How-To-Guide Assessing Hazards)



Types of Flooding

Two types of flooding primarily affect the region: slow-rise or flash flooding. Slow-rise floods may be preceded by a warning period of hours or days. Evacuation and sandbagging for slow-rise floods have often effectively lessened flood related damage. Conversely, flash floods are most difficult to prepare for, due to extremely limited, if any, advance warning and preparation time.

For the City of Hermosa Beach, floodplains are controlled by infrastructure while coastal and urban flooding continues to pose a problem from time to time.

Atmospheric Rivers

According to the National Oceanic and Atmospheric Administration (NOAA), atmospheric rivers are relatively long, narrow regions in the atmosphere – like rivers in the sky – that transport most of the water vapor outside of the tropics. These columns of vapor move with the weather, carrying an amount of water vapor roughly equivalent to the average flow of water at the mouth of the Mississippi River. When the atmospheric rivers make landfall, they often release this water vapor in the form of rain or snow.

Hurricanes and Tropical Storms

According to NOAA, a hurricane is a rotating low-pressure weather system that has organized thunderstorms but no fronts (a boundary separating two air masses of different densities). Tropical cyclones with maximum sustained surface winds of less than 39 miles per hour (mph) are called tropical depressions. Those with maximum sustained winds of 39 mph or higher are called tropical storms. When a storm's maximum sustained winds reach 74 mph, it is called a hurricane. The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 rating, or category, based on a hurricane's maximum sustained winds. The higher the category, the greater the hurricane's potential for property damage.

Hurricanes that make landfall in California are relatively rare; however, they can occur. In August of 2023 Hurricane Hilary made landfall in the Baja California peninsula in Mexico and then continued north through San Diego County and Los Angeles County. Prior to landfall, Governor Newsom proclaimed a State of Emergency as Hurricane Hilary approached California. Much of the impact from the storm included flooding and high winds.

Definitions of FEMA Flood Zone Designations

Flood zones are geographic areas that the FEMA has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Each zone reflects the severity or type of flooding in the area.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-c.

Q: Does the plan describe the extent for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(ii))
A: See **FEMA Flood Zones, Table 3.8** below.

Moderate to Low Risk Areas

In communities that participate in the NFIP, flood insurance is available to all property owners and renters in these zones:

Table 3.8: FEMA Flood Zones
(Source: FEMA)

ZONE	DESCRIPTION
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
C and X (unshaded)	Area of minimal flood hazard usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that do not warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.

High Risk Areas

In communities that participate in the NFIP, mandatory flood insurance purchase requirements apply to all of these zones:

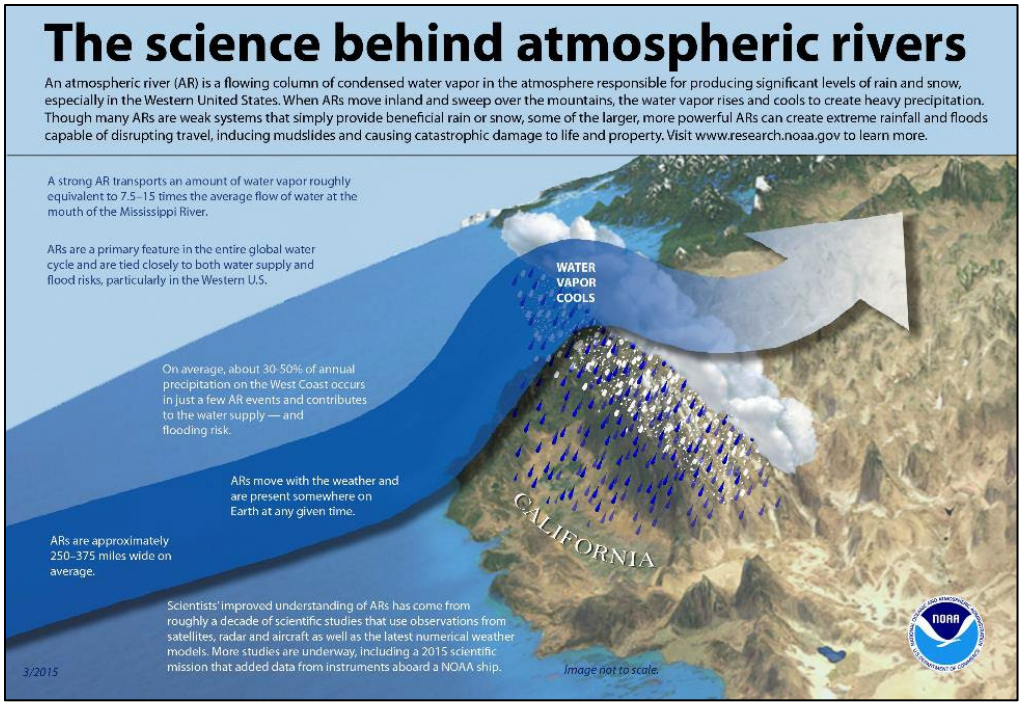
ZONE	DESCRIPTION
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
A1-30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.

Undetermined Risk Areas

ZONE	DESCRIPTION
D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.

Although atmospheric rivers come in many shapes and sizes, those that contain the largest amounts of water vapor and the strongest winds can create extreme rainfall and floods, often by stalling over watersheds vulnerable to flooding. These events can disrupt travel, induce mudslides, and cause catastrophic damage to life and property. A well-known example is the "Pineapple Express," a strong atmospheric river that can bring moisture from the tropics near Hawaii over to the US West Coast.

Figure 3.2: Atmospheric Rivers
(Source: National Oceanic and Atmospheric Administration, 2023)



While atmospheric rivers are responsible for great quantities of rain that can produce flooding, they also contribute to beneficial increases in snowpack. A series of atmospheric rivers fueled the strong winter storms that battered the U.S. West Coast from western Washington to southern California from December 10–22, 2010, producing 11 to 25 inches of rain in certain areas. These rivers also contributed to the snowpack in the Sierras, which received 75 percent of its annual snow by December 22, the first full day of winter.

NOAA research (e.g., NOAA Hydrometeorological Testbed and Cal Water) uses satellite, radar, aircraft and other observations, as well as major numerical weather model improvements, to better understand atmospheric rivers and their importance to both weather and climate

Q&A | ELEMENT B: RISK ASSESSMENT | B1-b.

Q: Does the plan include information on the location of each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Local Conditions** below.

Local Conditions

According to the General Plan Public Safety Element, coastal flooding poses a threat to life and safety and can cause severe damage to public and private property. Large portions of the Hermosa Beach beachfront development are less than 15 feet above sea level. Normally, the very wide beach buffers these areas from the high surf. However, during heavy storm seasons, this beach can be eroded to such an extent that these properties are subject to wave run-up. This has occurred during past El Niño events and during astronomical high tides. The resulting damage has been primarily to private property.

The entirety of the sandy beach extending inland to The Strand is located within the 100-year flood zone. As sea levels rise, the risk and degree of coastal flooding and other coastal hazards increase.

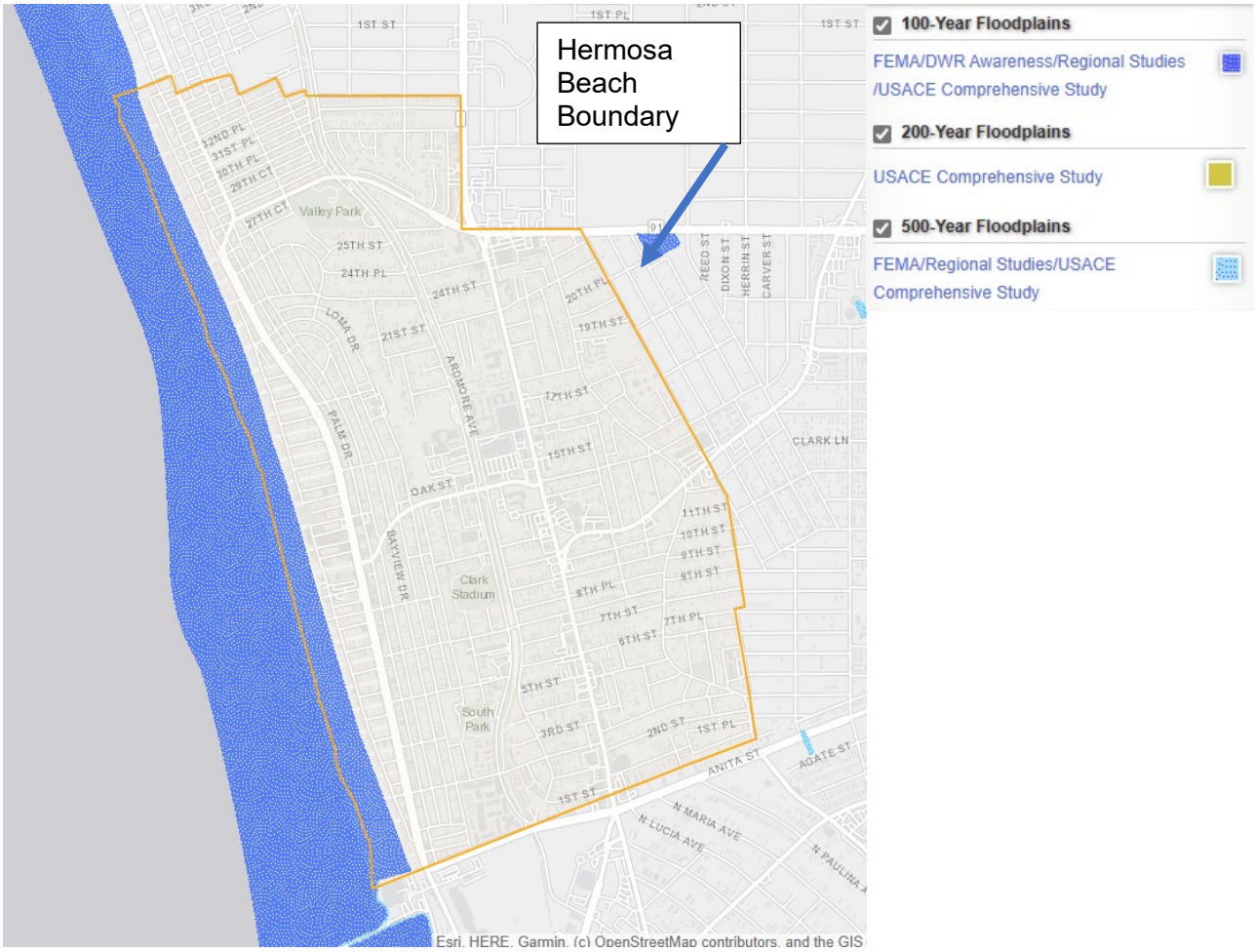
As land is converted from fields or woodlands to roads and parking lots, it loses its ability to absorb rainfall. Urbanization of a watershed changes the hydrologic systems of the basin. Heavy rainfall collects and flows faster on impervious concrete and asphalt surfaces. The water moves from the clouds, to the ground, and into streams at a much faster rate in urban areas. Adding these elements to the hydrological systems can result in flood waters that rise very rapidly and peak with violent force.

According to the Planning Team, almost 43 percent of the area in Hermosa Beach has a high concentration of impermeable surfaces that either collect water or concentrate the flow of water in unnatural channels. During periods of urban flooding, streets can become swift moving rivers and low-lying structures can fill with water. Storm drains often back up with vegetative debris causing additional, localized flooding.

Below is **Map 3.6: MyPlan City of Hermosa Beach** showing the areas at risk of flooding.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-c.
Q: Does the plan describe the extent for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(ii)) **A:** See **Map 3.6** below.

Map 3.6: MyPlan City of Hermosa Beach (Source: MyPlan Cal OES, 2023)



Q&A | ELEMENT B: RISK ASSESSMENT | B1-d.
Q: Does the plan include the history of **previous** hazard events for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i)) **A:** See **Previous Hazard Events of Flooding in the City of Hermosa Beach, Previous Hazard Events of Flooding in Los Angeles County** and **Table 3.9** below.

Previous Hazard Events of Urban Flooding in the City of Hermosa Beach

The City of Hermosa Beach is susceptible to localized flooding from severe storms, urban run-off and storm surge. In the last 5 years there have been no disaster declarations related to flooding impacting Hermosa Beach.

Previous Hazard Events of Flooding in Southern California

According to the 2011 General Plan, historic flooding records in Los Angeles County show that since 1811, the Los Angeles River has flooded 30 times, on average once every 6.1 years. But averages are deceiving, for the Los Angeles basin goes through periods of drought and then periods of above average rainfall. Between 1889 and 1891, the river flooded every year, from 1941 to 1945, the river flooded 5 times. Conversely, from 1896 to 1914, and again from 1944 to 1969, a period of 25 years, the river did not have serious floods.

Average annual precipitation in Los Angeles County ranges from 13 inches on the coast to approximately 40 inches on the highest point of the Peninsular Mountain Range that transects the county. Several factors determine the severity of floods, including rainfall intensity and duration. A large amount of rainfall over a short time span can result in flash flood conditions. A sudden thunderstorm or heavy rain, dam failure, or sudden spills can cause flash flooding. The National Weather Service's definition of a flash flood is a flood occurring in a watershed where the time of travel of the peak of flow from one end of the watershed to the other is less than six hours.

The towering mountains that give the Los Angeles region its spectacular views also bring a great deal of rain out of the storm clouds that pass through. Because the mountains are so steep, the rainwater moves rapidly down the slopes and across the coastal plains on its way to the ocean.

"The Santa Monica, Santa Susana and Verdugo Mountains, which surround three sides of the valley, seldom reach heights above three thousand feet. The western San Gabriel Mountains, in contrast, have elevations of more than seven thousand feet. These higher ridges often trap eastern-moving winter storms. Although downtown Los Angeles averages just fifteen inches of rain a year, some peaks in the San Gabriel Mountains receive more than forty inches of precipitation annually, as much as many locations in the humid eastern United States" (Source: The Los Angeles River: It's Life, Death, and Possible Rebirth, Gumprecht 2001). Naturally, this rainfall moves rapidly downstream, often with severe consequences for anything in its path. In extreme cases, flood-generated debris flows will roar down a canyon at speeds near 40 miles per hour with a wall of mud, debris and water, tens of feet high. Flooding occurs when climate, geology, and hydrology combine to create conditions where water flows outside of its usual course.

Table 3.9: Previous Hazard Events of Flooding in Los Angeles County (Source: FEMA Disaster Declaration, 2024)

Date	Location	Federal Declaration	State Executive Order/State of Emergency	Declaration Title
March 10, 2023	Los Angeles County	EM-3592-CA		Severe Winter Storms, Flooding, Landslides, and Mudslides
January 14, 2023	Los Angeles County	DR-4683-CA		Severe Winter Storms, Flooding, Landslides, and Mudslides
January 9, 2023	Los Angeles County	EM-3591-CA		Severe Winter Storms, Flooding, and Mudslides
August 18, 2023	Fresno, Imperial, Inyo, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Tulare, and Ventura	NA	State of Emergency	Hurricane Hilary related flooding
March 16, 2017	Los Angeles County	DR-4305-CA		Severe Winter Storms, Flooding, and Mudslides
February 3, 1993	Los Angeles County	DR-979-CA		Severe Winter Storms, Mud & Landslides, Flooding
February 25, 1992	Los Angeles County	DR-935-CA		Rain/Snow/Windstorms, Flooding, Mudslides
February 5, 1988	Los Angeles County	DR-812-CA		Severe Storms, High Tides & Flooding
February 21 1980	Los Angeles County	DR-615-CA		Severe Storms, Mudslides & Flooding
February 15 1978	Los Angeles County	DR-547-CA		Coastal Storms, Mudslides & Flooding
January 26, 1969	Los Angeles County	DR-253-CA		Severe Storms & Flooding

Q&A | ELEMENT B: RISK ASSESSMENT | B1-e.

Q: Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Probability of Future Flooding Events** and **Climate, Population, and Land Use Change Considerations** below.

Probability of Future Flooding Events

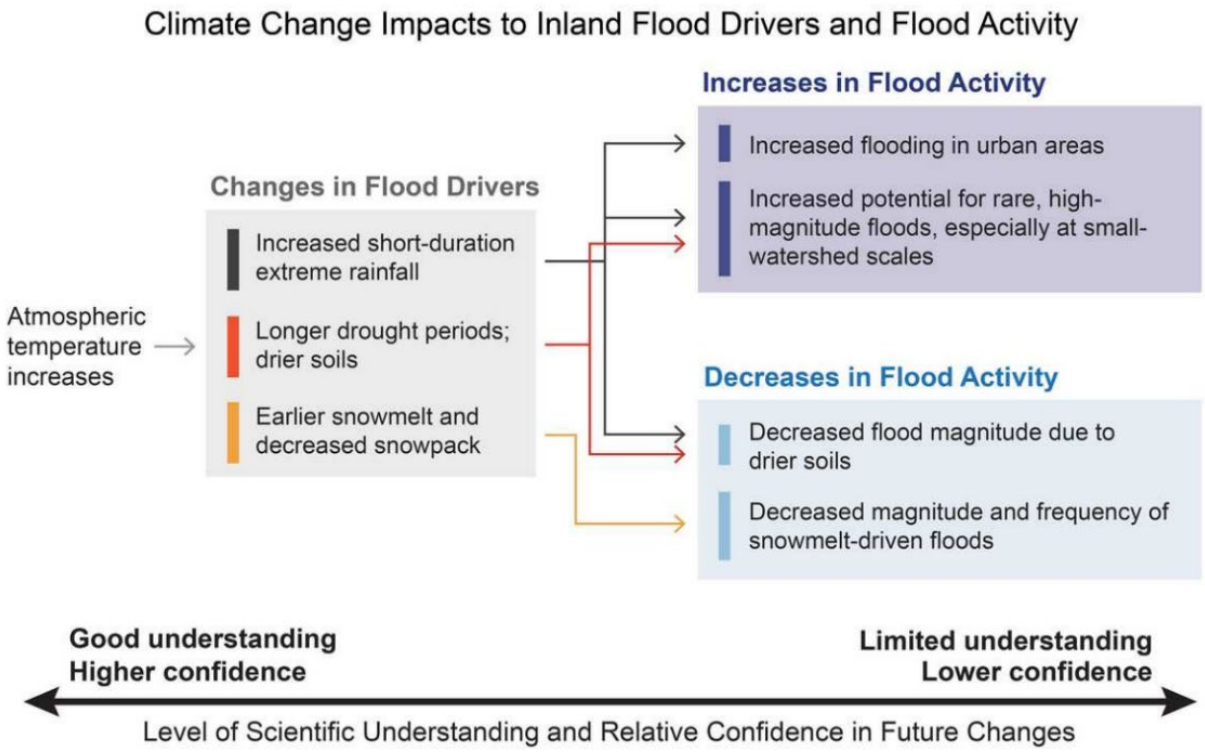
When conducting the risk assessment, the planning team determined that the probability of a catastrophic coastal or urban flooding event affecting Hermosa Beach is possible with an annual probability of occurrence being between 1 in 100 and 1 in 1,000 years.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.
Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii)) **A:** See **Climate, Population, and Land Use Change Considerations** below.

Climate Change Considerations

According to the Fifth National Climate Assessment, extreme precipitation–producing weather systems ranging from tropical cyclones to atmospheric rivers are *very likely* to produce heavier precipitation at higher global warming levels. Recent increases in frequency, severity, and amount of extreme precipitation are expected to continue across the US even if global warming is limited to the Paris Agreement targets. Changes in extreme precipitation events differ seasonally—they are *very likely* to increase in spring and winter across the continental US and Alaska and in eastern and northwestern states in the fall, while projected changes in the summer season are more uncertain.

Figure 3.3: Climate Change Impacts to Inland Flood Drivers and Flood Activity
Source: Fifth National Climate Assessment (2023)



According to Cal Adapt, Hermosa Beach has a 30-year average baseline of 13 inches of precipitation. During the mid-century (2035-2064) this 30-year average is projected to remain static at 12.8 inches of precipitation under high emissions scenario. During the end-century (2070-2099) it is projected that Hermosa Beach's 30-year average precipitation will remain static at 12.8 inches.

The maps are from the National Climate Assessment Interactive Atlas Explorer and depict the change in the number of days with extreme precipitation for 4 different global warming levels. The first level is if Earth's Temperature rises 2.7 degrees Fahrenheit (1.5 degrees Celsius) above the pre-industrial average. The effects of a 1.5-degree Celsius change on the number of extreme precipitation days is depicted in **Map 3.7**. Under this scenario, the annual number of days with precipitation in the top 1% of historical rainfall events in Los Angeles County is projected to increase by 19% compared to 1991 to 2020. The second level is if Earth's Temperature rises 3.6 degrees Fahrenheit (2 degrees Celsius) above the pre-industrial average and is depicted in **Map 3.8**. Under this scenario, the annual number of days with precipitation in the top 1% of historical rainfall events in Los Angeles County is projected to increase by 12% compared to 1991 to 2020. The third level is if Earth's Temperature rises 5.4 degrees Fahrenheit (3 degrees Celsius) above the pre-industrial average and is depicted in **Map 3.9**. Under this scenario, the annual number of days with precipitation in the top 1% of historical rainfall events in Los Angeles County is projected to increase by 27% compared to 1991 to 2020. The fourth level is if Earth's Temperature rises 7.2 degrees Fahrenheit (4 degrees Celsius) above the pre-industrial average and is depicted in **Map 3.10**. Under this scenario, the annual number of days with precipitation in the top 1% of historical rainfall events in Los Angeles County is projected to increase by 59% compared to 1991 to 2020.

The increase in the number of extreme precipitation days will increase the probability Hermosa Beach, and more broadly Los Angeles County, will experience flooding events. An increase in flood events will strain the city's capacity to respond to maintenance and repair activities due to flood events. Additional infrastructure modifications and retrofitting may be required for the city to better respond to and recover from flooding events.

Map 3.7: Global Warming Level 1.5 deg C
Source: Fifth National Climate Assessment

Global Warming Level 1.5 deg C

Change in Number of Days with Extreme Precipitation (%)

> 60

37.5

< 15

Map 3.8: Global Warming Level 2 deg C
Source: Fifth National Climate Assessment

Global Warming Level 2 deg C

Change in Number of Days with Extreme Precipitation (%)

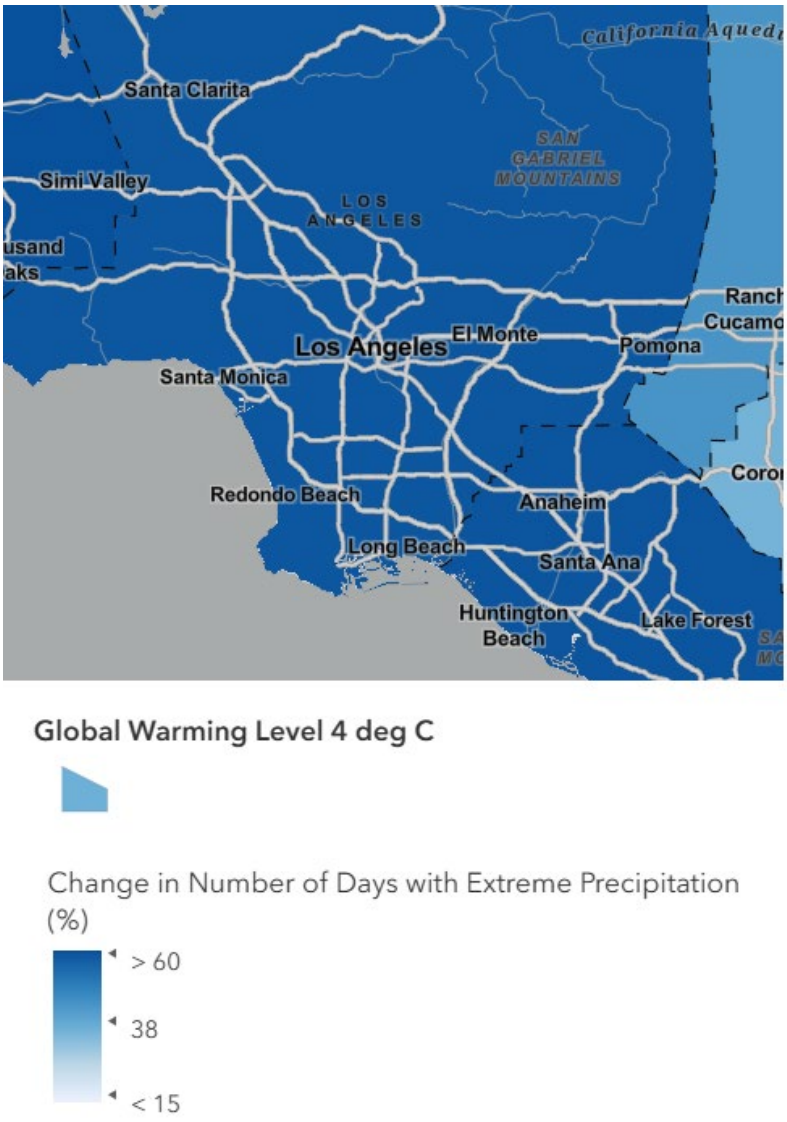
> 60

37.5

< 15

Map 3.9: Global Warming Level 3 deg C
Source: Fifth National Climate Assessment

Map 3.10: Global Warming Level 4 deg C
Source: Fifth National Climate Assessment



Population Change Considerations

According to the Housing Element, Hermosa Beach has had an annual growth rate of 0.3% from 2000 to 2020. As an essentially built-out city, there continue to be few opportunities for growth, except through redevelopment/infill on existing parcels. The City's anticipated residential/population growth over the next five years will have no effect on the impacts of flooding.

Q&A | ELEMENT E. PLAN UPDATE | E1-a.
Q: Does the plan describe the changes in development that have occurred in hazard-prone areas that have increased or decreased each community's vulnerability since the previous plan was approved? (Requirement 44 CFR § 201.6(d)(3))
A: See **Land Use Development Considerations** below.

Land Use Development Considerations

According to the General Plan, "vacant land accounts for less than 0.5% of the land area in Hermosa Beach. Of the vacant land, the majority of parcels are currently zoned for residential uses, placing greater pressure on underutilized commercial land to redevelop or densify. While redevelopment of underutilized spaces is a viable option, consideration of context and community character need to be considered so that new uses and development are consistent with the existing or preferred urban form of the city."

With no significant alterations to the development pattern of Hermosa Beach, the vulnerability and impact of flood is unchanged.

Tsunami

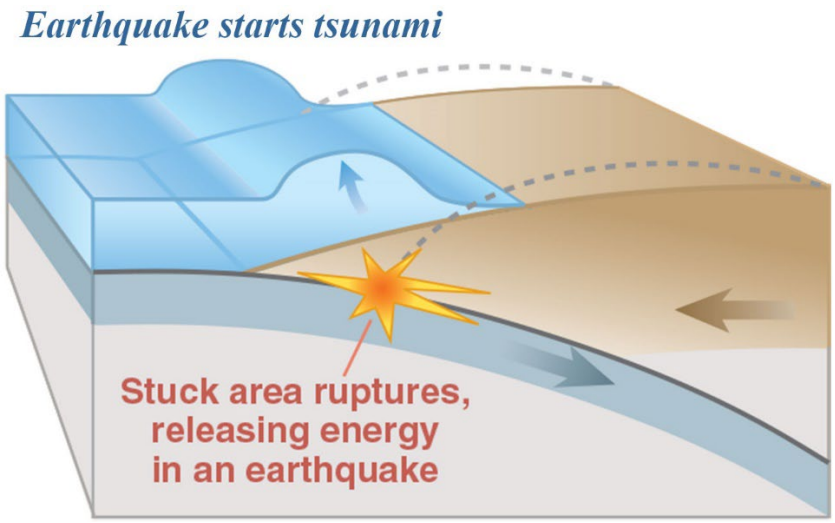
Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.
Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Description** below.

Description

According to the Intergovernmental Oceanographic Commission brochure titled "Tsunami: The Great Waves" (2012), the phenomenon we call "tsunami" (soo-NAH-mee) is a series of traveling ocean waves of extremely long length generated primarily by earthquakes occurring below or near the ocean floor. Underwater volcanic eruptions and landslides can also generate tsunamis. In the deep ocean, the tsunami waves move with a speed exceeding 500 miles per hour, and a wave height of only a few inches. Tsunami waves are distinguished from ordinary ocean waves by their great length between wave crests, often exceeding 60 miles or more in the deep ocean, and by the time between these crests, ranging from 10 minutes to an hour.

As they reach the shallow waters of the coast, the waves slow down and the water can pile up into a wall of destruction up to 30 feet or more in height. The effect can be amplified where a bay, harbor or lagoon funnels the wave as it moves inland. Large tsunamis have been known to rise over 100 feet. Even a tsunami 1-3 feet high can inflict destructive damage and cause many deaths and injuries.

Infographic: Earthquake Starts Tsunami
Source: "Surviving a tsunami: lessons from Chile, Hawaii, and Japan; USGS Circular 1187"



Earthquakes and Tsunamis

An earthquake can be caused by volcanic activity, but most are generated by movements along fault zones associated with the plate boundaries. Most strong earthquakes, representing 80% of the total energy released worldwide by earthquakes, occur in subduction zones where an oceanic plate slides under a continental plate or another younger oceanic plate.

Not all earthquakes generate tsunamis. To generate a tsunami, the fault where the earthquake occurs must be underneath or near the ocean and cause vertical movement of the sea floor over a large area, hundreds or thousands of square miles. "By far, the most destructive tsunamis are generated from large, shallow earthquakes with an epicenter or fault line near or on the ocean floor." The amount of vertical and horizontal motion of the sea floor, the area over which it occurs, the simultaneous occurrence of slumping of underwater sediments due to the shaking, and the efficiency with which energy is transferred from the earth's crust to the ocean water are all part of the tsunami generation mechanism. The sudden vertical displacements over such large areas, disturb the ocean's surface, displace water, and generate destructive tsunami waves.

Photo: Tsunami in Indonesia
Source: Antara Foto, Reuters, The New York Times

Q&A | ELEMENT B: RISK ASSESSMENT | B1-c.
Q: Does the plan describe the extent for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Tsunami Characteristics** below.

Tsunami Characteristics

According to the National Oceanic and Atmospheric Administration/National Weather Service, a tsunami can vary is speed and size. The speed of a tsunami depends on the depth of the water it is traveling through. The deeper the water, the faster the tsunami. In the deep ocean, tsunamis can move as fast as a jet plane, over 500 mph, and can cross entire oceans in less than a day. As the waves enter shallow water near land, they slow to the speed of a car, approximately 20 or 30 mph.

Tsunami speed can be computed by taking the square root of the product of the water depth and the acceleration of gravity (32.2 feet per second squared). In 15,000 feet of water, this works out to about 475 miles per hour. At rates like this, a tsunami will travel from the Aleutian Islands to Hawaii in about five hours; or from the Portugal coast to North Carolina in eight and a half hours.

In the deep ocean, the wavelength of a tsunami (the distance between waves) may be hundreds of miles, but its waves may be barely noticeable and are rarely more than three feet high. Mariners at sea will not normally notice tsunamis as they pass beneath their hulls. As the waves enter shallow water near land and slow down, their wavelengths decrease, they grow in height, and currents intensify. When they strike land, most tsunamis are less than 10 feet high, but in extreme cases, they can exceed 100 feet when they strike near their source. The first wave may not be the last or the largest. A large tsunami can flood low-lying coastal areas more than a mile inland.

Not all tsunamis act the same, and an individual tsunami may affect coasts differently due to offshore and coastal features. Reefs, bays, entrances to rivers, undersea features, and the slope of the beach can all influence the size, appearance, and impact of tsunamis when they strike the coast. A small non-destructive tsunami in one place may be very large and violent a few miles away.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-b.
Q: Does the plan include information on the location of each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Local Conditions** and **Map 3.11** below.

Local Conditions

In Los Angeles County, areas at risk of maximum tsunami run up include the ports of Long Beach and Los Angeles, Catalina Island, and areas in the cities of Los Angeles, Long Beach, Manhattan Beach, Redondo Beach, Hermosa Beach, El Segundo, Palos Verdes, Santa Monica, and Malibu. In the unincorporated areas of Los Angeles County, the five coastal zones (i.e., Marina Del Rey,

Santa Catalina Island, Santa Monica Mountains, San Clemente Island, and Ballona Wetlands) are subject to inundation.

In Southern California, an earthquake could trigger an underwater avalanche or submarine landslide in Santa Monica Bay and produce a tsunami that could inundate low-lying areas of Los Angeles County. According to researchers, a locally generated tsunami could bring water as high as 5 feet in Marina del Rey, 7 feet in Manhattan Beach and 11 feet in Redondo Beach. Such a tsunami could flood homes and destroy many small boats in nearby harbors, thereby creating dangerous debris.

Based on the history of tsunami run-ups in the region and the history of earthquakes in the Pacific Rim, another tsunami event is likely to occur, although the extent and probability is unknown.

Map 3.11: Hermosa Beach Tsunami Inundation Zone shows the maximum considered tsunami runup from several extreme tsunami sources. According to the County of Los Angeles All-Hazards Mitigation Plan (2019), there are 43.35 square miles (0.91%) in Los Angeles County located in this hazard area. In the unincorporated areas of Los Angeles County there are 2.07 square miles (0.07%) at risk of a maximum tsunami runup.

Map 3.11: Hermosa Beach Tsunami Inundation Zone
(Source: General Plan Public Safety Element, 2017)

Q&A | ELEMENT B: RISK ASSESSMENT | B1-d.
Q: Does the plan include the history of **previous** hazard events for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i)) **A:** See **Previous Hazard Events of Tsunami in the City of Hermosa Beach,** and **Previous Hazard Events of Dam Failure in Southern California** below.

Previous Hazard Events of Tsunami in the City of Hermosa Beach

There is no history of tsunami impacting the City of Hermosa Beach.

Since the 2018 HMP, there have been no federal disaster declarations relating to tsunamis in Hermosa Meach.

Previous Hazard Events of Tsunami in Los Angeles

According to the County of Los Angeles All-Hazards Mitigation Plan (2019), eleven major tsunami events have occurred in Los Angeles County in the last century, including:

Table 3.10: Los Angeles County Tsunamis
(Source: County of Los Angeles AHMP, 2019)

Date	Locations	Maximum Run up*(m)	Earthquake Magnitude
April 13, 1923	Kamchatka	Unknown	M 7.2
August 30, 1930	Santa Monica	9 to 10 feet	N/A
April 1, 1946	Earthquake near Aleutian Islands affecting Catalina Island, Los Angeles, and Long Beach	1 to 6 feet	M 8.8
November 4, 1952	Earthquake near Kamchatka affecting Santa Monica, Los Angeles, and Long Beach	1 to 2 feet	M 9.0
March 9, 1957	Earthquake near Aleutian Islands affecting Santa Monica, Los Angeles, and Long Beach	1 to 2 feet	M 8.6
May 22, 1960	Earthquake in Chile affecting Catalina Island, Los Angeles, Long Beach, and Santa Monica	2 to 5 feet	M 9.5
March 28, 1964	Earthquake in Alaska affecting Catalina Island, Los Angeles, Long Beach, and Santa Monica	2 to 3 feet	M 9.2
November 29, 1975	Earthquake in Hawaii affecting Catalina Island	3 to 4 feet	M 8.0
September 29, 2009	Earthquake in Samoa affecting Los Angeles	1 to 2 feet	M 8.0
February 27, 2010	Earthquake in Chile affecting Catalina Island, Los Angeles, Long Beach, and Santa Monica	1 to 3 feet	M 8.8
March 11, 2011	Earthquake in Japan affecting Catalina Island, Los Angeles, Long Beach, Redondo Beach, and Santa Monica	2 to 3 feet	M 9.0

Q&A | ELEMENT B: RISK ASSESSMENT | B1-e.

Q: Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Probability of Future Tsunami Events** and **Climate, Populations, and Land Use Change Considerations** below.

Probability of Future Tsunami Events

When conducting the risk assessment, the planning team determined that the probability of a catastrophic tsunami event affecting Hermosa Beach is possible with an annual probability of occurrence being between 1 in 100 and 1 in 1000 years.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Climate, Population, and Land Use Change Considerations** below.

Climate Change Considerations

Like earthquakes, there is no direct link between climate change and the frequency or intensity of tsunamis. However, as the sea levels rise, areas that are farther inland may have more severe impacts from tsunamis. The tsunami inundation zone will expand further inland, causing people, structures, and infrastructure to be more exposed to tsunamis.

Population Change Considerations

According to the General Plan Housing Element, Hermosa Beach has had an annual growth rate of 0.3% from 2000 to 2020. As an essentially built-out city, there continue to be few opportunities for growth, except through redevelopment/infill on existing parcels. The City's anticipated residential/population growth over the next five years will have no effect on the impacts of a tsunami.

Q&A | ELEMENT E. PLAN UPDATE | E1-a.
Q: Does the plan describe the changes in development that have occurred in hazard-prone areas that have increased or decreased each community's vulnerability since the previous plan was approved? (Requirement 44 CFR § 201.6(d)(3))
A: See **Land Use Development Considerations** below.

Land Use Development Considerations

According to the General Plan, "vacant land accounts for less than 0.5% of the land area in Hermosa Beach. Of the vacant land, the majority of parcels are currently zoned for residential uses, placing greater pressure on underutilized commercial land to redevelop or densify. While redevelopment of underutilized spaces is a viable option, consideration of context and community character need to be considered so that new uses and development are consistent with the existing or preferred urban form of the city."

With no significant alterations to the development pattern of Hermosa Beach, the vulnerability and impact of tsunami is unchanged.

Drought

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.
Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Description** below.

Description

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. Drought Monitor (USDM) is a map that is updated weekly to show the location and intensity of drought across the country. The USDM uses a five-category system (USDM, 2021):

- D0—Abnormally Dry
  - Short-term dryness slowing planting, growth of crops
  - Some lingering water deficits
  - Pastures or crops not fully recovered
- D1—Moderate Drought
  - Some damage to crops, pastures
  - Some water shortages developing
  - Voluntary water-use restrictions requested
- D2—Severe Drought
  - Crop or pasture loss likely
  - Water shortages common
  - Water restrictions imposed
- D3—Extreme Drought
  - Major crop/pasture losses

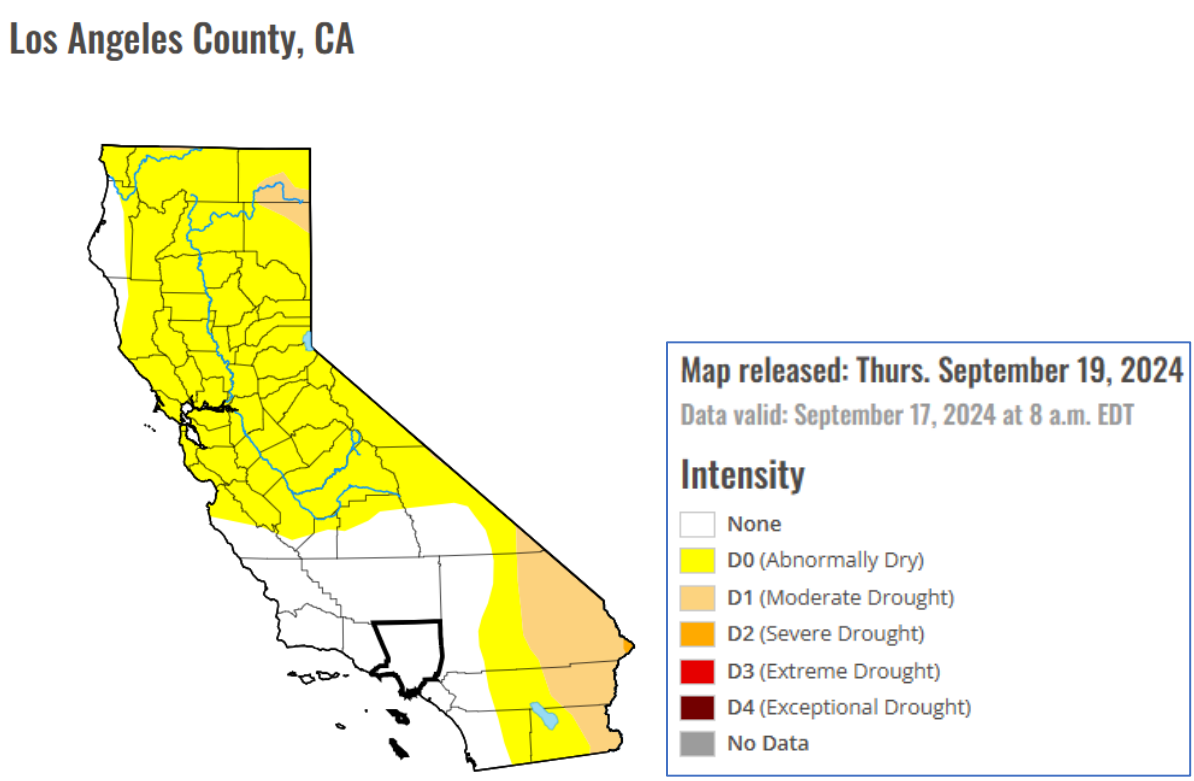
- Widespread water shortages or restrictions

• D4—Exceptional Drought
  - Exceptional and widespread crop/pasture losses
  - Shortages of water creating water emergencies

The USDM categories show experts' assessments of conditions related to drought. These experts check variables including temperature, soil moisture, stream flow, water levels in reservoirs and lakes, snow cover, and meltwater runoff. They also check whether areas are showing drought impacts such as water shortages and business interruptions. Associated statistics show what proportion of various geographic areas are in each category of dryness or drought, and how many people are affected. U.S. Drought Monitor data go back to 2000.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-c.
Q: Does the plan include information on the extent of each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i)) **A:** See **Extent** below.

U.S. Drought Monitor – Los Angeles County, California
(Source: Website – U.S. Drought Monitor 9.19.2024)



Statistics

Statistics type: Cumulative Percent Area | ? | Export Table | View More Statistics

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2024-09-17	100.00	0.00	0.00	0.00	0.00	0.00	0
Last Week to Current	2024-09-10	100.00	0.00	0.00	0.00	0.00	0.00	0
3 Months Ago to Current	2024-06-18	100.00	0.00	0.00	0.00	0.00	0.00	0
Start of Calendar Year to Current	2023-12-26	100.00	0.00	0.00	0.00	0.00	0.00	0
Start of Water Year to Current	2023-09-26	100.00	0.00	0.00	0.00	0.00	0.00	0
One Year Ago to Current	2023-09-19	100.00	0.00	0.00	0.00	0.00	0.00	0

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.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-b.

Q: Does the plan include information on the location of each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Local Conditions** below.

Local Conditions

According to the General Plan Public Safety Element, drought will continue to impact the entire community especially because of increases in both frequency and severity of climate change characteristics.

Water service is provided by California Water Service's Hermosa-Redondo District using groundwater, imported surface water, and recycled supplies. Groundwater satisfies between 10% and 15% of the water demand in any given year, while recycled water generally makes up approximately 1 percent of the total water served. The remainder of the water supply provided to

Hermosa Beach is purchased from West Basin Municipal Water District which utilizes imported water from the Colorado River Aqueduct and the California State Water Project, as well as groundwater supplies in Southern California. The District supplied 14,563 acre-feet per year (AFY) in 2010 and foresees that with additional anticipated conservation measures will have demand for 16,152 AFY by 2040. In response to recent drought conditions, the City has adopted a 'Water Conservation and Drought Management Ordinance' that applies to the use of water by individuals, households and businesses. It also applies to installation of various devices. Hermosa Beach residents have also engaged in educational competitions, like the Wyland Water Challenge, committing to further conservation of water at both an individual and community wide scale.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-d.
Q: Does the plan include the history of **previous** hazard events for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i)) **A:** See **Previous Hazard Events of Drought in the City of Hermosa Beach,** and **Previous Hazard Events of Drought in Los Angeles County,** and **Table 3.11** below.

Previous Hazard Events of Drought in the City of Hermosa Beach

Fortunately, there is no history of severe drought impacting the City of Hermosa Beach. Even so, Hermosa Beach has embraced state-level requirements to conserve water.

Previous Hazard Events of Drought in Los Angeles County

The region's Mediterranean climate makes it especially susceptible to variations in rainfall. Though the potential risk to Hermosa Beach is in no way unique, severe water shortages could have a bearing on the economic well-being of the community. Comparison of climate (rainfall) records from Los Angeles with water well records beginning in 1930 from the San Gabriel Valley indicates the existence of wet and dry cycles on a 10-year scale as well as for much longer periods. The climate record for the Los Angeles region beginning in 1890 suggests drying conditions over the last century. With respect to the present day, climate data also suggests that the last significant wet period was the 1940s. Well level data and other sources seem to indicate the historic high groundwater levels (reflecting recharge from rainfall) occurred in the same decade. Since that time, rainfall (and groundwater level trends) appears to be in decline. This slight declining trend, however, is not believed to be significant.

Climatologists compiled rainfall data from 96 stations in the State that spanned a 100-year period between 1890 and 1990. An interesting note is that during the first 50 years of the reporting period, there was only one year (1890) that had more than 35 inches of rainfall, whereas the second 50-year period recording of 5 year intervals (1941, 1958, 1978, 1982, and 1983) that exceeded 35 inches of rainfall in a single year. The year of maximum rainfall was 1890 when the average annual rainfall was 43.11 inches. The second wettest year on record occurred in 1983 when the State's average was 42.75 inches.

The driest year of the 100-year reported in the study was 1924 when the State's average rainfall was only 10.50 inches. The region with the most stations reporting the driest year in 1924 was the San Francisco Bay area. The second driest year was 1977 when the average was 11.57 inches. The most recent major drought (1987 to 1990) occurred at the end of a sequence of very

wet years (1978 to 1983). The debate continues whether “global warming” is occurring, and the degree to which global climate change will have an effect on local micro-climates. The semi-arid southwest is particularly susceptible to variations in rainfall. A study that documented annual precipitation for California since 1600 from reconstructed tree ring data indicates that there was a prolonged dry spell from about 1755 to 1820 in California. Fluctuations in precipitation could contribute indirectly to a number of hazards including wildfire and the availability of water supplies.

Table 3.11 outlines the State of California drought related executive orders. There were no federal declarations related to droughts found for Los Angeles County.

Table 3.11: Drought Related Executive Orders in Los Angeles County (Source: Cal OES Open State of Emergency Proclamations, 2024)

Date	Location	State Executive Order	Cause
July 8, 2021	Los Angeles County	N-7-33 N-3-23 N-4-23	Drought Conditions
May 10, 2021	Los Angeles County	N-7-33 N-3-23 N-4-23	Drought Conditions
April 12, 2021	Los Angeles County	N-7-33 N-3-23 N-4-23	Drought Conditions

Q&A | ELEMENT B: RISK ASSESSMENT | B1-e.

Q: Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Probability of Future Drought Events** and **Climate, Populations, and Land Use Change Considerations** below.

Probability of Future Drought Events

Droughts are not uncommon. However, droughts that cause widespread catastrophic impacts do not happen often. When conducting the risk assessment, the planning team determined that the probability of a catastrophic drought affecting Hermosa Beach is rare with an annual probability of occurrence being between 1 in 10 and 1 in 100 years. In the meantime, the City adopted a Water Conservation and Drought Management Ordinance in 2010.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Climate, Population, and Land Use Change Considerations** below.

Climate Change Considerations

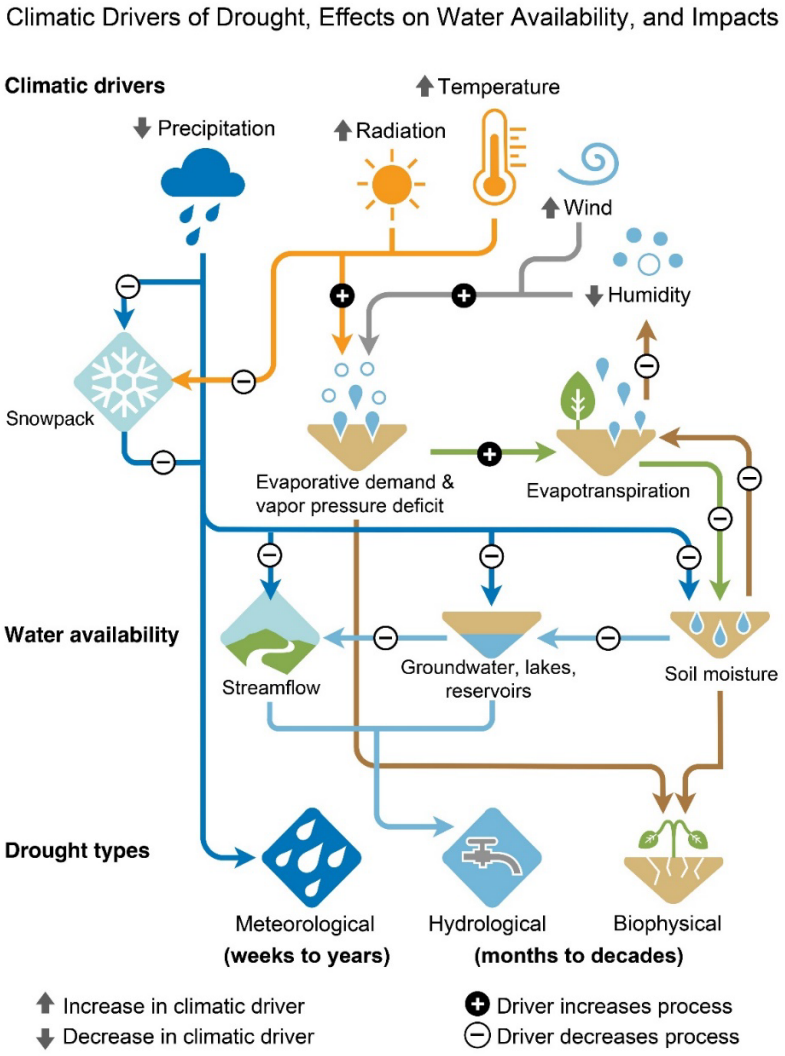
According to the Fifth National Climate Assessment, drought is such a complex phenomenon that it is a challenge to even define what it is: more than 150 different definitions have appeared in scientific literature. Broadly, drought results when there is a mismatch between moisture supply and demand. Meteorological drought happens when there is a severe or ongoing lack of precipitation. Hydrological drought results from deficits in surface runoff and subsurface moisture supply. Drying soil moisture affects crop yields and can lead to agricultural droughts. The timing of droughts is also complex. Droughts can last for weeks or decades. They may develop slowly over months or come on rapidly. A drought may be immediately apparent or detectable only in retrospect.

Despite this complexity, some robust regional trends are emerging. Colorado River streamflow over the period 2000–2014 was 19% lower than the 20th-century average, largely due to a reduction in snowfall, less reflected sunlight, and increased evaporation. The period 2000–2021 in the Southwest had the driest soil moisture of any period of the same length in at least the past 1,200 years. While this drought is partially linked to natural climate variability, there is evidence that climate change exacerbated it, because warmer temperatures increase atmospheric "thirst" and dry the soil. Droughts in the region are lasting longer and reflect not a temporary extreme event but a long-term aridification trend - a drier "new normal" occasionally punctuated by periods of extreme wetness consistent with expected increases in precipitation volatility in a warming world.

The Southwest is the only region in which the total area of unusually dry soil moisture is increasing. In the eastern regions of the country, hydrological droughts have become less frequent since the late 19th century due to increases in precipitation that compensate for warming-driven increases in evaporation. However, there is evidence that the likelihood of drought in the Northeast did not decrease as much as would be expected given these wetter conditions and that higher increases in evapotranspiration make the Southeast more drought-prone than the Northeast. Additionally, much of the US is vulnerable to rapid-onset flash droughts that can materialize in a matter of days, driven by extreme high temperatures or wind speeds and a lack of rainfall. These events are difficult to predict and prepare for and can have outsized impacts. There is evidence that these events are drying out soil more quickly as the world warms.

Climate change alters the hydrologic cycle and is expected to increase drought in some regions through various process pathways. **Figure 3.5** below shows how climate change alters the hydrologic cycle. According to the Fifth National Climate Assessment (2023), changes in climatic drivers (e.g., precipitation, temperature, wind, etc.) affect different aspects of the hydrologic cycle (e.g., evapotranspiration, snowpack, streamflow, soil moisture). In turn, these hydrologic shifts translate into changes in the severity, frequency, and risk of different drought types. Plus, and minus signs denote the direction of change in the driver that would cause increases in drought. For example, where precipitation declines (down arrow), all drought types will increase because this reduces snowpack, streamflow, groundwater and reservoir storage, and soil moisture. Similarly, increasing temperatures (up arrow) are also expected to increase hydrological and biophysical drought by reducing snowpack and increasing evaporative losses from streams, surface reservoirs, and soils.

Figure 3.5: Climate Drivers of Drought, Effects on Water Availability, and Impacts
Source: Fifth National Climate Assessment (2023)



Hermosa Beach can expect to see longer and more frequent droughts due to the impact of climate change on drought conditions. This will require the city to encourage water conservation measures and monitor fire weather closely to prevent wildfires.

Population Change Considerations

According to the Housing Element, Hermosa Beach has had an annual growth rate of 0.3% from 2000 to 2020. As an essentially built-out city, there continue to be few opportunities for growth, except through redevelopment/infill on existing parcels. The City's anticipated residential/population growth over the next five years will have no effect on the impacts of drought.

Q&A | ELEMENT E. PLAN UPDATE | E1-a.

Q: Does the plan describe the changes in development that have occurred in hazard-prone areas that have increased or decreased each community's vulnerability since the previous plan was approved? (Requirement 44 CFR § 201.6(d)(3))

A: See **Land Use Development Considerations** below.

Land Use Development Considerations

According to the General Plan, "vacant land accounts for less than 0.5% of the land area in Hermosa Beach. Of the vacant land, the majority of parcels are currently zoned for residential uses, placing greater pressure on underutilized commercial land to redevelop or densify. While redevelopment of underutilized spaces is a viable option, consideration of context and community character need to be considered so that new uses and development are consistent with the existing or preferred urban form of the city." With no significant alterations to the development pattern of Hermosa Beach, the vulnerability and impact of drought is unchanged.

Pandemic

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.

Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Description** below.

Description

According to the California State Hazard Mitigation Plan (2018), the California Department of Public Health has identified epidemics, pandemics, and vector-borne diseases as specific hazards that would have a significant impact throughout the State.

According to the Centers for Disease Control (CDC), an epidemic refers to an increase, often sudden, in the number of cases of a disease above what is normally expected in that population area. A pandemic refers to an epidemic that has spread over several countries or continents, usually affecting a large number of people. Vector-borne diseases are human illnesses caused by parasites, viruses and bacteria that are transmitted by vectors – living organisms that can transmit infectious pathogens between humans, or from animals to humans.

Given the recent catastrophic impacts and lingering effects of COVID-19, the Planning Team chose to focus specifically on pandemic.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-b.

Q: Does the plan include information on the location of each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Local Conditions** below.

Local Conditions

Any of the diseases below have the potential to impact the entire community.

Pandemic Influenza

Pandemic influenza occurs when a new influenza virus, for which there is little or no human immunity, emerges and spreads on a worldwide scale, infecting a large proportion of the human population. The 20th century saw three such pandemics. The most notable pandemic was the 1918 Spanish influenza pandemic that was responsible for 20 million to 40 million deaths throughout the world. There have been two pandemics in the 21st century; H1N1 in 2009, and the most recent COVID-19 outbreak in 2019. As demonstrated historically and currently, pandemic influenza has the potential to cause serious illness and death among people of all age groups and have a major impact on society. These societal impacts include significant economic disruption that can occur due to death, loss of employee work time, and costs of treating or preventing the spread of influenza.

H1N1 Influenza

In 2009 a pandemic of H1N1 influenza, popularly referred to as the swine flu, resulted in many hospitalizations and deaths. Pandemic H1N1 influenza is spread in the same way as seasonal influenza, from person to person through coughing or sneezing by infected people. In April 2009, two kids living more than 100 miles apart in Southern California came down with the flu. By mid-April, their illnesses had been diagnosed as being caused by a new strain of H1N1 influenza. Persons infected with H1N1 experienced fever and mild respiratory symptoms, such as coughing, runny nose, and congestion. In some cases, symptoms were severe and included diarrhea, chills, and vomiting, and in rare cases respiratory failure occurred. The H1N1 virus caused relatively few deaths in humans. In the United States, for example, it caused fewer deaths (between 8,870 and 18,300) than seasonal influenza, which, based on data for the years 2014–2019, causes an average of about 40,000 deaths each year. The H1N1 virus was most lethal in individuals affected by chronic disease or other underlying health conditions.

COVID-19

As of 2020, the CDC has responded to a pandemic of respiratory disease spreading from person to person caused by a novel (new) coronavirus. The disease was named “Coronavirus Disease 2019” (abbreviated “COVID-19”). Coronaviruses are a large family of viruses that are common in people and many different species of animals, including camels, cattle, cats, and bats. Rarely, animal coronaviruses can infect people and then spread between people such as with Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).

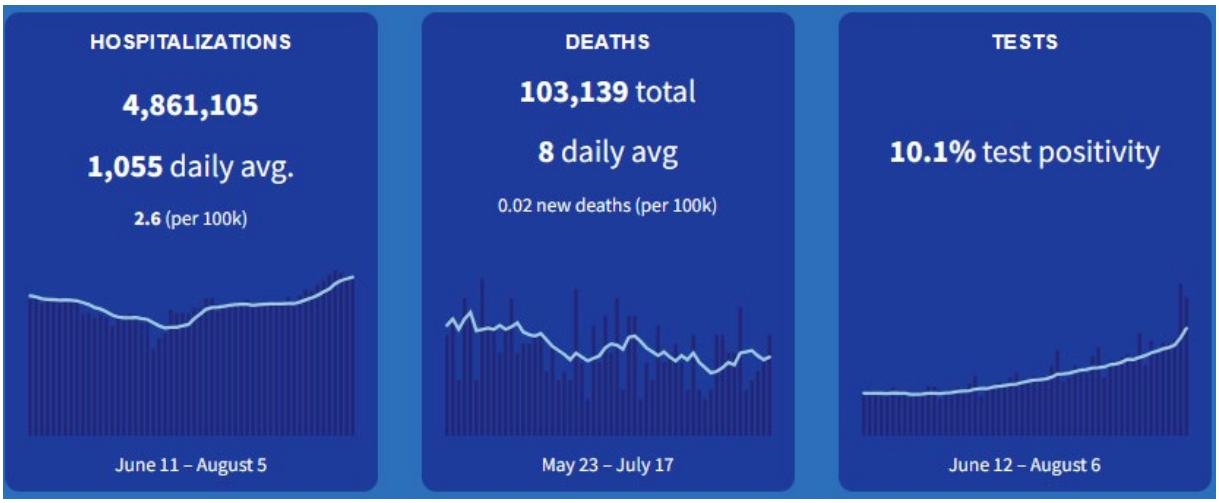
According to the CDC, many of the patients at the epicenter of the outbreak in Wuhan, Hubei Province, China had some link to a large seafood and live animal market, suggesting animal-to-person spread. Later, a growing number of patients reportedly did not have exposure to animal markets, indicating person-to-person spread. Person-to-person spread was subsequently reported outside Hubei and in countries outside China, including in the United States. Most international destinations now have ongoing community spread with the virus that causes COVID-19, as does the United States.

On March 4, 2020, Governor Newsom proclaimed a state of emergency in California’s response to the COVID-19 outbreak. On March 19, 2020, Governor Newsom issued an executive order

directing all residents immediately to heed current State public health directives to stay home, except as needed to maintain continuity of operations of essential critical infrastructure sectors.

According to the California Department of Public Health, as of June 1, 2023, California has suffered 104,047 COVID-related deaths.

Figure: Tracking COVID-19
(Source: California Department of Public Health, 2023)



Avian Influenza

Avian Influenza, commonly referred to as “Bird Flu,” remains a looming pandemic threat. Avian Influenza primarily spreads from birds to birds and rarely to humans. Public health experts continue to be alert to the possibility that an avian virus may mutate or change so that it can be passed from birds to humans, potentially causing a pandemic in humans. Some strains of the Avian Influenza could arise from Asia or other continents where people have very close contact with infected birds. This disease could have spread from poultry farmers or visitors to live poultry markets who had been in very close contact with infected birds and contracted fatal strains of Avian Influenza. Thus far, Avian Influenza viruses have not mutated and have not demonstrated easy transmission from person to person. However, if Avian Influenza viruses were to mutate into a highly virulent form and become easily transmissible from person to person, the public

health community would be very concerned about the potential for an influenza pandemic. Such a pandemic could disrupt all aspects of society and severely affect the economy.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-c.
Q: Does the plan include information on the extent of each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))
A: See **Extent** below.

Extent

According to the County of Los Angeles Public Health, Los Angeles County uses the Centers for Disease Control and Prevention's to guide assessment of risk across the county and inform the adoption of prevention strategies. Covid-19 risk levels are ranked low to high and are based on new COVID-19 hospital admissions per 100,000 population over 7 days. As shown in **Table 8**.1 the County has a low level of risk if new COVID-19 hospital admissions per 100,000 population is less than 10 in a 7-day period. The County is at a high risk if new COVID-19 hospital admissions per 100,000 population exceed 20 in a 7-day period. Los Angeles County will implement COVID-19 mitigation strategies in response to an increase in hospital admission levels when new hospital admissions move into the High Level for at least fourteen (14) consecutive days. Strategies will revert to a lower hospital admission level when the hospital admission rate has fallen below the threshold for the higher level for at least 7 consecutive days or the hospital admission rate has been declining consistently for the prior fourteen (14) days.

Table 8.1: Los Angeles County Assessment of Risk of COVID
Source: County of Los Angeles Public Health

Metric	Low	Medium	High
New COVID-19 hospital admissions per 100,000 population (7-day total)	<10.0	10.0-19.9	≥20.0

According to the CDC, Patients with COVID-19 can experience a range of clinical manifestations, from no symptoms to critical illness. In general, adults with COVID-19 can be grouped into the following severity of illness categories; however, the criteria for each category may overlap or vary across clinical guidelines and clinical trials, and a patient's clinical status may change over time.

- Asymptomatic or presymptomatic infection: Individuals who test positive for COVID-19 using a virologic test (i.e., a nucleic acid amplification test [NAAT] or an antigen test) but have no symptoms consistent with COVID-19.
- Mild illness: Individuals who have any of the various signs and symptoms of COVID-19 (e.g., fever, cough, sore throat, malaise, headache, muscle pain, nausea, vomiting, diarrhea, loss of taste and smell) but do not have shortness of breath, dyspnea, or abnormal chest imaging.

- Moderate illness: Individuals who show evidence of lower respiratory disease during clinical assessment or imaging and who have an oxygen saturation measured by pulse oximetry (SpO2) ≥94% on room air at sea level.
- Severe illness: Individuals who have SpO2 <94% on room air at sea level, a ratio of arterial partial pressure of oxygen to fraction of inspired oxygen (PaO2/FiO2) <300 mm Hg, a respiratory rate >30 breaths/min, or lung infiltrates >50%.
- Critical illness: Individuals who have respiratory failure, septic shock, and/or multiple organ dysfunction.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-d.

Q: Does the plan include the history **of previous** hazard events for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Previous Hazard Events of Pandemic in the City of Hermosa Beach**.

Previous Hazard Events of Pandemic in the City of Hermosa Beach

As a result of Coronavirus, most City offices/facilities and many businesses were closed from March 2020-June 2021. The Hermosa Beach Resiliency Plan for Reopening included numerous protocols to mitigate against spread.

According to the Los Angeles County Department of Public Health, between July 2020 and July 2024, there were 5,049 COVID cases identified in the City of Hermosa Beach. During the same period of time, there were 20 COVID-related deaths.

Previous Hazard Events of Pandemic in Los Angeles County

As shown below, according to the Los Angeles County Department of Public Health, between July 2020 and July 2024, there were 3,725,241 COVID cases identified in Los Angeles County. During the same period of time, there were 35,971 COVID-related deaths.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-e.

Q: Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Probability of Future Pandemic Events** and **Climate Change Considerations** below.

Probability of Future Pandemic Events

Following is an assessment from the 2023 California State Hazard Mitigation Plan of the probability of future epidemic, pandemic, and vector-borne disease events:

> *"Based on the historical epidemic, pandemic, and vector-borne disease events in California, the state has a high probability of future events occurring within the next 25 years. According to FEMA and CDPH, California experienced more than three epidemic, pandemic, or vector-borne disease events every year between 2013 and 2022. It is reasonable to expect similar averages in the future."*

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))
A: See **Climate, Population, and Land Use Development Change Considerations** below.

Climate Change Considerations

The health risks for a changing climate will negatively impact the City of Hermosa Beach. The City has residents and visitors that will be more susceptible to more severe impacts from health-related hazards due to compounding conditions. The changing climate will make this worse.

Population Change Considerations

According to the Housing Element, Hermosa Beach has had an annual growth rate of 0.3% from 2000 to 2020. As an essentially built-out city, there continue to be few opportunities for growth, except through redevelopment/infill on existing parcels. The City's anticipated residential/population growth over the next five years will have no effect on the impacts of disease.

Land Use Development Change Considerations

According to the General Plan, "vacant land accounts for less than 0.5% of the land area in Hermosa Beach. Of the vacant land, the majority of parcels are currently zoned for residential uses, placing greater pressure on underutilized commercial land to redevelop or densify. While redevelopment of underutilized spaces is a viable option, consideration of context and community character need to be considered so that new uses and development are consistent with the existing or preferred urban form of the city." With no significant alterations to the development pattern of Hermosa Beach, the vulnerability and impact of disease is unchanged.

Chapter 4: Vulnerability and Impacts

The vulnerability and impacts assessment process analyzes the potential harm of the prioritized hazard events discussed in Chapter 3: Risk Assessment.

Vulnerability and Impact Assessment Process

The vulnerability and impact assessment examines the potential harm that may result from a hazard event, without factoring in its likelihood. This means that equal attention is given to hazards regardless of their probability. The assessment evaluates three key aspects of each hazard on assets: the physical threat posed to facilities, the social threat to vulnerable populations, and the potential impact on other assets. The **FEMA Handbook** categorizes assets as follows:

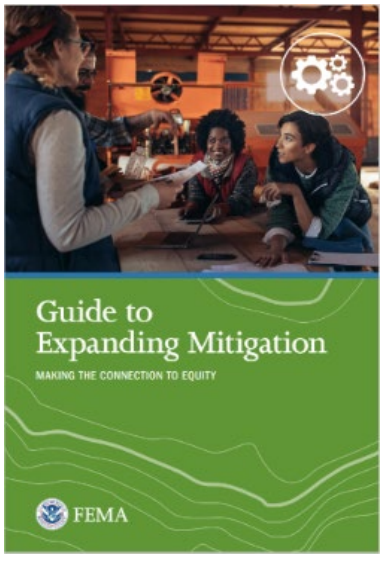
People
Structures
Economy
Natural, Historic, and Cultural Resources
Activities Bringing Value to the Community

People

People are the community's most important asset. People include individuals who live and/or work in Hermosa Beach.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.
Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))
A: See **Vulnerability of People** below.

Vulnerability of People

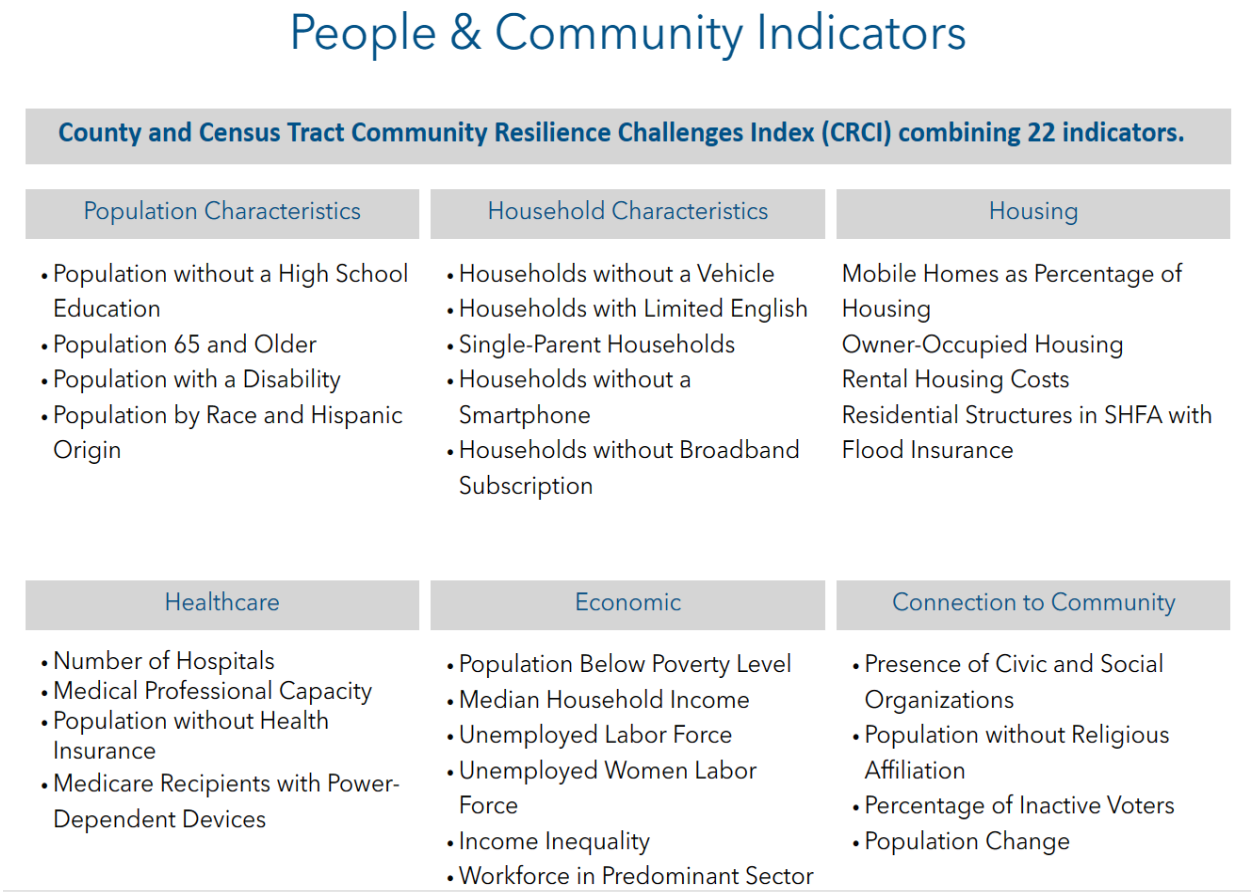


Disasters affect all populations; however, some populations are more adversely affected because of a higher level of social vulnerability. According to **The Guide to Expanding Mitigation – Making the Connection to Equity**, social vulnerability is defined in terms of the characteristics of a person or group that affect "their capacity to anticipate, cope with, resist, and recover from the impact" of a discrete and identifiable disaster in nature or society.

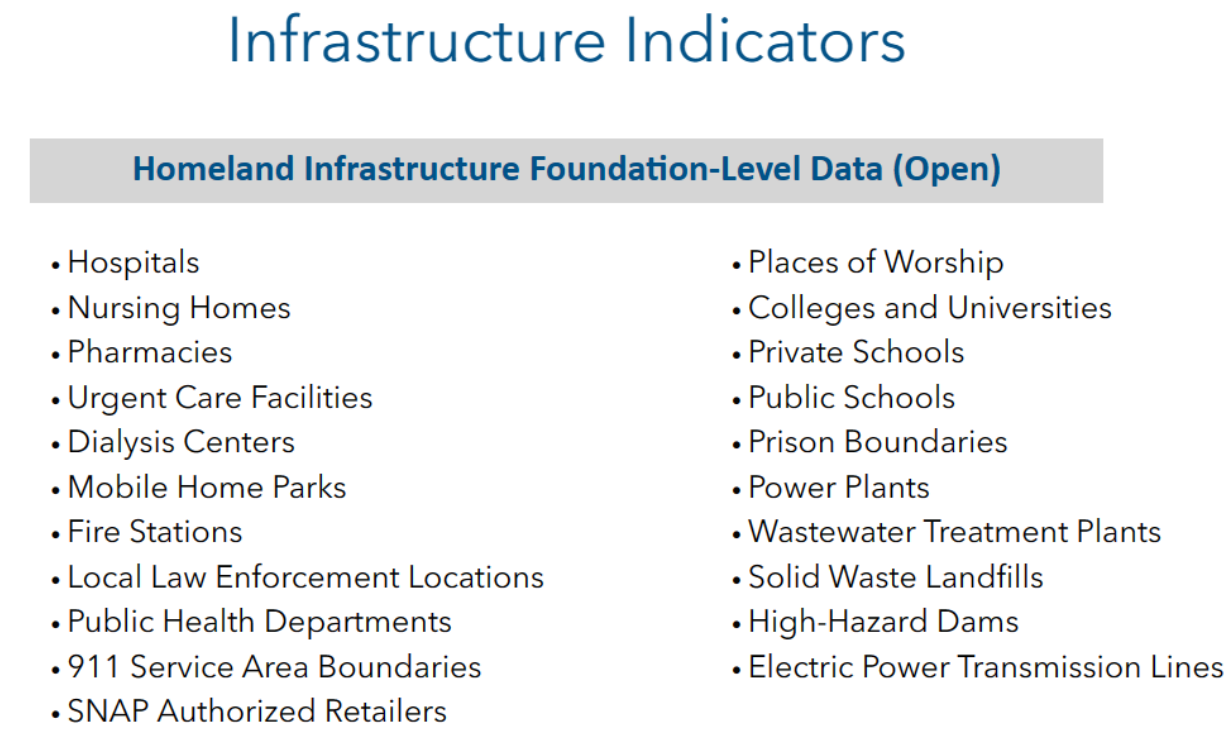
Using **FEMA's Resilience Analysis and Planning Tool** (RAPT), census tract data was used to understand what census tracts might be more vulnerable. Many of the maps in the People section were created using data provided by RAPT. RAPT is a free, publicly available geographic information systems (GIS) tool to help emergency managers and community partners of all GIS skill levels to visualize and assess potential challenges to community

resilience. RAPT includes over 100 pre-loaded data layers and the tool's functionality allows users to visualize combinations of these data layers for a specific location. One of the layers includes community demographics for counties, census tracts, and tribes drawn primarily from the U.S. Census Bureau. RAPT includes 27 demographic layers, including 22 community resilience challenges indicators identified from peer-reviewed research, and **FEMA's Community Resilience Challenges Index** (CRCI) for counties and census tracts, a composite value of all 22 community resilience challenges indicators. The graphics below outline the community resilience indicators.

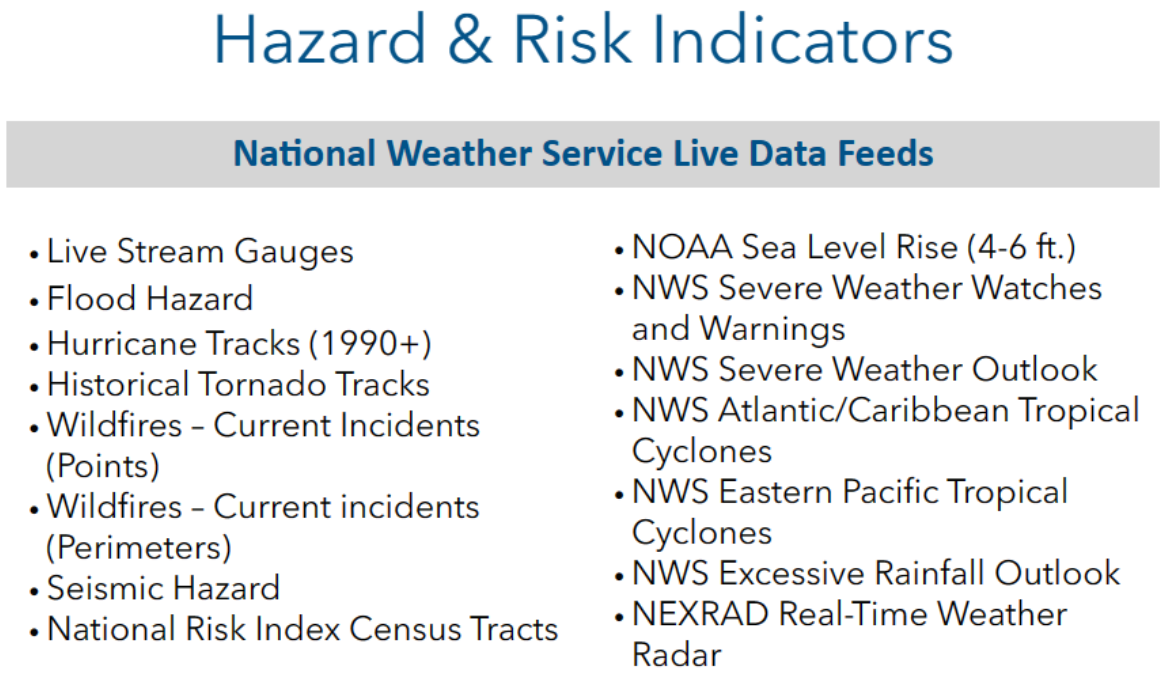
Graphic 4.1: RAPT People & Community Indicators
Source: FEMA Resilience Analysis and Planning Tool (RAPT)



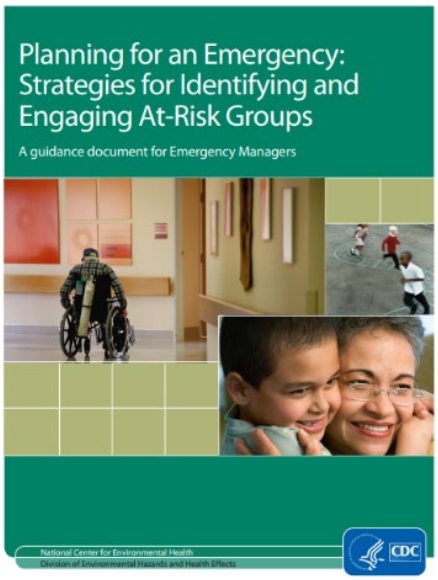
Graphic 4.2: RAPT Infrastructure Indicators
Source: FEMA Resilience Analysis and Planning Tool (RAPT)



Graphic 4.3: RAPT Hazard and Risk Indicators
Source: FEMA Resilience Analysis and Planning Tool (RAPT)



A person's vulnerability to disaster is influenced by many factors. According to **CDC's Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Group**, the following six categories are among the most commonly accepted factors: socioeconomic status, age, gender, race and ethnicity, English language proficiency, and medical issues and disability. These categories were used to analyze the vulnerability of people in Hermosa Beach. The compounding effects of these factors will further impact an individual's ability to withstand the effects of disasters and other hazards.



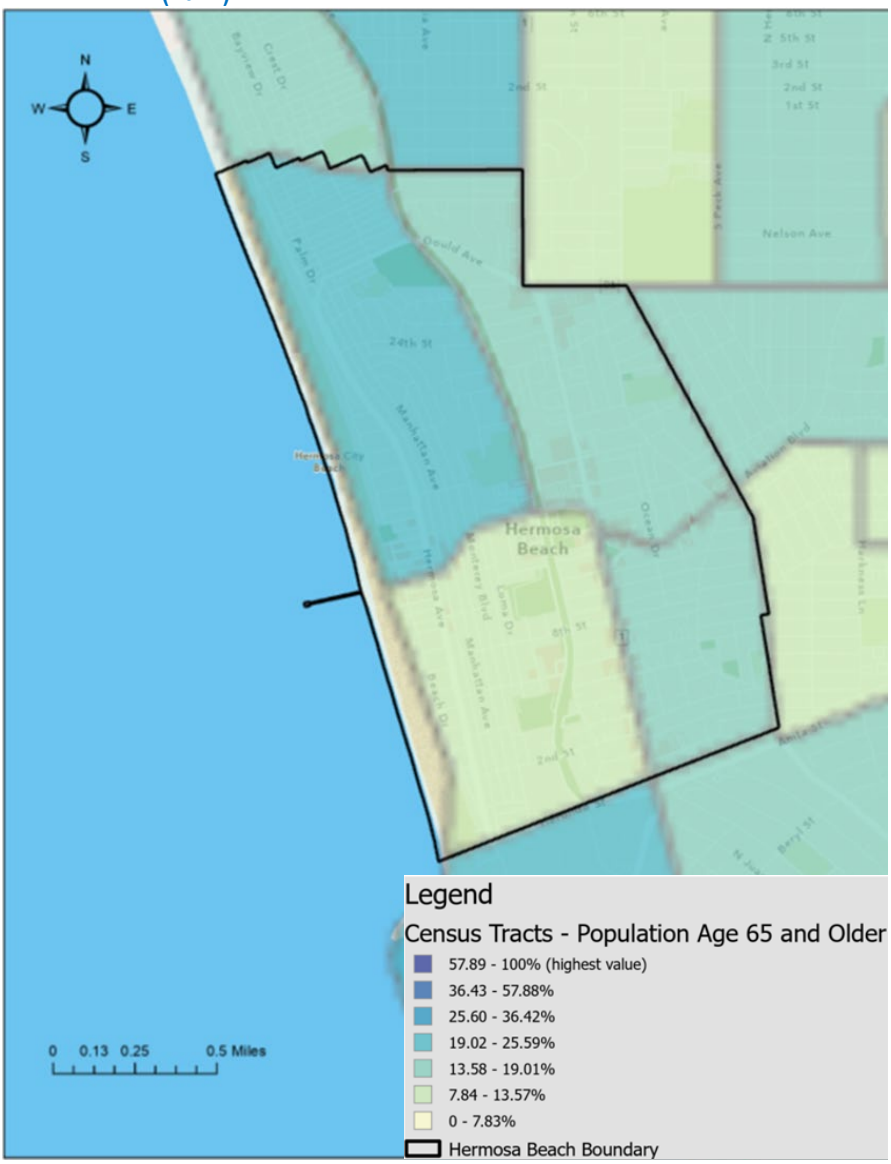
Below is an overview of the City of Hermosa Beach's population broken down by the six contributing factors of social vulnerability. Due to a limitation with data that is currently available it is not known exactly where in the city those who are more vulnerable may reside.

Age

The old and young are particularly vulnerable during disasters. Age can contribute to cognitive development, physical ability and mobility, socioeconomic stats, and access to resources that can help the individual prepare for, respond to and recover from disasters and other hazard events. For example, individuals 65 and older can have mobility challenges and other ailments that can prevent them from properly preparing for a disaster. At the same time, children are reliant on their parents or guardians to provide for them. Their ability to withstand a disaster is highly dependent on their parents or guardians. Children are more vulnerable to disasters when they are separated from their parents while at school or daycare.

According to the 2020 Census, there are 2,658 individuals over the age of 65 and 3,453 individuals under the age of 18 living in Hermosa Beach. **Map 4.1** depicts the population percentage of individuals over 65 in each census tract. The tracts with a darker blue represent a tract with a higher population of individuals over 65. The census tracts in the northwest boundaries of Hermosa Beach have a higher percentage of their population older than 65. Due to a limitation with data that is currently available it is not known where certain aged populations live. Working with local organizations that serve these populations can provide better insight into the exact needs of the community.

Map 4.1: Percentage of the Population Over 65 by Census Tract
Source: FEMA RAPT (2024)



Race and Ethnicity

According to **Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Group,** "Race and ethnicity contribute to social vulnerabilities. Race and ethnicity are tied to issues of socioeconomic status. Social and economic marginalization contributes to the vulnerability of these groups".

Hermosa Beach is a diverse city with a population that reflects a rich blend of various racial and ethnic groups. The largest racial and ethnicity group in Hermosa Beach is white. The second largest group is Hispanic or Latino, followed by Asian descent. There is also a smaller portion of black and American Indian residents. The city also includes a mix of identifying with two or more races.

Table 4.1: Hermosa Beach Population by Race/Ethnicity
Source: Esri Business Analyst

2024 Race and Ethnicity	Number	Percent
White Alone	14,195	74.6%
Black Alone	204	1.1%
American Indian Alone	63	0.3%
Asian Alone	1,477	7.8%
Pacific Islander Alone	23	0.1%
Some Other Race Alone	516	2.7%
Two or More Races	2,541	13.4%
Hispanic Origin (Any Race)	2,184	11.5%

Gender

According to **Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Group**, "gender does not necessarily indicate vulnerability or disadvantage. However, gender intersects with social patterns and inequalities can arise from gender differences. During a disaster, females might be more vulnerable because of differences in employment, lower income, and family responsibilities, as most single-parent households are single-mother families. However, females are a strong influence in mobilizing response to a warning. Females are also more likely to be effective risk communicators through being active participants in the community. They also might know more neighborhood information that can assist emergency managers. Although many families evacuate together, it is not uncommon for males to stay behind to guard the property or to continue working as the family provider. Males are also more likely to be risk takers and might not heed warnings."

According to the 2020 Census, 51.2% of Hermosa Beach's population is male and 48.8% are female. The majority of the population live in a married couple household with 16.8% of those married having children under the age of 18. A smaller portion of the population lives in a single parent household with children under 18. There are approximately 130 single dad households and 241 single mom households in Hermosa Beach.

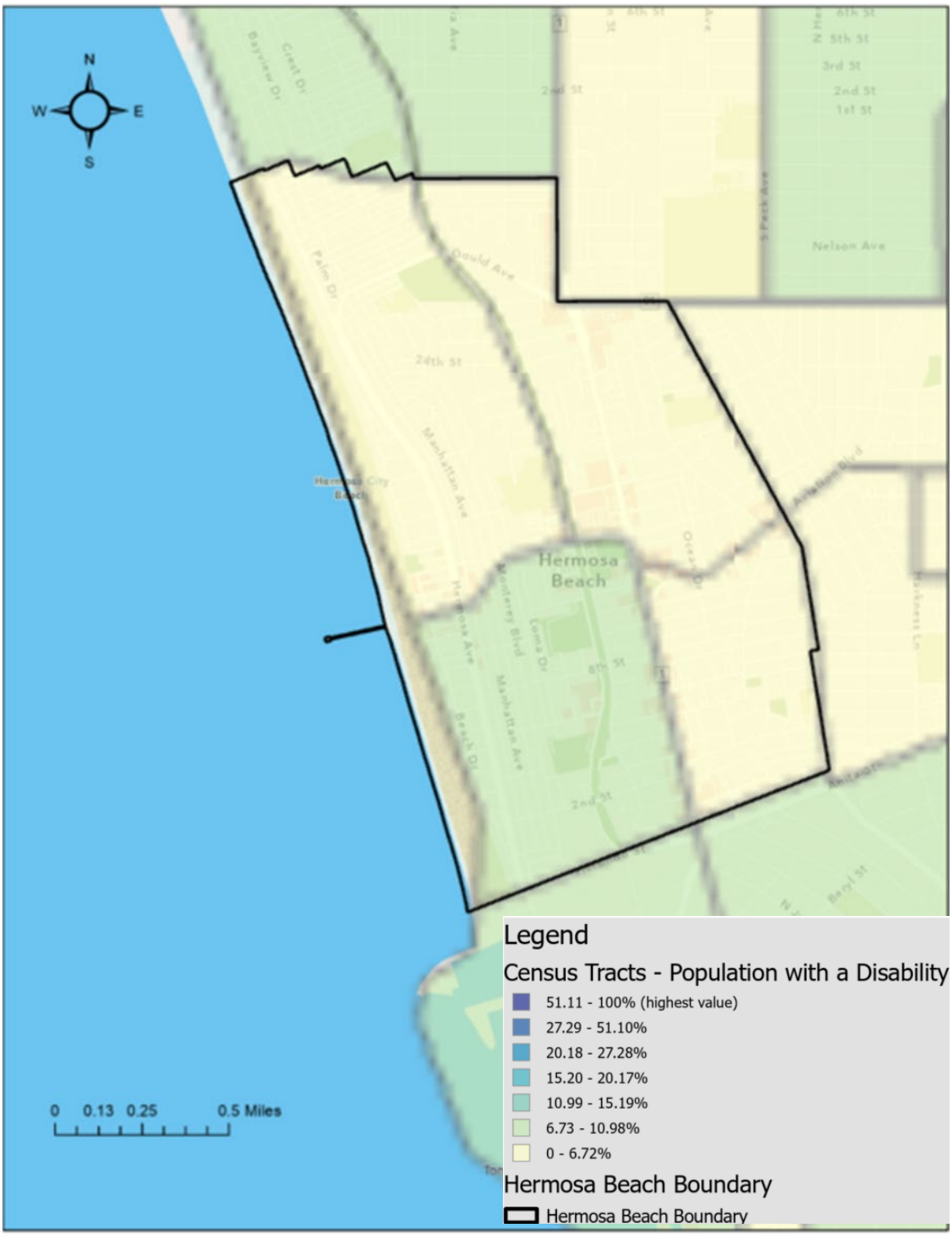
Medical Issues and Disability

Individuals with disabilities are disproportionately affected by disasters. Individuals with disabilities have a higher rate of fatality, and exclusion during disasters. They also have greater challenges during recovery. Understanding the disability demographics of a community gives the community the opportunity to identify and plan for the access and functional needs their communities' members might need during a disaster.

With information provided by ESRI ArcGIS Business Analyst Tool, it was determined there are 956 households with at least 1 person with a disability. **Map 4.2** depicts the population percentage of individuals with at least one disability in each census tract. The tracts with a darker blue represent a tract with a higher population of individuals with a disability. The tracks with a light green or yellow represent the tracts with a lower population of individuals with a disability. The census tracts in the south region of Hermosa Beach have a higher percentage of their population with a disability. Due to a limitation with data that is currently available it is not known the number of individuals in the community with a disability or what their limitation might be. Working with

local organizations that serve these populations can provide better insight into the exact needs of the community.

Map 4.2: Percentage of the Population with a Disability
Source: FEMA RAPT (2024)



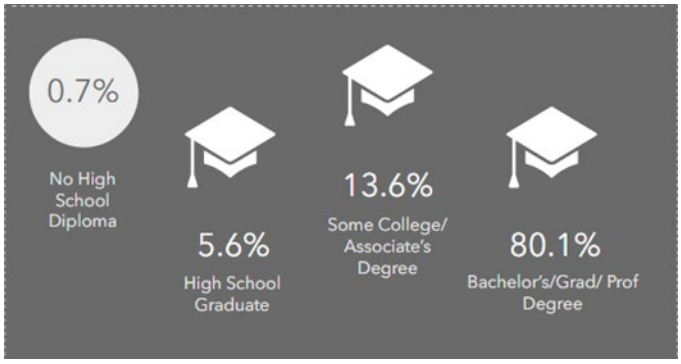
Socioeconomic Status

The ability for an individual to prepare for, mitigate against, respond to, and recover from disasters often depends on the availability of key resources. It is logical to assume that individuals with a higher socioeconomic status are in a better position to acquire key resources than individuals with a lower socioeconomic status. Factors that contribute to socioeconomic status include income, education, occupation, and housing. According to **Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Group**, people with lower socioeconomic status more likely lack resources needed to follow emergency preparedness instructions. They might be unable to stockpile food, for example. They might be unwilling or unable to stay home from work and lose a day's pay or evacuate and leave their home during an emergency. By identifying at-risk groups ahead of time, you can plan more efficient evacuations and specifically target people who need transportation or special assistance (e.g., those without a vehicle).

The info graphics below show key indicators for socioeconomic status for the City of Hermosa Beach. The data in the sections below came from the ESRI ArcGIS Business Analyst Tool.

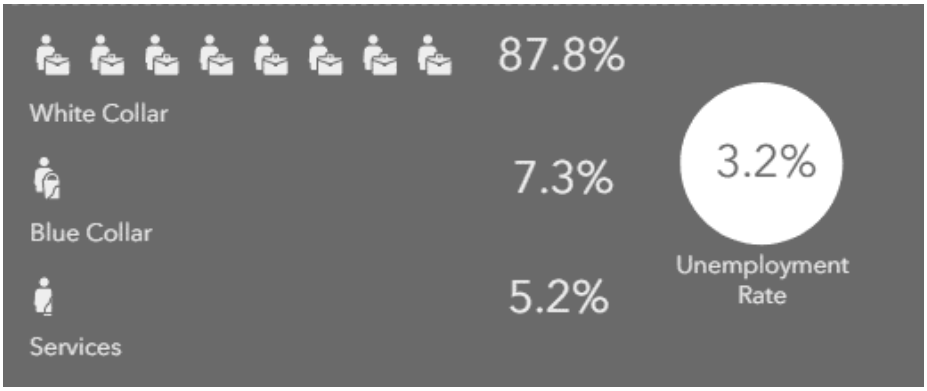
- Income: The average household income for the City of Hermosa Beach is $172,593. Roughly 6% of households in Hermosa Beach are below poverty level.
- Education: Most of the residents of Hermosa Beach have a college degree or advanced degree. **Figure 4.1** provides a visualization of the highest level of education completed by residents of Hermosa Beach.

Figure 4.1: Hermosa Beach Residents' Highest Level of Education Completed
Source: ESRI Business Analyst



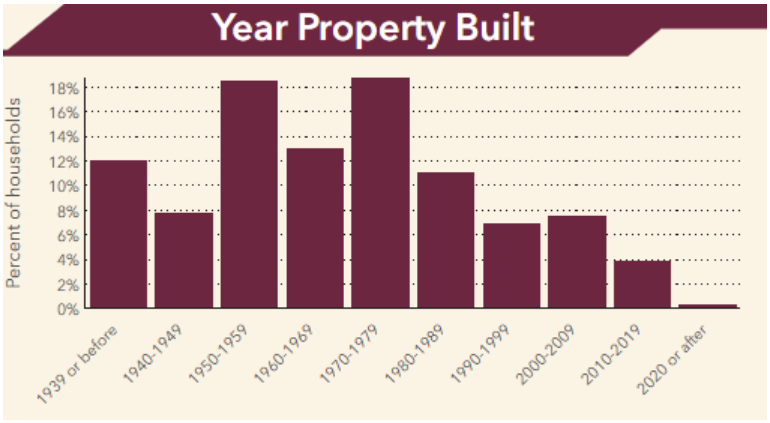
- Occupation: The majority of Hermosa Beach residents work white collar jobs. **Table 4.2** provides a percentage breakdown of Hermosa Beach Residents' employment.

Figure 4.2: Hermosa Beach Residents' Employment
Source: ESRI Business Analyst



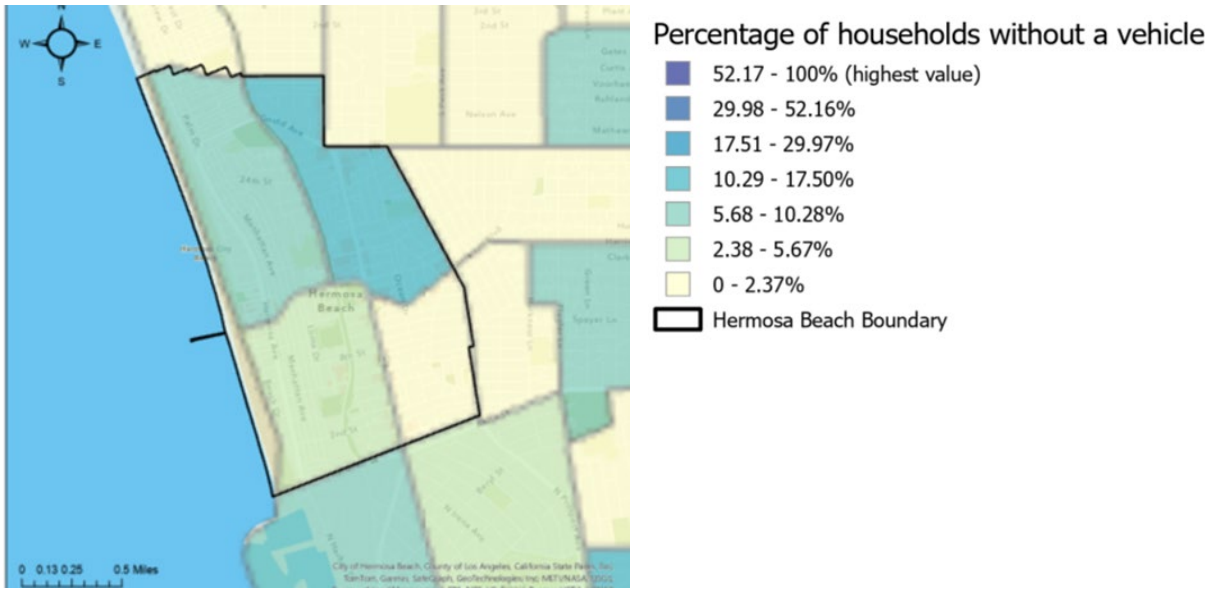
- Housing: The majority of the housing units are owner occupied (50.6%). Of these homes most are under mortgage/loan (72.8%). The remainder are owned free and clear (27.2%). The majority of the houses in Hermosa Beach were built between 1950 and 1959, and 1970 and 1979. **Graph 4.4** displays the percentage of households by decade of construction.

Graph 4.4: Houses Built in Hermosa Beach by Decade
Source: ESRI Business Analyst

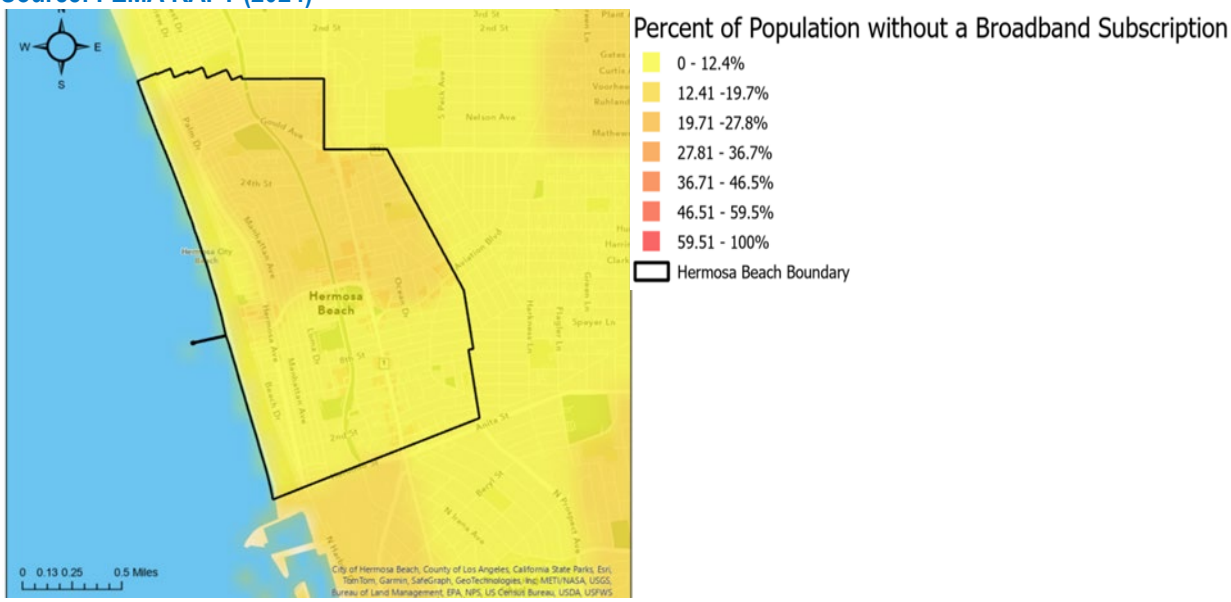


- **Other Factors:** There are other factors related to socioeconomic status that are important to take into account. **Map 4.3** breaks down the percentage of households without a vehicle by census tract. There is one census tract in the northeastern region of the City of Hermosa Beach where 17.51 – 29.97% of households do not have a vehicle. This census tract is the darker blue tract. Generalizing vehicle ownership to the entire City of Hermosa Beach, only 2% of households do not have a vehicle. **Map 4.4** breaks down the percentage of households without a broadband subscription by census tract. 2% of households in Hermosa Beach do not have access to the internet. The same census tract that had a high rate of households without a vehicle also has a high rate of households without a broadband subscription. Access to the internet and a vehicle will impact a person's ability to prepare for, respond to, and recover from disasters.

Map 4.3: Percent of Households without a Vehicle
Source: FEMA RAPT (2024)



Map 4.4: Percentages of Population without a Broadband Subscription
Source: FEMA RAPT (2024)



English Language Proficiency

The ability to communicate with others during a disaster is imperative for residents to be able to take the necessary precautions related to the disaster. When individuals do not speak the language in which emergency information is presented, it can negatively impact the individual's ability to comprehend the situation and take appropriate action. According to data provided by the **ESRI Business Analyst at Risk Population** infographic 0% of the population in Hermosa Beach speak a language other than English and do not speak English. Furthermore, less than 1% of the population speak Spanish, an Indo-European language, or Asian-Pacific Island but English not well. Together, less than 1% of the population may have communication challenges

during a hazard event. **Table 4.3** shows the breakdown of language spoken in Hermosa Beach. English and Indo-European are the two most common language groups spoken in Hermosa Beach.

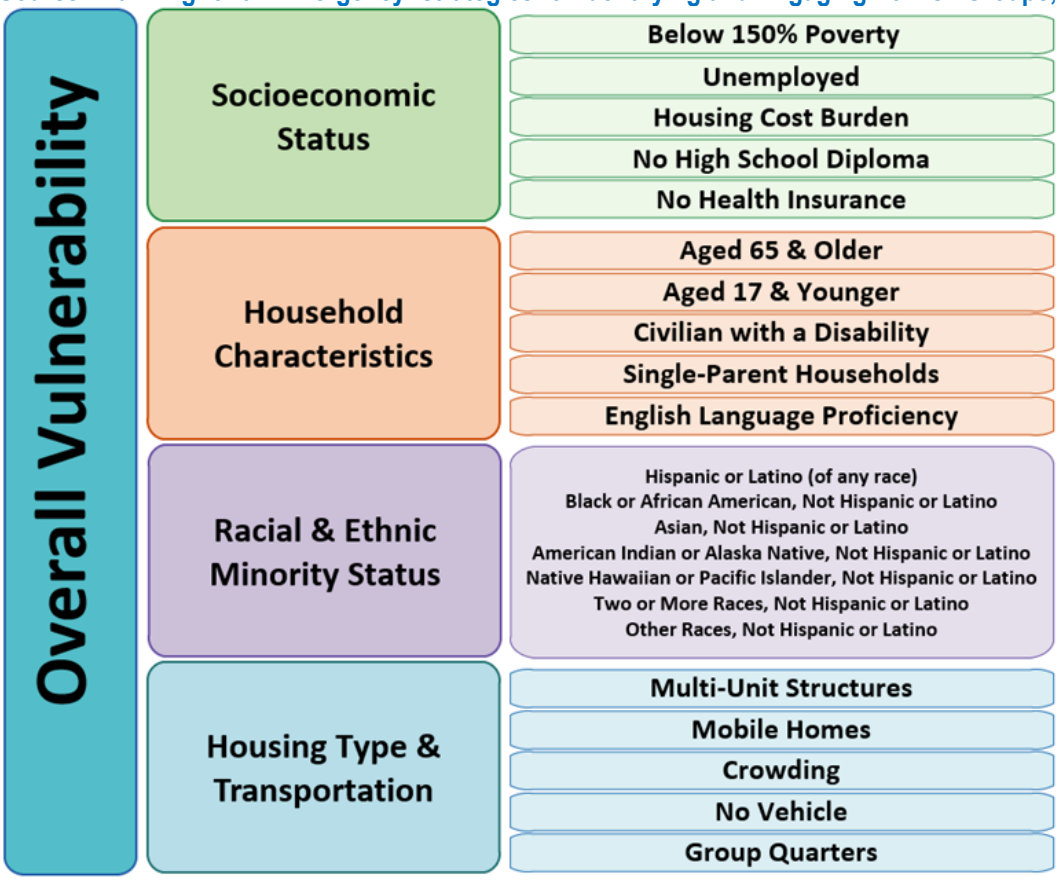
Table 4.3: Language Spoken in Hermosa Beach
Source: ESRI Business Analyst/ American Community Survey (2023)

Language Spoken (ACS)	Age 5-17	18-64	Age 65+	Total
English Only	2,519	11,274	2,409	16,202
Spanish	72	615	77	764
Spanish & English Well	51	606	77	734
Spanish & English Not Well	21	9	0	30
Spanish & No English	0	0	0	0
Indo-European	136	696	190	1,022
Indo-European & English Well	136	679	180	995
Indo-European & English Not Well	0	17	10	27
Indo-European & No English	0	0	0	0
Asian-Pacific Island	80	324	63	467
Asian-Pacific Isl & English Well	80	285	41	406
Asian-Pacific Isl & English Not Well	0	39	22	61
Asian-Pacific Isl & No English	0	0	0	0
Other Language	0	124	0	124
Other Language & English Well	0	124	0	124
Other Language & English Not Well	0	0	0	0
Other Language & No English	0	0	0	0

Social Vulnerability Index

The CDC Social Vulnerability Index (SVI) is a tool developed by the Centers for Disease Control and Prevention (CDC) to help identify communities that may need support before, during, or after disasters. Social vulnerability refers to the resilience of communities when confronted by external stresses on human health, such as natural or human-caused disasters, or disease outbreaks. The SVI is calculated based on 16 social factors grouped into four themes as shown below in **Figure 4.2**.

Figure 4.2: Social Vulnerability Index Themes and Social Factors
Source: Planning for an Emergency: strategies for identifying and Engaging At-Risk Groups, CDC



The CDC Social Vulnerability Index (SVI) is calculated using data from the U.S. Census Bureau's American Community Survey on 15 social factors. Each factor is ranked at the census tract level and converted into percentiles. These percentiles are averaged to create composite scores for four themes: socioeconomic status, household composition and disability, minority status and language, and housing type and transportation. The overall SVI is then determined by summing these theme-specific percentile ranks, resulting in a value that reflects the overall social vulnerability of each census tract. Finally, census tracts are categorized into quartiles, with higher values indicating greater vulnerability.

Map 4.5 below depicts the overall social vulnerability for the City of Hermosa Beach. The census tracts in Hermosa Beach are in the 10th percentile for overall SVI rating. This means that the census tracts are more vulnerable than only 25% of the other census tracts in California. This equates to Hermosa Beach having a low SVI rating.

Map 4.5: Hermosa Beach Social Vulnerability Index with Census Tract
Source: CDC/ATSDR Social Vulnerability Index, 2024

Legend

Hermosa Beach Boundary

Social Vulnerbility Index

- Low (Less than 25th Percentile)
- Low-Medium (Between the 25th and 50th Percentile)
- Medium-High (Between the 50th and 75th Percentile)
- High (Greater than the 75th Percentile)

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.

Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))
A: See **Table 4.4** below.

Table 4.4: Hazard Vulnerability to People
(Source: Emergency Planning Consultants)
(Note: "X" indicates affirmative)

Census Tract in Hermosa Beach	Earthquake	Flood	Tsunami	Drought	Pandemic
06037621005	X	X	X	X	X
06037621001	X	X		X	X
06037621104	X	X	X	X	X
06037621102	X	X		X	X

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))
A: See **Impact Profile of People** below.

Impact Profile of People

Earthquake

Hermosa Beach has a diverse population that includes vulnerable groups, such as elderly and younger residents, low-income families, and disabled individuals. The elderly population in Hermosa Beach are particularly vulnerable during emergencies due to mobility issues and potential isolation. Low-income families may lack the resources to adequately prepare for or recover from a disaster, such as securing emergency supplies or making necessary housing repairs. Additionally, individuals with physical, sensory, or cognitive disabilities face added challenges in evacuating and accessing emergency services.

In the event of an earthquake, these vulnerable populations in Hermosa Beach could face significant risks and challenges. Elderly residents may have difficulty evacuating quickly and could be living in older, less earthquake-resistant buildings. The disruption of healthcare services could critically impact those with medical needs. Low-income families might struggle with the financial burden of property damage and loss of income if their workplaces are affected, with limited access to insurance and emergency funds exacerbating their vulnerability. Disabled individuals may face increased risks due to mobility issues and the potential inaccessibility of emergency shelters and services.

Flood

Floods can have devastating impacts on Hermosa Beach vulnerable populations, including the elderly, low-income families, and individuals with disabilities. The elderly who may live alone or

may rely on care, may struggle to evacuate or access emergency services during floods, leading to heightened health risks. Low-income families, already facing financial constraints, may suffer property damage and loss of belongings, further destabilizing their situation. The disruption of critical services, such as healthcare and transportation, can exacerbate these vulnerabilities, highlighting the need for targeted preparedness and response strategies to protect the vulnerable populations in Hermosa Beach during urban flood events.

Tsunami

A tsunami could have devastating effects on vulnerable populations in Hermosa Beach including the elderly, disabled, low-income residents, and those with limited access to resources. These individuals may struggle to evacuate quickly, increasing their risk of injury or death. The loss of homes and jobs due to flooding can lead to long-term displacement and deepen economic hardship. Additionally, disruption to social support networks and limited access to emergency services can exacerbate the physical and psychological impacts on these vulnerable groups, making recovery more challenging and prolonged.

Drought

Drought could significantly impact Hermosa Beach vulnerable populations, including the elderly, low-income families, and individuals with disabilities. Elderly individuals are particularly susceptible to utility-related changes. Limited mobility and health issues make them more vulnerable to heat-related illnesses, which can be exacerbated by water shortages and reduced availability of cooling options. Additionally, the elderly may have fixed incomes, making it difficult to cope with increased utility bills and the cost of purchasing bottled water. Low-income families are disproportionately affected by limited financial resources. These families may struggle to afford higher water bills, and the cost of purchasing additional water or implementing water-saving measures can be prohibitive. Droughts can also lead to increased food prices, as agricultural production declines, and further straining household budgets. Reduced availability of water for hygiene and sanitation can lead to health issues, compounding the challenges faced by these families. Non-English speakers may face difficulties accessing information and resources related to drought.

Language barriers can impede their understanding of weather related warnings, and available assistance programs. This population might also have limited access to services that provide drought relief, such as financial assistance for increased utility costs or resources for securing alternative water supplies. People with disabilities often require additional water for medical and personal care needs. Mobility issues can also hinder their ability to access relief services and emergency supplies. Drought can lead to increased utility costs and maintenance expenses for households. Vulnerable populations may face difficult choices between paying for water and other essential expenses, potentially leading to housing instability or displacement if they are unable to keep up with costs. Furthermore, those with cognitive disabilities may find it challenging to understand and implement necessary water conservation practices. Drought can impact water quality, as reduced water levels can concentrate contaminants. Vulnerable populations are at higher risk of waterborne illnesses due to weakened immune systems and limited access to healthcare. Heatwaves associated with drought can exacerbate chronic health conditions and increase the incidence of heatstroke and dehydration.

Pandemic

Pandemic outbreaks can have severe impacts on populations in Hermosa Beach including the elderly, individuals with pre-existing health conditions, low-income residents, and those with limited access to healthcare. These groups are more susceptible to infection and may experience more severe health outcomes due to weakened immune systems or barriers to timely medical care.

The economic impact of an outbreak can also be more pronounced for vulnerable populations, as they may lack the financial resources to cope with job loss, medical expenses, or the need to quarantine. Social isolation, which often accompanies disease outbreaks, can further exacerbate mental health challenges, particularly for those who rely on community support networks. Additionally, limited access to reliable information and healthcare services can make it more difficult for these populations to protect themselves and seek appropriate treatment, increasing their risk of severe illness and death. In Hermosa Beach, targeted public health interventions and support systems are crucial to protect these vulnerable groups during pandemic or other disease outbreaks.

Climate Change

Climate change impacts people in Hermosa Beach in various ways, including through extreme heat events, changes in air quality, increased risk of wildfires, and potential impacts on water supply and infrastructure. These effects can lead to health issues, such as heat-related illnesses and respiratory problems, as well as challenges related to water availability and infrastructure resilience, highlighting the importance of adaptation and mitigation strategies to protect the well-being of the community. Rising sea levels will be of particular concern for residents that live close to the coastline.

Changes in Population

According to the General Plan Housing Element, Hermosa Beach has had an annual growth rate of 0.3% from 2000 to 2020. As an essentially built-out city, there continue to be few opportunities for growth, except through redevelopment/infill on existing parcels. The City's anticipated residential/population growth over the next five years will have little effect on the people of Hermosa Beach.

Land Use Development

According to the General Plan, "vacant land accounts for less than 0.5% of the land area in Hermosa Beach. Of the vacant land, the majority of parcels are currently zoned for residential uses, placing greater pressure on underutilized commercial land to redevelop or densify. While redevelopment of underutilized spaces is a viable option, consideration of context and community character need to be considered so that new uses and development are consistent with the existing or preferred urban form of the city."

With no significant alterations to the development pattern of Hermosa Beach, the impact of land use development on people in Hermosa Beach is unchanged.

Structures

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.
Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))
A: See **Vulnerability of Structures, Table 4.5** below.

Vulnerability of Structures

Structures include critical facilities, properties and structures that serve vital functions in government operations and the services offered to the community. These may include local government offices and yards, community centers, public safety buildings such as police and fire stations, schools, and other properties deemed essential for city operations. Additionally, some critical facilities may serve dual roles if designated as public assembly points during emergencies. While many critical facilities are owned by the city, certain ones, such as utilities and telecommunication infrastructure, may be privately owned and operated.

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

The Planning Team identified ten City-owned facilities as "critical". The Team also identified one other facility that is not owned by the city but is deemed critical. **Table 4.5** below illustrates the hazards with potential to impact critical facilities owned by or providing critical services to the City of Hermosa Beach.

Table 4.5: Hazard Vulnerability to Structures
(Source: City of Hermosa Beach Planning Team, Emergency Planning Consultants)
(Note: "X" indicates affirmative that structure is in or very near the hazard)

Critical Facilities (values based on 2024)	Earthquake	Flood	Tsunami	Drought	Pandemic
CITY OF HERMOSA BEACH					
City Hall Complex (City Hall and Police Department) Address: 1315 Valley Drive and 540 Pier Avenue # of Buildings: 2 Staff: 113 Property Value: $14,608,000 Content Value: $874,000	X			X	X
Hermosa Beach Police Department (Community Services Building) Address: 1035 Valley Drive # of Buildings: 1 Staff: 17 Property Value: $1,410,000 Content Value: $139,000	X			X	X
Hermosa Beach Public Works Yard Address: 555 6th Street # of Buildings: 5 Staff: 15 Property Value: $2,828,000 Content Value: $322,000 Site Improvement: $45,200	X			X	X
Hermosa Beach Community Center & Emergency Operations Center Address: 710 Pier Avenue # of Buildings: 3 Staff: 9 full-time (28 part-time staff) Property Value: $19,714,000 Content Value: $962,000 Site Improvement: $656,800	X			X	X
Clark Building Address: 861 Valley Drive # of Buildings: 2 Staff: 0 Property Value: $1,700,000 Content Value: $0 Site Improvement: $692,900	X			X	X
South Park Building Address: 425 Valley Drive # of Buildings: 1 Staff: 0 Structure Value: $1,737,000 Content Value: $110,000 Site Improvement: $290,700	X			X	X

Critical Facilities (values based on 2024)	Earthquake	Flood	Tsunami	Drought	Pandemic
COUNTY OF LOS ANGELES					
Los Angeles County Fire Station 100 (leased) Address: 540 Pier Avenue, Hermosa Beach # of Buildings: 1 Staff: 5 Property Value: $2,458,000 Content Value: Property of Los Angeles County Fire Department Site Improvement: $8,900	X			X	X
Los Angeles County Lifeguard Headquarters (Leased) Address: 1200 The Strand # of Buildings: 1 Staff: 10 Property Value: $1,444,000 Content Value: $170,000	X	X	X	X	X
OTHER COMMUNITY LIFELINES (located in Hermosa Beach)					
Hermosa Beach Pier Address: 1 Pier Avenue, Hermosa Beach	X	X	X	X	X
Hermosa Valley School Address: 1645 Valley Drive, Hermosa Beach	X			X	X
Hermosa Vista School Address: 417 25th Street, Hermosa Beach	X			X	X
Fusion Academy South Bay Address: 1601 Pacific Coast Highway Suite 260, Hermosa Beach	X		X	X	X
Our Lady of Guadalupe School 340 Massey Avenue, Hermosa Beach	X			X	X
Hermosa View Elementary School 1800 Prospect Avenue, Hermosa Beach	X		X	X	X
Vons 715 Pier Avenue, Hermosa Beach	X			X	X
Sunrise Assisted Living 1837 Pacific Coast Highway, Hermosa Beach	X			X	X
Hennessey's Tavern 8 Pier Avenue, Hermosa Beach	X	X	X	X	X
The Beach House 1300 The Strand, Hermosa Beach	X	X	X	X	X

Based on available data provided by the city, there is a minimum of $69,207000 worth of city owned property and $2,581,600 of city owned contents that were analyzed. The total potential loss value of all City-owned and non-City-owned assets is much higher but is unknown due to data limitations.

The possibility that all facilities will be completely damaged simultaneously is extremely rare. Most of the impacts of the hazards that were analyzed are anticipated to be isolated to certain locations. To better understand the magnitude of impacts, this plan identifies representative percentages of potential impact based on the total valuation of city assets. For planning purposes, we identified different tiers of impact that could occur. It is reasonable to assume that impacts would not exceed 50% of the total asset value city-wide during a single event. The following are parameters to help

understand how much a proposed investment/improvement compares to the existing assets within the city:

- 1% Impact – $717,886
- 5% Impact – $3,589,430
- 10% Impact – $7,178860
- 20% Impact – $14,357720
- 50% Impact – $35,894,300

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.
Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii)) **A:** See **Impact Profile of Structures** below.

Impact Profile of Structures

Earthquake

Structures include physical buildings, lifelines, and critical infrastructure in a community. All properties and occupants in Hermosa Beach can be either directly impacted or affected by earthquakes. It is estimated more than a third of the planning area's building stock was built prior to 1975, when seismic provisions became uniformly applied through building code applications. These buildings are at a higher risk of damage from earthquakes. Due to limitations in current modeling abilities, the risk to critical facilities in the planning area from the earthquake hazard is likely understated. A more thorough review of the age of critical facilities, codes they were built to, and location on liquefiable soils should be conducted. Damage to transportation systems in the planning area after an earthquake has the potential to significantly disrupt response and recovery efforts and lead to isolation of populations. Additionally, seismic events can damage electrical and communication systems, complicating efforts to coordinate response to the event. Many structures may need seismic retrofits in order to withstand a moderate earthquake. Residential retrofit programs, such as Earthquake Brace+Bolt, may be able to assist in the costs of these efforts.

The City-owned critical facilities include 17 buildings with property and contents valued at $71,788,600 based on estimates in 2024. The severe ground shaking and soil liquefaction will result in significant damage or total destruction of these facilities and can be catastrophic for the City of Hermosa Beach.

Flood

Coastal properties and occupants in Hermosa Beach can be directly impacted or affected by urban flooding. Structures in the planning area built before any regulations existed on floodplain development may be particularly vulnerable to some level of flood hazard. The risk associated with the flood hazard overlaps the risk associated with other hazards such as earthquake, landslide, and severe weather. None of the city-owned facilities are vulnerable to flooding. However, historically, the majority of flooding has occurred due to storm surges, and heavy rainfall. Excessive rain and blocked or insufficient storm drains can result in increasing the extent of urban flooding while resulting in damage to buildings and infrastructure. Structures can also be damaged from trees falling as a result of water-saturated soil. In the event of electrical power outages, related interruptions can cause major problems throughout the community. Also, loss

of power is a common precursor to closure of schools. The city may need to activate crews to reroute traffic or even close access to impacted properties.

Tsunami

None of the city owned properties are located within a tsunami inundation zone. However, infrastructure, buildings, and other community assets located between Hermosa Avenue and the coast are at most risk of tsunami inundation. Damage from tsunamis can result in negative impacts on property values. Property damage can be made worse because of the possibility of cascading disasters.

Public infrastructure, such as roadways, electrical lines, and water/sewer lines are at risk of damage or complete destruction from a tsunami. Structures can be damaged from trees falling as a result of water-saturated soil. Structures can also be damaged from tsunami related flooding. Electrical power outages could happen, resulting in the interruption of critical services. Also, loss of power is usually a precursor to closure of schools. It's very likely the city would be required to reroute traffic or close access to impacted neighborhoods.

Ground saturation would likely result in instability, collapse, or other damage to trees, structures, roadways, and other critical infrastructure. Standing water could cause damage to roads and building foundations.

Drought

The most immediate impact of a drought is on the water supply. Hermosa Beach relies on both surface and groundwater sources, which can become depleted during prolonged droughts. This could lead to water rationing, affecting residential, institutional, commercial, and industrial users. Reduced water availability could strain the city's ability to provide adequate water for drinking, sanitation, and fire suppression, compromising public health and safety. All properties in Hermosa Beach could be directly impacted or affected by drought. Most of the impact will be from the related hazards such as competition for water supply and disruption of public infrastructure. Reduced water supply could leave property vulnerable to fires. Dried vegetation around properties could also increase the vulnerability to fires.

Prolonged drought conditions could weaken soil stability, leading to ground subsidence. This can cause damage to roads, bridges, and pipelines, increasing maintenance costs and potentially leading to hazardous conditions. Water mains and sewage systems could be impacted by a loss of water or pressure. Also, those systems could be affected by soil movement, leading to leaks and breaks that further strain the city's water resources. Public parks and recreational areas may face restrictions on water use for irrigation, leading to degraded landscapes and reduced green spaces. This can affect the quality of life for residents and reduce the city's attractiveness for tourism and community events.

All of the critical facilities in Hermosa Beah could be affected by drought. City-owned critical facilities include 17 buildings with property and contents are valued at $71,788,600 based on estimates in 2024.

Climate Change

Climate change impacts critical facilities and structures in Hermosa Beach by increasing the frequency and severity of heatwaves, flooding, sea level rise, wildfires, and poor air quality. These

events strain energy and water resources, damage infrastructure, and heighten health risks, particularly for hospitals, emergency services, and community centers. To mitigate these effects, Hermosa Beach needs to upgrade infrastructure, improve energy efficiency, and enhance emergency response plans. These measures will help ensure that critical facilities remain operational and continue to serve the community effectively amidst the challenges posed by climate change. *See Mitigation Actions Matrix in Chapter 5 (Table 5.1) for actions relating to climate change.*

Changes in Population

According to the General Plan Housing Element, Hermosa Beach has had an annual growth rate of 0.3% from 2000 to 2020. As an essentially built-out city, there continue to be few opportunities for growth, except through redevelopment/infill on existing parcels. The City's anticipated residential/population growth over the next five years will have little effect on the structures in Hermosa Beach.

Land Use Development

According to the General Plan, "vacant land accounts for less than 0.5% of the land area in Hermosa Beach. Of the vacant land, the majority of parcels are currently zoned for residential uses, placing greater pressure on underutilized commercial land to redevelop or densify. While redevelopment of underutilized spaces is a viable option, consideration of context and community character need to be considered so that new uses and development are consistent with the existing or preferred urban form of the city."

With no significant alterations to the development pattern of Hermosa Beach, the impact of land use development on structures in Hermosa Beach is unchanged.

Economy

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.
Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii)) **A:** See **Vulnerability to Economy, Table 4.6** below.

Vulnerability to Economy

Hermosa Beach has several assets that have an important impact on the city's economy. Several of these economic assets overlap with the assets outlined in **Structures** as they are community lifelines. These assets are also key employers and any impact from natural hazards has the potential of causing debilitating consequences to the local economy. These assets include Vons, Lazy Acres, Hermosa Beach School District, Sunrise Assisted Living, Hennessey's Tavern, and The Beach House. These assets overlap with the Structure Assets. Please refer to Vulnerability to Structures above for detailed information.

Table 4.6: Hazard Vulnerability to Economic Assets
(Source: City of Hermosa Beach Planning Team, Emergency Planning Consultants)
(Note: "X" indicates affirmative, asterisk indicates asset is included as a Structure as well)

Economic Assets	Earthquake	Flood	Tsunami	Drought	Pandemic
Hermosa Beach Pier Address: 1 Pier Avenue, Hermosa Beach, CA 90254	X	X	X	X	X
Hermosa Beach School District 1800 Prospect Avenue, Hermosa Beach, CA 90254	X		X	X	X
Vons 715 Pier Avenue, Hermosa Beach, CA 90254	X			X	X
Sunrise Assisted Living 1837 Pacific Coast Highway, Hermosa Beach, CA 90254	X			X	X
Hennessey's Tavern 8 Pier Avenue, Hermosa Beach, CA 90254	X	X	X	X	X
The Beach House 1300 The Strand, Hermosa Beach, CA 90254	X	X	X	X	X

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))
A: See **Impact Profile of Economy** below.

Impact Profile of Economy

Earthquake

An earthquake in Hermosa Beach would significantly impact its principal employers, including Vons, Lazy Acres, Hermosa Beach School District, Sunrise Assisted Living, Hennessey's Tavern, and The Beach House.

Vons: Vons is a major grocery store in Hermosa Beach. They are also a major employer for the city. Catastrophic damage to Vons from an earthquake would not only cause job related economic impacts, but it will also have a negative impact on the food supply chain in the area.

Lazy Acres: Lazy Acers is another major grocery store in Hermosa Beach. They are also a major employer for the city. Catastrophic damage to Lazy Acres from an earthquake would not only cause job related economic impacts, but it will also have a negative impact on the food supply chain in the area.

Hermosa Beach School District: The school district will likely experience damage to buildings and facilities, disrupting the education of thousands of students. Schools might need to close temporarily for inspections and repairs, affecting students, staff, and families. Closure of schools could lead to reduced or no pay for faculty and staff which will cause financial hardship. This financial hardship is not limited to the employees but will also spread to Hermosa Beach as these employees may need to move out of the city for employment.

Sunrise Assisted Living.: As a major employer and an assisted living facility, Sunrise Assisted Living could face significant operational challenges. Earthquake damage to their facility could lead to temporary closures and relocation of residents. This can cause undue hardship for the residents. If the facility has to temporarily close from earthquake related damage, jobs will be lost impacting the local economy.

Hennessey's Tavern: Hennessey's Tavern is a major employer and restaurant located near the Hermosa Beach Pier. Catastrophic damage to the tavern from an earthquake would not only cause job related economic impacts, but it will also have a negative impact on the local economy as the restaurant is in a popular area near the pier.

The Beach House: The Beach House is a local hotel located right on the beach. As a major employer catastrophic damage to the hotel from an earthquake would not only cause job related economic impacts, but it will also have a negative impact on the local economy. As a popular tourism spot, the hotel might have to temporarily close due to damage thus negatively impacting revenues from tourism.

Overall, an earthquake would disrupt operations, cause financial losses, and pose significant safety challenges for these principal employers in Hermosa Beach. Recovery efforts would require coordinated responses to ensure employee safety, restore services, and support the community's needs during the crisis.

Flood

Flooding in Hermosa Beach could directly impact or affect its principal employers including Vons, Lazy Acres, Hermosa Beach School District, Sunrise Assisted Living, Hennessey's Tavern, and The Beach House.

Vons: Vons is a major grocery store in Hermosa Beach. They are also a major employer for the city. Vons is not located in a flood zone; however, urban flooding can cause indirect impacts on business. As roads are temporarily closed due to urban flooding, employees, customers, and delivery trucks will need to be rerouted causing delays and inconveniences that could drive customers to other stores. While temporary, this could cause a negative impact on revenues for Vons.

Lazy Acres: Lazy Acres is another major grocery store in Hermosa Beach. They are also a major employer for the city. Lazy Acres is not located in a flood zone; however, urban flooding can cause indirect impacts on the business. As roads are temporarily closed due to urban flooding, employees, customers, and delivery trucks will need to be rerouted causing delays and inconveniences that could drive customers to other stores. While temporary, this could cause a negative impact on revenues for Lazy Acres.

Hermosa Beach School District: Schools could experience water damage to buildings, equipment, and learning materials. Flooding might necessitate temporary closures, disrupting education and displacing students and staff. Closure of schools could lead to reduced or no pay for faculty and staff which will cause financial hardship. This financial hardship is not limited to the employees but will also spread to Hermosa Beach as these employees may need to move out of the city for employment.

Sunrise Assisted Living.: As a major employer and an assisted living facility, Sunrise Assisted Living could face significant operational challenges. While Sunrise Assisted Living is not located

within a flood zone, urban flooding can cause damage to the facility and impact the ingress and egress to the facility. Floods damage to their facility could lead to temporary closures and relocation of residents. This can cause undue hardship for the residents. If the facility has to temporarily close from flood-related damage, jobs could be lost impacting the local economy.

Hennessey's Tavern: Hennessey's Tavern is a major employer and restaurant located near the Hermosa Beach Pier. Catastrophic damage to the tavern from a flood would not only cause job related economic impacts, but it will also have a negative impact on the local economy as the restaurant is in a popular area near the pier.

The Beach House: The Beach House is a local hotel located right on the beach. As a major employer catastrophic damage to the hotel from a flood would not only cause job related economic impacts, but it will also have a negative impact on the local economy. As a popular tourism spot, the hotel might have to temporarily close due to damage thus negatively impacting revenues from tourism.

Overall, an urban flood could disrupt operations, cause financial losses, and pose significant safety challenges for these principal employers in Hermosa Beach. Coordinated emergency response and recovery plans would be essential to restore services, ensure employee and customer safety, and support the community during and after a major urban flooding event.

Tsunami

A tsunami could have minor to catastrophic impacts on its principal employers, including Vons, Lazy Acres, Hermosa Beach School District, Sunrise Assisted Living, Hennessey's Tavern, and The Beach House. The degree of damage would be dependent on the level of water inundation at the time and a spectrum of other circumstances.

Vons: Vons is a major grocery store in Hermosa Beach. They are also a major employer for the city. Vons is not located in the tsunami inundation zone; however, urban flooding can cause indirect impacts on business. As roads are temporarily closed due to tsunami damage, employees, customers, and delivery trucks will need to be rerouted causing delays and inconveniences that could drive customers to other stores. While temporary, this can cause a negative impact on Vons' revenues.

Lazy Acres: Lazy Acers is another major grocery store in Hermosa Beach. They are also a major employer for the city. Lazy Acres is not located in the tsunami inundation zone; however, tsunami damage can cause indirect impacts on the business. As roads are temporarily closed due to urban flooding, employees, customers, and delivery trucks will need to be rerouted causing delays and inconveniences that could drive customers to other stores. While temporary, this can cause a negative impact on Lazy Acres' revenues.

Hermosa Beach School District: None of the schools in Hermosa Beach are located in a tsunami inundation zone; however, school can experience indirect impacts from a tsunami. It is not uncommon for schools to be repurposed as shelters during disasters. If schools were to become shelters after a tsunami, teaching would likely stop temporarily as the community recovers. This temporary closure, while necessary, will disrupt education and displace students and staff. Closure of schools could lead to reduced or no pay for faculty and staff which will cause financial hardship. This financial hardship is not limited to the employees but will also spread to Hermosa Beach as these employees may need to move out of the city for employment.

Sunrise Assisted Living: As a major employer and an assisted living facility, Sunrise Assisted Living could face significant operational challenges from a tsunami. While Sunrise Assisted Living is not located within the tsunami inundation zone, damage to surrounding areas can impact the ingress and egress to the facility. The nearby damage and stress from a tsunami can cause undue hardship for the residents. If the facility has to temporarily close, jobs could be lost impacting the local economy.

Hennessey's Tavern: Hennessey's Tavern is a major employer and restaurant located near the Hermosa Beach Pier. With its proximity to the ocean, catastrophic damage to the tavern from a tsunami is likely. Damage from a tsunami will either temporarily or permanently close the tavern leading to lost jobs and revues for the local economy.

The Beach House: The Beach House is a local hotel located right on the beach. With its proximity to the ocean, catastrophic damage to the tavern from a tsunami is likely. Damage from a tsunami will either temporarily or permanently close the tavern leading to lost jobs and revenues for the local economy.

Overall, a tsunami would disrupt operations, cause significant financial losses, and pose serious safety challenges for these principal employers in Hermosa Beach. Coordinated emergency response and recovery plans would be essential to restore services, ensure employee and customer safety, and support the community during and after the flood.

Drought

An extended drought in Hermosa Beach would have significant impacts on its principal employers, including Vons, Lazy Acres, Hermosa Beach School District, Sunrise Assisted Living, Hennessey's Tavern, and The Beach House.

Vons: An extended drought could impact Vons by disrupting supply chains (e.g. fresh foods, ice), compromise infrastructure (e.g. pipes, landscaping), and creating operational challenges (e.g., cleaning). Additionally, extreme conditions can increase demand for specific items, such as bottled water, ice, and fresh food before a storm or following an emergency. Vons must navigate these challenges through contingency planning to maintain operations and ensure safety.

Lazy Acres: An extended drought could impact Lazy Acres by disrupting supply chains (e.g. fresh foods, ice), compromise infrastructure (e.g. pipes, landscaping), and creating operational challenges (e.g., cleaning). Additionally, extreme conditions can increase demand for specific items, such as bottled water, ice, and fresh food before a storm or following an emergency. Lazy Acres must navigate these challenges through contingency planning to maintain operations and ensure safety.

Hermosa Beach School District: An extended drought can significantly impact the Hermosa Beach School District by causing school closures (this happens when restrooms are not functioning), and damage to infrastructure (e.g., pipes, landscaping). Also, food handling and storage could be impacted as well as athletic and science operations. It's likely that public water fountains, bathrooms, and showers were be minimized or shut off. The district must have emergency plans to ensure safety and educational continuity.

Sunrise Assisted Living: An extended drought could significantly impact Sunrise Assisted Living in Hermosa Beach by posing safety and health risks to elderly and disabled residents, causing

disruptions in services relating to food preparation and storage, production of ice, and availability of water to sinks, toilets, and bathing fixtures. Such disruptions in expected services could impact residents' mental well-being, necessitating supportive measures to address increased anxiety or stress. Effective contingency planning is essential to ensure the safety and continuity of care during adverse conditions.

Hennessey's Tavern: An extended drought could significantly impact Hennessey's Tavern in Hermosa Beach by affecting supply chains (e.g. fresh foods, ice), infrastructure (e.g., pipes, landscaping), operational functions like cleaning, and leading to shortages of food and beverages. Effective contingency planning is essential to mitigate these disruptions and maintain business operations.

The Beach House: An extended drought could significantly impact The Beach House in Hermosa Beach by affecting supply chains (e.g. fresh foods, ice), infrastructure (e.g., pipes, landscaping), operational functions like cleaning, and leading to shortages of food and beverages. Effective contingency planning is essential to mitigate these disruptions and maintain business operations.

Overall, an extended drought could lead to increased operational costs, supply chain disruptions, and the need for severe water conservation measures across these principal employers in Hermosa Beach. These cost and operational changes would spread to the consumer as they would likely face increased prices for goods and services.

Pandemic

A pandemic outbreak in Hermosa Beach would have significant impacts on its principal employers, including Vons, Lazy Acres, Hermosa Beach School District, Sunrise Assisted Living, Hennessey's Tavern, and The Beach House.

Vons: A pandemic outbreak can significantly impact Vons in Hermosa Beach by reducing customer traffic, leading to decreased sales and financial strain. Employee health issues and staffing shortages may arise, while supply chain disruptions can cause product shortages. The store may need to adopt additional health and safety measures, increasing operational costs. Customer confidence can be affected, necessitating clear communication about safety practices. Compliance with new regulations and managing the combined effects of these challenges require effective adaptation and contingency planning.

Lazy Acres: A pandemic outbreak can profoundly affect Lazy Acres in Hermosa Beach by reducing customer attendance and sales due to health concerns or restrictions. Staffing may be impacted by employee illness or absenteeism, affecting service levels. Supply chain disruptions can lead to shortages of products or inventory issues. The facility may need to implement enhanced health and safety measures, increasing operational costs. Customer confidence and behavior may shift, requiring effective communication about safety practices. Compliance with any new regulations and managing these challenges effectively are crucial for maintaining operations and financial stability.

Hermosa Beach School District: A pandemic outbreak can significantly impact the Hermosa Beach School District by leading to school closures or reduced in-person attendance, disrupting the academic calendar and student learning. Staffing shortages due to illness or quarantine can affect classroom instruction and operations. The outbreak may also strain resources, including remote learning technologies and support services. Health and safety measures, such as enhanced cleaning protocols and social distancing, can increase operational costs. Additionally,

changes in student and family behavior and compliance with new health regulations can further challenge the district's ability to provide consistent and effective education.

Sunrise Assisted Living: A pandemic outbreak can have a severe impact on Sunrise Assisted Living in Hermosa Beach by posing significant health risks to residents, staff, and visitors - potentially leading to increased illness or fatalities. Staffing shortages and restrictions on visitors due to illness or quarantine can disrupt care services and affect residents' well-being. The facility may need to implement stringent health and safety measures, such as enhanced sanitation and visitor restrictions, which can increase operational costs. Supply chain disruptions could affect the availability of essential protective and cleaning supplies and maintaining resident and family confidence becomes crucial. Overall, managing the outbreak requires robust contingency planning to ensure continuous care and safety for residents.

Hennessey's Tavern: A pandemic outbreak can significantly affect Hennessey's Tavern in Hermosa Beach by reducing customer traffic and sales due to health concerns or restrictions. Staffing shortages, caused by employee illness or quarantine, can impact service levels and operations. The tavern may need to implement additional health and safety measures, such as enhanced sanitation and social distancing, increasing operational costs. Supply chain disruptions can lead to shortages of food and beverages. The outbreak can also affect customer confidence and behavior, requiring effective communication about safety practices and adjustments to business operations to maintain service and financial stability.

The Beach House: A pandemic outbreak can significantly impact The Beach House in Hermosa Beach by reducing customer patronage and sales due to health concerns or restrictions. Staffing challenges may arise from employee illness or quarantine, affecting service quality and operations. The establishment may need to adopt additional health and safety measures, such as enhanced cleaning protocols and social distancing, which can increase operational costs. Disruptions in supply chains could lead to shortages of food and beverages. Managing customer confidence and adapting to changing regulations are also crucial for maintaining operations and financial stability during the outbreak.

Overall, a pandemic outbreak would lead to increased operational costs, supply chain disruptions, and the need for protective measures across these principal employers in Hermosa Beach. These cost and operational changes will be spread to the consumer as they might face increased prices for goods and services.

Climate Change

Climate change can have significant economic impacts in Hermosa Beach. Increased costs for infrastructure repair, emergency response, and healthcare due to drought events could strain the economy. Property damage from flooding can lead to financial losses for homeowners and businesses. Changes in temperature and precipitation patterns can affect agriculture, impacting crop yields and food prices. Additionally, impacts on tourism and recreation industries, higher insurance costs, and increased healthcare costs due to climate-related health issues further contribute to the economic challenges posed by climate change. Addressing these impacts requires implementing climate resilience and adaptation strategies to protect the local economy and community well-being.

Population Change

According to the Housing Element, Hermosa Beach has had an annual growth rate of 0.3% from 2000 to 2020. As an essentially built-out city, there continue to be few opportunities for growth, except through redevelopment/infill on existing parcels. The City's anticipated residential/population growth over the next five years will have little effect on the economy of Hermosa Beach.

Land Use Development

According to the General Plan, "vacant land accounts for less than 0.5% of the land area in Hermosa Beach. Of the vacant land, the majority of parcels are currently zoned for residential uses, placing greater pressure on underutilized commercial land to redevelop or densify. While redevelopment of underutilized spaces is a viable option, consideration of context and community character need to be considered so that new uses and development are consistent with the existing or preferred urban form of the city."

With no significant alterations to the development pattern of Hermosa Beach, the impact of land use development on Hermosa Beach's economy is unchanged.

Natural, Historic, and Cultural Resources

Natural, historic, and cultural resources are essential elements that define the identity and heritage of a community. Natural resources include native flora and fauna, water bodies, landscapes, and climate, providing ecological and recreational benefits. Historic resources consist of buildings, archaeological sites, monuments, and historic districts that hold historical significance. Cultural resources encompass museums, traditional practices, languages, literature, festivals, and public art, reflecting the community's cultural heritage and values. Together, these resources contribute to preserving the community's history, environment, and cultural identity, enriching the quality of life for its residents.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.
Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))
A: See **Vulnerability of Natural, Historic, and Cultural Resources** and **Table 4.7** below.

Vulnerability of Natural, Historic, and Cultural Resources

Hermosa Beach offers a blend of natural, historic, and cultural resources that reflect its diverse community and rich history. The Hermosa Beach Pier is a central landmark and gathering place in the city. The Pier was originally built in 1904 but has been rebuilt after various storms. The Hermosa Beach Pier remains a symbol of the city's history and maritime culture. Old Town Hermosa, sometimes referred to as the Historic District, is located in the central area of Hermosa Beach, primarily around Pier Avenue and the surrounding streets. It includes a mix of historic buildings, older residential homes, and early 20th-century commercial structures that reflect the city's development. The district encompasses parts of Pier Avenue, which is a key street in Hermosa Beach, and extends to adjacent areas where historic architecture and local landmarks can be found. The area is often explored through walking tours that highlight its historical significance.

Hermosa Beach has several parks that enhance its recreational offerings. Hermosa View Park provides panoramic ocean views and features playgrounds and picnic areas. Valley Park, located at 23rd Street and Valley Drive, includes sports fields and community event spaces. Clark Building & Park offers a community center and recreational areas. South Park, at the southern end of the city, has playground equipment and open green spaces. The Hermosa Beach Community Center Park includes sports courts and additional recreational amenities. These parks provide valuable green spaces and facilities for leisure, sports, and community events.

Table 4.7: Hazard Proximity to Natural, Historic, and Cultural Resources
(Source: City of Hermosa Beach Planning Team, Emergency Planning Consultants)
(Note: "X" indicates affirmative)

Natural, Historic, and Cultural Resources	Earthquake	Flood	Tsunami	Drought	Pandemic
Hermosa View Park 1870 Prospect Avenue, Hermosa Beach	X			X	X
Valley Park 2521 Valley Drive, Hermosa Beach	X			X	X
Clark Building & Park 861 Valley Drive, Hermosa Beach	X			X	X
South Park 425 Valley Drive, Hermosa Beach	X			X	X
Hermosa Beach Community Center Park 710 Pier Avenue, Hermosa Beach	X			X	X
Hermosa Beach Peir 1 Pier Avenue, Hermosa Beach	X	X	X	X	X
Old Town Area	X	X	X	X	X

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))
A: See **Impact Profile of Natural, Historic, and Cultural Resources** below.

Impact Profile of Natural, Historic, and Cultural Resources

Earthquake

An earthquake can significantly impact Hermosa Beach's natural, historic, and cultural resources by causing damage to the beach and coastal areas, potentially altering shoreline and eroding parks. Historic sites like the Hermosa Beach Pier and Old Town Hermosa may suffer structural damage, affecting their preservation. Cultural resources, including community events and venues such as art galleries and music spaces, could be disrupted or closed due to infrastructure damage. Overall, an earthquake would present challenges in maintaining and preserving these valuable resources, impacting the city's heritage and recreational offerings.

Flood

Flooding can significantly impact Hermosa Beach's natural, historic, and cultural resources by causing erosion and damage to the beach and coastal areas, potentially altering the landscape and affecting recreational use. Historic structures like the Hermosa Beach Pier and older buildings in Old Town Hermosa may experience water damage or structural issues, compromising their integrity. Cultural resources, such as community events and cultural venues, could be disrupted or rendered inaccessible due to water damage and infrastructure issues. Overall, floods can lead to extensive damage and operational challenges, impacting the preservation and functionality of these key resources.

Tsunami

A tsunami could have a severe impact on Hermosa Beach's natural, historic, and cultural resources by causing extensive damage to the beach and coastal areas, including erosion and destruction of marine habitats. Historic sites, such as the Hermosa Beach Pier and buildings in Old Town Hermosa, may be severely damaged or washed away. Cultural resources, including community spaces and event venues, could be destroyed or rendered unusable, disrupting local cultural activities and heritage. Overall, a tsunami would result in significant physical damage and pose challenges for the restoration and preservation of these vital resources.

Drought

An extended drought can impact Hermosa Beach's natural, historic, and cultural resources in various ways. Challenges with hygiene and cleaning can affect their recreational use and natural habitats. Historic sites, including the Hermosa Beach Pier and older buildings, may suffer from weather-related wear and tear or structural damage. Cultural resources, such as community event spaces and cultural venues, can be disrupted by weather conditions, potentially affecting local activities and events. Overall, adverse weather can lead to significant physical damage and operational challenges, impacting the preservation and functionality of these valuable resources.

Pandemic

A pandemic outbreak could impact Hermosa Beach's natural, historic, and cultural resources by disrupting maintenance and conservation efforts. Natural resources, such as beaches and parks, may suffer from reduced upkeep and monitoring if staff are unavailable due to illness. Historic sites, including the Hermosa Beach Pier and historic buildings, might face neglect or damage due to limited resources and personnel. Cultural resources, such as community events and cultural venues, may be canceled or restricted, affecting local cultural life and engagement. Overall, disease can lead to reduced maintenance and operational challenges, impacting the preservation and enjoyment of these resources.

Climate Change

Climate change can impact Hermosa Beach's natural, historic, and cultural resources by causing increased coastal erosion, rising sea levels, and more frequent extreme weather events, which can erode the beach and damage coastal ecosystems. Historic sites, such as the Hermosa Beach Pier and older buildings, may face accelerated deterioration due to rising sea levels and more severe weather conditions. Cultural resources, including community spaces and event venues, might be affected by disruptions in local activities and increased maintenance costs. Overall,

climate change poses significant threats to the preservation and functionality of these valuable resources, requiring adaptation and mitigation strategies.

Changes in Population

According to the Housing Element, Hermosa Beach has had an annual growth rate of 0.3% from 2000 to 2020. As an essentially built-out city, there continue to be few opportunities for growth, except through redevelopment/infill on existing parcels. The City's anticipated residential/population growth over the next five years will have little effect on the natural, historic, and cultural resources in Hermosa Beach.

Land Use Development

According to the General Plan, "vacant land accounts for less than 0.5% of the land area in Hermosa Beach. Of the vacant land, the majority of parcels are currently zoned for residential uses, placing greater pressure on underutilized commercial land to redevelop or densify. While redevelopment of underutilized spaces is a viable option, consideration of context and community character need to be considered so that new uses and development are consistent with the existing or preferred urban form of the city."

With no significant alterations to the development pattern of Hermosa Beach, the impact of land use development on natural, historic, and cultural resources in Hermosa Beach is unchanged.

Activities Bringing Value to the Community

Activities bringing value to the community are those that contribute positively to the well-being, cohesion, and development of the community as a whole. These activities can take various forms and serve different purposes, but they generally aim to enhance the quality of life for community members and promote a sense of belonging and connectedness.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.
Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))
A: See **Vulnerability of Activities Bringing Value to the Community** and **Table 4.7** below.

Vulnerability Of Activities Bringing Value to the Community

Fiesta Hermosa is an annual street festival held in Hermosa Beach, typically over the Memorial Day and Labor Day weekends. It features a vibrant mix of live music, local food vendors, arts and crafts booths, and family-friendly activities. The event celebrates the community spirit of Hermosa Beach and attracts both locals and visitors. With its lively atmosphere, the festival highlights the area's cultural and artistic offerings while providing entertainment and opportunities for socializing.

National Night Out is an annual community-building campaign that promotes police-community partnerships and neighborhood camaraderie to make neighborhoods safer, more caring places to live. National Night Out enhances the relationship between neighbors and law enforcement while bringing back a true sense of community. Furthermore, it provides a great opportunity to bring police and neighbors together under positive circumstances. The event is always held on the 1st Tuesday in August.

Table 4.7: Hazard Proximity to Activities Bringing Value to the Community
(Source: City of Hermosa Beach Planning Team, Emergency Planning Consultants)
(Note: "X" indicates affirmative)

Activities Bringing Value to the Community	Earthquake	Flood	Tsunami	Drought	Pandemic
Fiesta Hermosa Near - 1 Pier Ave, Hermosa Beach	X	X	X	X	X
National Night Out Various neighborhoods	X	X	X	X	X

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))
A: See **Impact Profile of Activities Bringing Value to the Community** below.

Impact Profile of Activities Bringing Value to the Community

Earthquake

An earthquake during Fiesta Hermosa or National Night Out could have significant impacts, including safety concerns for attendees and potential disruption of festival activities due to structural damage or logistical challenges. Organizers would need to assess the safety of the festival grounds and potentially cancel or modify activities. The earthquake could also affect attendance and have economic implications for vendors and organizers. However, such a hazard event could also prompt a community-wide response, with residents coming together to support each other and assist with recovery efforts. Overall, quick and effective response measures would be crucial to ensuring the safety of attendees and minimizing the impact on the festival and the community.

Flood

Fiesta Hermosa takes place near a flood zone along the coast. Although there have not been any recent flooding events, a downpour or tropical system could create a flood situation. Such circumstances could have significant impacts, including safety concerns for attendees due to risks like being temporarily stranded and water contamination. Flooding could also damage festival infrastructure, disrupt activities, and create logistical challenges for organizers. The flood could lead to a decrease in attendance, affecting vendors and organizers financially. However, it could also prompt a community-wide response, with residents coming together to support each other and assist with recovery efforts. Quick and effective response measures would be crucial to ensuring the safety of attendees and minimizing the impact on the festival in future years. National Night Out takes place in different neighborhoods each year. As such, it's impossible to predict whether the location could be impacted by flooding.

Tsunami

The location of Fiesta Hermosa is not within a tsunami inundation area. The event, held along the beachfront, could be directly affected by tsunami waves, which might destroy festival

infrastructure, vendor booths, and public amenities. Such damage could lead to the cancellation or postponement of the festival. Additionally, the aftermath of a tsunami could result in a loss of beach and park areas used for the event, affecting future festivals. Recovery efforts and cleanup could be extensive, impacting the festival's scheduling and financial aspects. Overall, a tsunami could have severe consequences for Fiesta Hermosa, requiring significant recovery and planning to restore the event. National Night Out takes place in different neighborhoods each year. As such, it's impossible to predict whether the location could be impacted by a tsunami.

Drought

An extended drought could significantly impact Fiesta Hermosa by influencing its overall execution and attendee experience. Adverse conditions could lead to logistical challenges, including damage to surrounding landscaping, difficulties for vendors (e.g., lack of fresh food, ice), restrictions on water use, and potential safety hazards for attendees.

Pandemic

A pandemic outbreak can significantly impact Fiesta Hermosa and National Night Out by potentially causing its cancellation or postponement to prevent the spread of illness. Health concerns may lead to reduced attendance, as individuals might avoid large gatherings to protect themselves from infection. Increased health and safety measures, such as sanitation stations and health screenings, could be required, adding logistical complexity and costs. Vendors and staff may also face challenges if they fall ill or are required to quarantine. Overall, a pandemic outbreak could disrupt the operations, reduce the success, and necessitate extensive planning and adjustments to ensure public health and safety.

Climate Change

Climate change could significantly impact the Fiesta Hermosa and National Night Out, leading to more frequent and intense extreme weather events such as storms, heatwaves, and wildfires, which could disrupt or cancel festival activities and pose safety risks. Rising temperatures could make attending the festival uncomfortable, necessitating additional measures for attendee safety and comfort. Changes in precipitation patterns and increased drought conditions could impact the availability of water for the festival, affecting the maintenance of green spaces and decorative features. Climate change could also affect agricultural practices and crop yields, potentially impacting the availability and cost of food and drink vendors. Overall, climate change presents challenges that require organizers to adapt and implement new strategies to ensure the sustainability and success of the Fiesta Hermosa.

Changes in Population

According to the General Plan - Housing Element, Hermosa Beach has had an annual growth rate of 0.3% from 2000 to 2020. As an essentially built-out city, there continue to be few opportunities for growth, except through redevelopment/infill on existing parcels. The City's anticipated residential/population growth over the next five years will have little effect on the activities that bring value to the community of Hermosa Beach.

Land Use Development

According to the General Plan, "vacant land accounts for less than 0.5% of the land area in Hermosa Beach. Of the vacant land, the majority of parcels are currently zoned for residential uses, placing greater pressure on underutilized commercial land to redevelop or densify. While redevelopment of underutilized spaces is a viable option, consideration of context and community

character need to be considered so that new uses and development are consistent with the existing or preferred urban form of the city."

With no significant alterations to the development pattern of Hermosa Beach, the impact of land use development on activities that bring value to Hermosa Beach is unchanged.

Chapter 5: Mitigation Strategies

Overview of Mitigation Strategy

As the cost of damage from disasters continues to increase nationwide, the City of Hermosa Beach recognizes 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 at the City of Hermosa Beach facilities.

The plan provides a set of action items to reduce risk from hazards through education and outreach programs, and to foster the development of partnerships. Further, the plan provides for the implementation of preventative activities.

The resources and information within the Mitigation Plan:

1. Establish a basis for coordination and collaboration among agencies and the public in the City of Hermosa Beach.
2. Identify and prioritize future mitigation projects.
3. Assist in meeting the requirements of federal assistance programs.

The Mitigation Plan is integrated with other City plans including the City of Hermosa Beach Emergency Operations Plan, General Plan, Capital Improvement Program, as well as department-specific standard operating procedures.

Mitigation Measure Categories

Following is FEMA's list of mitigation categories. The activities 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 projects, 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.

Ensuring Goals Benefit the Whole Community

The following content was gathered from FEMA's 2023 Local Mitigation Planning Policy Guide.

Individuals and groups within your community have differing needs, preferences and strengths. When your most underserved and socially vulnerable residents can participate in and benefit from your plan and your projects, the rest of your community will too. Pick a planning approach in which you set large-scale goals for the entire community, but then use targeted approaches to meet those goals for even the most underserved and socially vulnerable populations.

For example, you could set a goal of making sure that all residents, workers and visitors have the ability to access safe, cool spaces during a heat wave. While the wealthiest residents most likely have access to private homes with air conditioning, lower-income residents may lack such resources. Also, anyone can be affected by storms or other disruptions to cooling systems.

To resolve this disparity and achieve the overarching goal of community resilience to high heat events, your community may decide to create public cooling centers. However, this may not meet the need. These spaces also need to be accessible to those who need them. Consider accessibility to people with disabilities, public transit availability and proximity. Also consider ways to provide travel vouchers, availability of wi-fi and charging stations (including power cords), access to potable water and facilities, and staff cultural or language competencies. It is also important to think about the potential consequences of your plan as it may have unintended impacts on socially vulnerable populations. For instance, while many mitigation measures increase property values and improve neighborhood livability, these effects can contribute to gentrification. Gentrification often displaces low-income residents and disrupts the social fabric of a community. This could decrease the overall resilience of already-at-risk groups. By thinking through potential impacts like these, you can proactively work to address them.

Q&A | ELEMENT E. PLAN UPDATE | E2-a.
Q: Does the plan describe how it was revised due to changes in community priorities? (Requirement 44 CFR § 201.6(d)(3)) **A:** See **Community Priorities** below.

Community Priorities

Equally important are the changes in priorities to the plan itself since the writing of the 2018 HMP. Most of the changes in priorities are tied directly to the 2024 FEMA Local Mitigation Planning Policy Guide:

- Executive Summary: new section summarizes the overall planning process, and
- Chapter 1: Planning Process - several stakeholder categories were added; more robust community outreach strategy designed and implemented, and
- Chapter 2: Community Profile – new attention given to the location and levels of the underserved communities and socially vulnerable populations, and

- Chapter 3: Risk Assessment – consideration given to the state and federal recommended hazards yielded different hazards for inclusion in the 2024 HMP; an update to the City's Floodplain Ordinance relating to substantial improvements and substantial damage, and
- Chapter 4: Vulnerability and Impacts - new research and content for the vulnerabilities and impacts discussion, much more robust list and analysis of vulnerability of assets including people, structures, systems, community resources and activities, and
- Chapter 5: Mitigation Strategies – added pertinent General Plan – Public Safety Element and Infrastructure Element goals/projects/actions; updated status on 2018 action items including deleting some lacking political or budgetary support; adding action items to protect critical facilities and socially vulnerable populations, and
- Chapter 7: Plan Review, Adoption, and Approval - a new section summarizing the progression of the Draft Plan to Final Plan.

Q&A | ELEMENT C. MITIGATION STRATEGY | C3-a.
Q: Does the plan include goals to reduce the risk from the hazards identified in the plan? (Requirement 44 CFR § 201.6(c)(3)(i)) **A:** See **Goals** below.
Q&A | ELEMENT E. PLAN UPDATE | E1-a.
Q: Does the plan describe the changes in development that have occurred in hazard-prone areas that have increased or decreased each community's vulnerability since the previous plan was approved? (Requirement 44 CFR § 201.6(d)(3)) **A:** See **Goals** below.

Goals

It's important to note that, as identified in Chapter 3: Risk Assessment – Hazard Profiles – Land Use Development Considerations (for each hazard), that the changes in development that occurred in the hazard-prone areas has not changed the overall vulnerability of Hermosa Beach since the writing of the 2018 HMP.

Overall goals guide the direction of future activities aimed at reducing risk and preventing loss from natural hazards. During the first meeting of the 2024 Planning Team, the 2018 HMP goals were reviewed and determination made that the goals were consistent with the 2024 risk assessment and that they continue to represent a long-term vision for hazard reduction and enhanced mitigation capabilities. In addition to reviewing the 2018 HMP goals, the Team agreed to incorporate the pertinent General Plan goals from the Public Safety Element and Infrastructure Element (see below).

Each of the HMP goals is supported by mitigation action items. The Planning Team developed these action items through its knowledge of the local area, risk assessment, review of past efforts, identification of mitigation activities, and qualitative analysis.

Also, the General Plan goals from the Public Safety Element and Infrastructure Element have been added to the HMP to establish a strong link between the General Plan and Mitigation Plan.

General Plan Public Safety Element Goals
Goal 1. Injuries and loss of life are prevented, and property loss and damage are minimized.

Goal 2. The anticipated effects of sea level rise are understood, prepared for, and successfully mitigated.
Goal 3. Hermosa Beach residents, businesses, and coastal resources are protected from hazardous materials.
Goal 4. The community has the capacity and is prepared for unavoidable hazards.
Goal 5. High quality police and fire protection services are provided to residents and visitors.
Goal 6. Hermosa Beach is prepared for, responds to and recovers quickly from natural disasters.
Goal 7. Noise compatibility is considered in the land use planning and design process.
Goal 8. Transportation noise sources are minimized.

General Plan – Infrastructure Element Goals:
Goal 1. Infrastructure systems are functional, safe, and well maintained.
Goal 2. Roadway infrastructure maintenance supports convenient, attractive, and complete streets and associated amenities.
Goal 3. Adequate water supplies from diverse sources provide for the needs of current and future residents, businesses, and visitors.
Goal 4. The sewer system infrastructure is modernized and resilient.
Goal 5. The stormwater management system is safe, sanitary, and environmentally and fiscally sustainable.
Goal 6. Utility services are reliable, affordable, and renewable.
Goal 7. A reliable and efficient telecommunications network available to every resident, business, and institution.

HMP Goals

Each HMP goal is supported by mitigation action items. The Planning Team developed these action items through its knowledge of the local area, risk assessment, review of past efforts, identification of mitigation activities, and qualitative analysis.

The five HMP goals and descriptions are listed below:

Protect Life, Property, and Reduce Potential Injuries from Natural, Technological, and Human-Caused Hazards

Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other properties more resistant to losses from natural, technological, and human-caused hazards.

Promote Disaster Resistance for City's Existing and Future Built Environment

Reduce losses and repetitive damage for chronic hazard events while promoting insurance coverage for catastrophic 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.

Improve Public Understanding, Support and Need for Hazard Mitigation Measures

Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.

Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.

Strengthen Partnerships and Collaboration to Implement Hazard Mitigation Activities

Strengthen communication and coordinate participation among and within public agencies, citizens, non-profit organizations, business, and industry to gain a vested interest in implementation.

Encourage leadership within public and private sector organizations to prioritize and implement local, county, and regional hazard mitigation activities.

Enhance City's ability to effectively and immediately respond to disasters and rapidly initiate disaster recovery actions

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 natural 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 City agencies and citizens can be engaged to reduce risk.

The action items are organized within the following Mitigation Actions Matrix, categorized by hazard. 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:

Q&A | ELEMENT C: MITIGATION STRATEGY | C5-b.
Q: Does the plan identify the position, office, department, or agency responsible for implementing/administering the identified mitigation actions, as well as potential funding sources and expected time frame? (Requirement 44 CFR § 201.6(c)(3)(iii)) **A:** See **Mitigation Actions Matrix (Lead Department)** below.

Lead Department

The Mitigation Actions Matrix assigns primary responsibility for each of the action items. The hierarchies of the assignments vary – some are positions, departments, or committees. The primary responsibility for implementing the action items falls to the entity shown as the "Lead Department". This department has the regulatory responsibility to address hazards, or is able to organize resources, find appropriate funding, or oversee activity implementation, monitoring, and evaluation.

Timeline

The mitigation plan will be updated every 5 years according to FEMA regulations. However, there are projects and programs in the Mitigation Actions Matrix that will require more than 5 years to complete. Some of the actions are "ongoing" since the 2018 HMP or will continue on a regular basis throughout the 2024 HMP. These items are indicated as either Ongoing-Annual/Quarterly/Monthly, or Ongoing-As Needed with an explanation of what triggers the action (e.g. amending the General Plan, a public agency meeting, etc.).

Funding Source

External resources could include a range of FEMA mitigation grants perhaps including HMGP, FMA, and BRIC. Internal resources could include the general fund, capital improvement budgets, impact fees, human capital, in-kind resources, etc.

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

Q&A | ELEMENT D: PLAN MAINTENANCE | D3-b.

Q: Does the plan identify the planning mechanisms for each plan participant into which the ideas, information and strategy from the mitigation plan may be integrated? (Requirement 44 CFR § 201.6(c)(4)(ii))

A: See **Planning Mechanism** below.

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 City's existing "planning mechanisms" including the "internal resources" including the General Plan, Capital Improvement Projects, General Fund, and "external resources" including 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. On the contrary, if preparation of a floodplain ordinance is not already included in the General Plan policies, then the item will need to be added during the next update to the General Plan.

The Capital Improvement Program is updated annually. The CIP includes infrastructure projects built and owned by the 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 document that guides all of the 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 others triggered by events like disasters. Whatever the source, the City uses the Annual Budget 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.

Expanding and Improving Capabilities

This identifies the capability categories and applicability to individual mitigation action items. Sub-category indicators are P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach.

Comments

The purpose of the "Comments" is to capture the notes and status of the various action items. Notations include:
"Completed" - action item from the 2018 HMP is now completed and will be removed following FEMA approval of the 2024 Plan.
"Revised" – action item from the 2018 HMP has been edited.
"Deleted" – action item from the 2018 HMP has been deleted. This happens for a variety of reasons but most often it's because of a lack of staff/funding.
"Deferred" – action item from the 2018 HMP was not yet completed but will remain in the 2014 HMP.
"New" – action item did not exist in the 2018 HMP.
"Notes" – often include details or justifications for a particular action item intended to assist with implementation.

It's also important to note that some of the action items are shown in strike-out. This is because FEMA requires explanation of all action items in the previous plan (2018). When an item is now complete, the "Comments" column will indicate "completed" while the action item itself will be shown in strike-out.

Q&A | ELEMENT C. MITIGATION STRATEGY | C5-a.

Q: Does the plan describe the criteria used for prioritizing actions? (Requirement 44 CFR § 201.6(c)(3)(iv))
A: See **Benefit/Cost Ratings** below.

Benefit/Cost Ratings

The benefits of proposed projects were weighed against estimated costs as part of the project prioritization process. The benefit/cost analysis was not of the detailed variety required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP) and Building Resilient Infrastructure and Communities (BRIC) grant program. A 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. Therefore, a review of the apparent benefits versus the apparent cost of each project will be performed in the future as needed. 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 funding within the jurisdiction will not cover the cost of the action item so outside 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 within the assigned lead department.

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.

Q&A | ELEMENT C. MITIGATION STRATEGY | C5-a.
Q: Does the plan describe the criteria used for prioritizing actions? (Requirement 44 CFR § 201.6(c)(3)(iv))
A: See **Priority Rating** below.

Priority Rating

The Planning Team utilized the following rating tool to establish priorities. Designations of "High", "Medium", and "Low" priority have been assigned to all of the 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 Project?

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 LHMP?
- ☐ 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 | C1-b.
Q: Does the plan describe each participant's ability to expand and improve the identified capabilities to achieve mitigation? (Requirement 44 CFR § 201.6(c)(3)) **A:** See **Mitigation Actions Matrix (Expanding and Improving Capabilities)** below.
Q&A | ELEMENT C: MITIGATION STRATEGY | C4-a.
Q: Does the plan include an analysis of a comprehensive range of actions/projects that each jurisdiction considered to reduce the impacts of hazards identified in the risk assessment? (Requirement 44 CFR § 201.6(c)(3)(ii)) **A:** See **Mitigation Actions Matrix (Action Items)** below.
Q&A | ELEMENT C: MITIGATION STRATEGY | C4-b.
Q: Does the plan include one or more action(s) per jurisdiction for each of the hazards as identified within the plan's risk assessment? (Requirement 44 CFR § 201.6(c)(3)(ii)) **A:** See **Mitigation Actions Matrix (Action Items)** below.
Q&A | ELEMENT C: MITIGATION STRATEGY | C5-a.
Q: Does the plan describe the criteria used for prioritizing actions? (Requirement 44 CFR § 201.6(c)(3)(ii)) **A:** See **Mitigation Actions Matrix (Priority, Goals)** below.
Q&A | ELEMENT C: MITIGATION STRATEGY | C5-b.
Q: Does the plan identify the position, office, department, or agency responsible for implementing/administering the identified mitigation actions, as well as potential funding sources and expected time frame? (Requirement 44 CFR § 201.6(c)(3)(iii))) **A:** See **Mitigation Actions Matrix (Lead Department, Timeline, Funding Source)** below.
Q&A | ELEMENT D: PLAN MAINTENANCE | D3-a.
Q: Does the plan describe the process the community will follow to integrate the ideas, information and strategy of the mitigation plan into other planning mechanisms? (Requirement 44 CFR § 201.6(c)(4)(ii)) **A:** See **Mitigation Actions Matrix (Planning Mechanism)** below.
Q&A | ELEMENT E: PLAN UPDATE | E2-b.
Q: Does the plan include a status update for all mitigation actions identified in the previous mitigation plan? (Requirement 44 CFR § 201.6(d)(3)) **A:** See **Mitigation Actions Matrix (Comments and Status)** below.
Q&A | ELEMENT E: PLAN UPDATE | E2-c.
Q: Does the plan describe how jurisdictions integrated the mitigation plan, when appropriate, into other planning mechanisms? (Requirement 44 CFR § 201.6(d)(3)) **A:** See **Integration into other Planning Mechanisms (Comments and Status – Completed)** below.

Mitigation Actions Matrix

Table 5.1: Mitigation Actions Matrix

Source: Hermosa Beach Planning Team

Key to Leads: CMO – City Manager's Office, CD-Community Development, CMO/EMC-Emergency Management Coordinator CMO/EPM-Environmental Programs Manager, PW-Public Works, FI-Finance

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
MULTI-HAZARD MITIGATION ACTION ITEMS															
MH-1 Maintain an internal Hazard Mitigation Planning Team to develop a sustainable process for implementing, monitoring, and evaluating citywide mitigation activities.	CMO/EMC	Annual	X	X	X	X	X	Y	GF	GF		H	L	M	Revised
MH-2 Conduct a backup power resources assessment (e.g., generators, alternative power sources) of critical infrastructure such as fire, police, city hall, public works yard, community center complex and EOC and upgrade resources as necessary.	PW	2026	X		X		X	Y	GF	Gf	E	H	L	H	Revised

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
MH-3 Fund and deploy a community warning system that includes sirens and loudspeakers.	CMO/EMC	Annual	X	X	X	X	X	Y	GF, CIP	GF, CIP	E	M	L	H	Revised
MH-4 Continue to adopt, implement, and enforce the latest editions of the California Building and Fire Codes, with appropriate local amendments based on risk (e.g., seismic hazards, flooding), type of occupancy, and location (e.g., floodplain, fault).	CD	Annual	X	X	X			Y	GF	H	P		L	H	Revised
MH-5 Continue to develop, implement, revise, and maintain emergency plans which shall include, but not be limited to: EOP, COOP, Debris Removal Plan, and the Disaster Recovery and Resiliency Plan.	CMO/EMC, CMO/EPM, PW/PD	Ongoing – as funding is available	X	X	X	X	X	N	GF	GF, HMGP, BRIC	P, A	H	H	H	Revised
MH-6 Conduct a needs assessment and develop a plan for community sheltering to	CMO/EMC	2025	X	X	X	X	X	Y	GF	GF		M	L	M	Revised

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
include populations with disabilities and other AFN, and animals.															
MH-7 Develop a public outreach and awareness campaign that informs the community regarding the hazards that can impact the city and how to implement mitigation actions at their homes to prepare themselves and their families.	CMO/EMC	2025	X	X	X	X	X	Y	GF	GF	E	H	L	M	Revised – outreach program running simultaneously with HMP update.
MH-8 Partner with the Chamber of Commerce and local businesses to develop and implement an emergency preparedness program for businesses and visitors to the City.	CMO/EMC	2026	X	X	X	X	X	N	GF	GF		H	L	M	Revised
MH-9 Encourage local businesses to develop a business COOP.	CMO/EMC	2026	X	X	X	X	X	N	GF	GF		H	L	M	Revised
MH-10 Utilize the internal Hazard Mitigation Planning	CMO/EMC	Annual	X	X	X	X	X	Y	GF	GF	F	H	L	M	Revised

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
Team to identify, pursue and secure funds that support risk reduction measures.															
MH-11 Periodically update the Public Safety Element and concurrently amend the Local Hazard Mitigation Plan to maintain eligibility for maximum grant funding.	CD	As required by state and federal regulations	X		X		X		General Plan Maintenance Fee	GF		H	L	H	Revised
MH-12 Encourage all new development (including rehabilitation, renovation, and redevelopment) to incorporate "Green" building activities, increase tree plantings, use fire-resistant materials, and include projects to mitigate sea level rise and flooding. Activities may include the use of low impact development standards, energy efficient features, or active and passive solar heating and water pumping systems.	CD, CMO, PW	Ongoing - daily	X	X	X			X	GF, Project Applicant	GF	P	H	L	H	Revised

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MH-13 Develop a post disaster recovery policy that establishes the procedures and permit requirements surrounding abandoned structures, condemned buildings, and reconstruction. The policy will need to address debris removal, hazardous materials management, utility reconnection, and designated historical landmarks.	CD, CMO, PW	2026	X	X	X	X		X	GF, HMGP, BRIC, Bonds	GF	P, F	H	H	H	Revised
MH-14 Coordinate with the utility companies and vendors to strengthen, safeguard, and improve the resiliency of their infrastructure and facilities to address the impact of disasters on their vital lifeline services provided to the community.	PW	Annual	X	X	X	X	X	Y	GF	GF		H	L	H	Revised
~~MH-15 Continue to educate, train, and exercise City staff in compliance with California~~	~~EMC~~					~~X~~			~~GF~~					~~M~~	Deleted – not mitigation

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
~~Disaster Services Workers program, SEMS/NIMS Compliance, and all other State and Federal requirements.~~															
~~MH-16 Build a cadre of committed, and trained volunteers to augment disaster response and recovery efforts in compliance with the California Disaster Service Worker program guidance. These volunteer teams may include but are not limited to: Community Emergency Response Team, American Red Cross shelter workers, animal rescue and care teams, and Amateur Radio communications teams.~~	~~EMC~~					~~X~~			~~GF~~					~~H~~	Deleted – not mitigation
~~MH-17 Develop a volunteer management plan (including spontaneous unaffiliated volunteers) to support City~~	~~EMC~~					~~X~~			~~GF~~					~~H~~	Deleted – not mitigation

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
~~disaster response and recovery efforts.~~															
~~MH-18 Partner with Hermosa Beach City School District to review, update, and maintain a multi-hazard emergency operation plan.~~	~~EMC~~					~~X~~			~~GF~~					~~H~~	Deleted – not mitigation
MH-19 This project includes design and construction of sewer improvements and repairs based on the Sewer Master Plan. (Source: 2023-2024 CIP)	PW	2024-2025	X	X	X	X	X	Y	CIP	CIP		M	L - H	H	New
MH-20 This project provides necessary safety improvements to the City's Record Center that is currently housed in the former shower and locker room area in the lower level of the Community Center. The area is not designed, or properly set up, to be a Records Center for the City to ensure safe retention and processing of public records.	PW	2025-2027	X	X	X	X	X	Y	CIP	CIP	A	M	L - H	H	New

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
The Records Center is in need of several improvements to bring the area up to current health and building safety standards, including, but not limited to, new sprinkler system, new ventilation system, pipe repairs, seismic retrofit of records shelving, and lighting modifications. The project currently includes funding for design of the improvements; construction costs will be further defined through the design process. (Source: 2023-2024 CIP) (Note: also include the Citywide effort to digitize records for cloud storage/access)															
MH-21 Buildings and infrastructure will be periodically evaluated for seismic, fire, flood, and coastal storm hazard risks and identified risks will be minimized by complying with	PW, CD (Building Official)	2024-2015	X	X	X		X	Y	CIP	CIP		H	L	H	New, Status: 2015 was last time evaluation was conducted.

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
California Building Code standards and other applicable regulations. (Source: GP Public Safety Element)															
MH-22 Reduce fire hazards associated with older buildings, multi-story structures, and industrial facilities. (Source: GP Public Safety Element)	CD, LACoFD	2026	X	X	X		X	Y	CIP	CIP	P	H	L	H	New
MH-23 Establish centralized internal procedures to coordinate efforts for securing funds that support risk reduction measures. (Source: GP Public Safety Element)	FI	2025	X	X	X		X	Y	GF	GF	A	H	L	H	New
~~MH-24 Identify and regularly evaluate or update evacuation and response procedures through the Emergency Operations Plan. (Source: GP Public Safety Element)~~	~~CMO/EMC~~	~~2018~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~Y~~	~~GF~~	~~GF~~		~~H~~	~~L~~	~~H~~	Completed in 2017 GP Public Safety Element Update
MH-25 Consider the combined effects of sea level rise when	CMO/EMC, PW, CD	2024-2025	X	X	X	X	X	Y	GF	GF	P	H	L	H	New

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evaluating potential tsunami and storm surge impacts. (Source: GP Public Safety Element)															
MH-26 Strictly implement, enforce, and monitor MS4 National Pollutant Discharge Elimination Systems (NPDES) Permit requirements through stormwater ordinances. (Source: GP Infrastructure Element)	CMO/EPM	Annual	X	X	X	X	X	Y	GF	GF	P, A	H	L	H	New
MH-27 Promote community-based programs in fire safety and emergency preparedness, including neighborhood-level and business programs and community volunteer groups such as CERT, Neighborhood Watch, Volunteers in Policing and the Amateur Radio Association. (Source: GP Public Safety Element)	CMO/EMC	Annual	X	X	X	X	X	Y	GF	GF	E	H	L	H	New
MH-28 Maintain the City's emergency communication	CMO/EMC	Annual	X	X	X	X	X	Y	GF	GF		H	L	H	New

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policy and protocols and utilize City media resources, emergency alert notification systems, and program advertising to provide information and communicate with the community prior to, during, or after events posing risk to community health safety, and welfare. (Source: GP Public Safety Element)															
MH-29 Encourage neighborhood groups, including Neighborhood Watch, to identify, consider, and prepare for the needs of neighbors with access and functional needs to adequately respond to disasters. (Source: GP Public Safety Element)	CMO/EMC	Annual	X	X	X	X	X	Y	GF	GF	E	H	L	H	New
MH-30 Incorporate procedures into emergency and hazard mitigation plans to take care of vulnerable populations during	CMO/EMC	3-5 years	X	X	X	X	X	Y	GF	GF		H	L	H	New

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hazardous events. (Source: GP Public Safety Element)															
MH-31 Regularly evaluate, identify, and communicate new hazard risks and incorporate them into planning and programs. (Source: GP Public Safety Element)	CMO/EMC, CD	Every 5 years	X	X	X	X	X	Y	GF	GF		H	L	H	New
MH-32 Cooperate and collaborate with neighboring jurisdictions and social services to maximize public safety and emergency services. (Source: GP Public Safety Element)	CMO/EMC, PD, LACoFD	2026	X	X	X	X	X	Y	GF	GF		H	L	H	New
MH-33 Dedicate funds to upgrade and maintain essential facilities (including EOC, Police/Fire Facilities, and City Hall) to make them more resilient to the potential impacts of natural disasters. (Source: GP Public Safety Element)	CMO, PW	2024-2025	X	X	X	X	X	Y	GF, HMGP, BRIC, CIP	GF, HMGP, BRIC, CIP	F	H	L	H	New

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MH-34 Develop a comprehensive approach to water infrastructure that integrates sewer system planning with potable and recycled water systems, stormwater systems, and increased conservation awareness. (Source: GP Infrastructure Element)	PW, CD	Annual	X	X	X	X	X	Y	GF	GF	P	H	L	H	New
MH-35 Complete grant-funded Emergency Preparedness Community Education Project.	CMO	2024	X	X	X	X	X	X	State of California Grant	GF		H	H	H	New
MH-36 Convert first responder vehicle to fully electric vehicles.	PW, PD	2025	X	X	X	X	X		GF	GF	F	H	L	H	New
MH-37 Purchase and acquisition of animal disaster response supplies.	EMC	Completed	X	X	X	X	X		GF	GF		H	L - M	H	New, Comment: purchase of four ProPac Pet Emergency Response Carts. Each cart is

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															specifically designed to provide immediate assistance to pets in distress during emergency situations.
MH-38 Train Hermosa Beach CERT Volunteers on animal disaster response.	EMC	Begin 2025	X	X	X	X	X		GF	GF		H	L - M	H	New
MH-39 Partner with South Bay Animal CERT for sheltering animals after a disaster.	EMC	2025	X	X	X	X	X		GF	GF		H	L - M	H	New
EARTHQUAKE MITIGATION ACTION ITEMS															
EQ-1 During review of permit, identify residential structures that are not seismically resilient. Implement programs to support retrofitting.	CD	Ongoing – as projects are reviewed	X		X			Y	GF	GF	P, F	H	H	M	Revised

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EQ-2 Require new and redeveloped projects to prepare geotechnical reports (tool used to communicate site conditions, design and construction recommendations) to include potential liquefaction and/or landslide issues and mitigation strategies and site construction recommendations.	CD	Ongoing – as projects are reviewed	X		X			Y	PA	GF		H	L	M	Revised
~~EQ-3 Develop and implement a Citywide building retrofit policy to include URMs and second soft story and other seismically vulnerable structures in the City.~~	~~CD, PW, CMO/EMC~~		~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~Y~~	~~GF~~	~~GF~~		~~H~~	~~L~~	~~M~~	Deleted - redundant
EQ-4 Develop a retrofitting action plan to improve the structural integrity of city owned structures.	CD, PW, CMO/EMC	2025-2026	X	X	X	X	X	Y	GF	GF	F, E	H	H	H	Deleted - redundant
EQ-5 Prepare condition assessment reports for City facilities throughout the city to understand the infrastructure	PW	2024-2025	X	X	X	X	X	Y	CIP	CIP	F	M	L - H	H	New

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improvement needs. (Source: 2023-2024 CIP)															
EQ-6 Design and construct a new City Yard. The current City Yard is in need of reconstruction. A new City Yard will provide a safe and functional area for City maintenance crew and staging and be consistent with contemporary seismic standards. (Source: 2023-2024 CIP)	PW	2024-2025	X	X	X	X	X	Y	CIP, HMGP, BRIC	GF	A, F, E	M	L - H	H	New
EQ-7 Require geotechnical reports to be prepared for new development projects in areas with the potential for liquefaction or landslides. (Source: GP Public Safety Element)	CD	Begin in 2024	X	X	X	X	X	Y	GF	GF		H	L	H	New
EQ-8 Encourage and facilitate retrofits of seismically high-risk buildings. (Source: GP Public Safety Element)	PW	Ongoing – as projects are in for permits	X	X	X	X	X	Y	CIP	CIP	F, E	M	L - H	H	New

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
FLOOD MITIGATION ACTION ITEMS															
FLD-1 Require new development and redevelopment projects to analyze and mitigate relevant sea level rise impacts.	CD	Ongoing – as projects are in for permits	X	X	X	X	X	Y	GF, PA	GF		H	L	M	Revised
FLD-2 Investigate, design and implement engineering improvements to the City's storm water outfall system's operation and resiliency.	CMO/EPM, PW	Complete by 2029	X	X	X	X	X	Y	GF, HMGP, BRIC	GF, HMGP, BRIC		M	L - H	H	Status: Began work in 2019, Revised
FLD-3 Enhance community understanding of sea level rise and the potential impacts it will have on the City.	CD, CMO/EPM	Annual	X	X	X	X	X	N	GF	GF	E	L	L	H	Revised
FLD-4 Develop a long-term adaptive shoreline management program with a strong preference for beach replenishment over shoreline protective structures. Replenish beaches after major erosion events.	PW	2026	X	X	X	X	X	Y	GF	GF		M	L	H	Deleted – no longer necessary

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
FLD-5 Storm drain improvements throughout the city. Locations will be as identified and prioritized per the Storm Drain Master Plan. Projects will address deficiencies, ponding, and repairs citywide. (Source: 2023-2024 CIP)	PW	2024-2025	X	X	X	X	X	Y	CIP	CIP	P, F	M	L - H	H	New
FLD-6 Storm drain improvements at 5th Street. (Source: 2023-2024 CIP)	PW	2024-2025	X	X	X	X	X	Y	CIP	CIP		M	L - H	H	New
FLD-7 Storm drain improvements will include Bard Street. Projects will address deficiencies, ponding, and repairs as well as where new storm drains are needed citywide. (Source: 2023-2024 CIP	PW	2025	X	X	X	X	X	Y	CIP	CIP		M	L - H	H	New
FLD-8 As required by the region's Enhanced Watershed Management Plan (EWMP), this	PW	2026	X	X	X	X	X	Y	CIP	CIP		M	L - H	H	Status: Design is complete, New

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
project will assess the implementation of a series of drywells east of Pacific Coast Highway (PCH) between 1st Street and 10th Street to capture storm water and dry weather flows within 118 acres of the Herondo Drain (SMB-6-1) watershed. (Source: 2023-2024 CIP)															
FLD-9 Inspection of the pier will be performed to assess and evaluate the structural condition of the pier and provide recommendations for additional repairs as needed. (Source: 2023-2024 CIP)	PW	2024-2025	X	X	X	X	X	Y	CIP	CIP		M	L	H	New
FLD-10 This project will include repairs of the municipal pier structural elements including the piles, pile caps, deck and the lifeguard storage room. (Source: 2023-2024 CIP)	PW	February 2024	X	X	X	X	X	Y	CIP	CIP		M	L	H	Completed in February 2024,

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
FLD-11 Natural interventions, green infrastructure, and infiltration systems will be utilized to minimize damage from coastal flooding. (Source: GP Public Safety Element)	CD, PW	Ongoing – during review of project permit	X	X	X	X	X	Y	GF	GP		H	L	H	New
FLD-12 Encourage existing structures, critical facilities, and infrastructure to reduce flood vulnerability. (Source: GP Public Safety Element)	CD, PW	Ongoing – during review of project permit	X	X	X	X	X	Y	GF	GP		H	L	H	New
FLD-13 Reduce stormwater runoff consistent with local stormwater permits. (Source: GP Public Safety Element)	CD	Ongoing – during review of project permit	X	X	X	X	X	Y	GF	GP		H	L	H	New
FLD-14 Integrate resilience to anticipated sea level rise impacts into project designs when repairing and replacing aging infrastructure within the coastal zone. (Source: GP Public Safety Element)	PW	As projects are designed	X	X	X	X	X	Y	GF	GP		H	L	H	New

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
FLD-15 Require new development and redevelopment projects to consider and address relevant sea level rise impacts. (Source: GP Public Safety Element)	CD	Ongoing – during review of project permit	X	X	X	X	X	Y	GF	GP		H	L	H	New
FLD-16 Enhance local understanding of sea level rise and keep decisionmakers and the community aware of potential impacts based on best available science. (Source: GP Public Safety Element)	CD, PW	2024-2025	X	X	X	X	X	Y	GF	GP		H	L	H	New
FLD-17 Provide public information describing new flooding risks under a 55-inch sea level rise scenario in areas previously not affected by flooding. (Source: GP Public Safety Element)	CMO/EMC, CD	2024-2025	X	X	X	X	X	Y	GF	GP		H	L	H	New
FLD-18 Maintain or expand current beach widths under changing sea level conditions.	PW	2024-2025	X	X	X	X	X	Y	GF	GP		H	M	H	New

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
(Source: GP Public Safety Element)															
FLD-19 Support regional approaches to sediment management, beach replenishment, and adaptive shoreline protection to allow Hermosa Beach to voice its needs, allow for coordination with neighboring jurisdictions, and identify creative finance mechanisms to continue the replenishment program. (Source: GP Public Safety Element)	PW	As projects arise	X	X	X	X	X	Y	GF	GP		H	L	H	New
FLD-20 Continue to monitor beach width and elevations to identify potential erosion problems. (Source: GP Public Safety Element)	PW	Annual	X	X	X	X	X	Y	GF	GP		H	L	H	New
FLD-21 Consider allowing construction projects with sand excavation to add sand for beach replenishment or	CD, PW	2024-2025	X	X	X	X	X	Y	GF	GP		H	L	H	New

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
nourishment purposes. (Source: GP Public Safety Element)															
FLD-22 Where feasible, use permeable pavement for low travel streets and minimize the use of concrete on streets and medians. (Source: GP Infrastructure Element)	PW	Begin 2024	X	X	X	X	X	Y	GF	GP		H	L	H	New
FLD-23 Anticipate sea level rise impacts when planning, upgrading, and operating the sewer collection and treatment systems. (Source: GP Infrastructure Element)	PW	As systems are repaired or replaced	X	X	X	X	X	Y	GF	GP		H	L	H	New
FLD-24 Naturalize flood channels that enhance flood protection capacity before employing other management solutions. (Source: GP Infrastructure Element)	PW	Begin 2024	X	X	X	X	X	Y	GF	GP		H	L	H	New
FLD-25 Integrate natural features, such as topography, drainage, and trees, into the	PW	Begin 2024	X	X	X	X	X	Y	GF	GP		H	L	H	New

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
design of streets and rights-of-way to capture stormwater and prevent runoff. (Source: GP Infrastructure Element)															
FLD-26 Encourage community behavior changes to reduce urban runoff pollution by incentivizing the capture of rainwater to prevent runoff and meet on-site water demand. (Source: GP Infrastructure Element)	CMO/EMC, CD	Begin 2024	X	X	X	X	X	Y	GF	GP		H	L	H	New
FLD-27 Require new development and redevelopment projects to incorporate low impact development (LID) techniques in project designs, including but not limited to on-site drainage improvements using native vegetation to capture and clean stormwater runoff and minimize impervious	CD, PW	Begin 2024	X	X	X	X	X	Y	GF	GP		H	L	H	New

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
surfaces. (Source: GP Infrastructure Element)															
DROUGHT MITIGATION ACTION ITEMS															
DRO-1 Implement a City-wide water wise plan to survey public and private water usage and implement water conservation measures.	PW, CalWater	2025	X	X	X	X	X	Y	GF	GF		H	L	M	Revised
DRO-2 Develop a public outreach and awareness campaign about drought, water conservation measures and the use of recycled water.	CMO/EMC, CMO/EPM	2025	X	X	X	X	X	Y	GF	GF		H	L	H	Revised
DRO-3 Continue to evaluate and monitor the adequacy of available water supply and distribution systems relative to proposed development and redevelopment projects. (Source: GP Infrastructure Element)	PW, CalWater	Annual	X	X	X	X	X	Y	GF	GP		H	L	H	New

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
DRO-4 Pursue expansion of recycled water infrastructure and other alternative water supplies to meet water demands of the community that cannot be offset through conservation measures. (Source: GP Infrastructure Element)	PW	2024-2025	X	X	X	X	X	Y	GF	GP		H	L	H	New
DRO-5 Encourage the use and integration of dual plumbing system hookups to accommodate recycled water into new development. (Source: GP Infrastructure Element)	CD, PW	Ongoing – during project permit review	X	X	X	X	X	Y	GF	GP		H	L	H	New
DRO-6 Consider the impacts of climate change in projections used to establish which water supply and distribution facilities as well as conservation efforts are necessary to sustain future water demands. (Source: GP Infrastructure Element) (Note: also consider water peak periods	PW	Ongoing	X	X	X	X	X	Y	GF	GP		H	L	H	New

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
generally occur in July and August)															
DRO-7 Ensure measures to respond to drought conditions are enforced through the City's 'Water Conservation and Drought Management Plan Ordinance.' (Source: GP Infrastructure Element)	CD, CalWater	Annual – through budgetary process	X	X	X	X	X	Y	GF	GP		H	L	H	New
DRO-8 Support the development of general water storage, recycling, greywater treatment, and necessary transmission facilities to meet necessary water demand. (Source: GP Infrastructure Element)	CD, PW, CalWater	Ongoing - Annual	X	X	X	X	X	Y	GF	GP		H	L	H	New
TSUNAMI MITIGATION ACTION ITEMS															
TSU-1 Work with the Emergency Management Coordinator, Los Angeles County Department of Beaches and Harbors to install an outdoor warning siren at the	CMO/EMC	2024	X	X	X	X	X	Y	CIP	CIP		H	L	H	New

Mitigation Action Item	Lead Department/Division/Position	Timeline	Goal: Protect Life and Property	Goal: Improve Public Understanding	Goal: Promote Disaster Resilience	Goal: Strengthen Partnerships and Collaboration	Goal: Enhance Ability to Respond and Recover	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities, PA-Project Applicant	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan	Expanding and Improving Capabilities: P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Comments and Status: Completed, Revised, Deleted, New, Deferred, and Notes
community Center and possible other locations and integrate the selected siren and the Beach Emergency Evacuation Lighting System (BEELS) systems into the City's alert and warning software platform, Alert South Bay. (Source: 2023-2024 CIP)															
TSU-2 Work with Los Angeles County and utilize resources such as the Tsunami Playbook in the evaluation and response of tsunami risk. (Source: GP Public Safety Element)	CMO/EMC, PW	2024-2025	X	X	X	X	X	Y	GF	GP		H	L	H	New
PANDEMIC MITIGATION ACTION ITEMS															
PAN-1 Mandatory inoculation to COVID for all City staff as a condition of employment	CMO	Ongoing – As needed	X	X	X	X	X	Y	GF	GF		H	L	H	New – began in 2020
PAN-2 Regulation requiring mask-wearing in response to COVID.	CMO	Ongoing – As needed	X	X	X	X	X	Y	GF	GF		H	L	H	New – began in 2020

Chapter 6: Plan Maintenance

The plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing a plan revision every five years. This section describes how the City of Hermosa Beach will integrate public participation throughout the plan maintenance process.

Q&A | ELEMENT D: PLAN MAINTENANCE | D2-a.

Q: Does the plan describe the process that will be followed to track the progress/status of the mitigation actions identified within the Mitigation Strategy, along with when this process will occur and who will be responsible for the process? (Requirement 44 CFR § 201.6(c)(4)(i))

A: See **Local Mitigation Officer, Method and Scheduling of Plan Implementation, Monitoring and Implementing the Plan, Annual Implementation Matrix** below.

Local Mitigation Officer

The Planning Team that was involved in research and writing of the Plan will also be responsible for implementation. The Planning Team will be led by the Planning Team Chair Angela Crespi who will be referred to as the Local Mitigation Officer. Under the direction of the Local Mitigation Officer, the Planning Team will take responsibility for plan maintenance and implementation. The Local Mitigation Officer 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 Officer will coordinate with the City of Hermosa Beach leadership to ensure funding for 5-year updates to Plan as required by FEMA.

The Planning Team will be responsible for coordinating the implementation of plan action items and undertaking the formal review process. The Local Mitigation Officer will be authorized to make changes in assignments to the current Planning Team.

The Planning Team will meet no less than annually. Meeting dates will be scheduled once the final Planning Team 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. The Local Mitigation Officer or designee will be responsible for contacting the Planning Team members and organizing the annual meetings.

Plan updates will need to be approved by FEMA every 5 years. However, adequate time should be allowed to secure grant funding (if necessary), allow adequate time for a thorough planning process, and time for the formal review by Cal OES and FEMA. All said, if grant funding is going to be needed, the update timeline should begin 3 years prior to the plan's due date to FEMA.

Method and Scheduling of Plan Implementation

	Year 1	Year 2	Year 3	Year 4	Year 5
Monitoring	X	X	X	X	X
Evaluating					
Internal Planning Team Evaluation	X	X	X	X	X
Cal OES and FEMA Evaluation					X
Updating					X

Monitoring and Implementing the Plan

Monitoring the Plan

The Local Mitigation Officer will hold annual meetings with representatives from the departments with assignments in the Mitigation Actions Matrix. 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. Below, see the **Annual Implementation Report** which will be a valuable tool for the Planning Team to measure the success of the Hazard Mitigation Plan. The focus of the annual meetings will be on the progress and changes to the Mitigation Action Items.

Annual Implementation Matrix

The Annual Implementation Matrix is the same as the Mitigation Actions Matrix but with a column added to track the annual status of each Action Item. Upon approval and adoption of the Plan, the Annual Implementation Reports will be added to the Plan's **Attachments**. Following is a view of the Annual Implementation Matrix:

Insert Implementation Matrix here once plan has been adopted and approved

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 Officer will convene the Planning Team (as well as any other departments with responsibilities on the Mitigation Actions Matrix) 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 D: PLAN MAINTENANCE | D3-a.
Q: Does the plan describe each community will follow to integrate the ideas, information and strategy of the mitigation plan into other planning mechanisms? (Requirement 44 CFR § 201.6(c)(4)(ii))
A: See **Integration into Other Planning Mechanisms** below.
Q&A | ELEMENT E: PLAN UPDATE | E2-c.
Q: Does the plan describe how jurisdictions integrated the mitigation plan, when appropriate, into other planning mechanisms? (Requirement 44 CFR § 201.6(d)(3))
A: See **Integration into other Planning Mechanisms** below.

Integration into Other Planning Mechanisms

The City of Hermosa Beach addresses statewide planning goals and legislative requirements through the General Fund, Capital Improvement Program, and Grants. The Mitigation Plan provides a series of recommendations - many of which are closely related to the goals and objectives of existing planning programs. The City of Hermosa Beach will implement recommended mitigation action items through existing programs and procedures.

The City of Hermosa Beach is responsible for adhering to the Building Standards Codes, including the California Building Code. In addition, the City of Hermosa Beach may work with other

agencies at the state level to review, develop and ensure the Building Standards Codes are adequate to mitigate or present 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 the strategic and other budget documents. The various departments involved in developing the Plan will review it on an annual basis. Upon annual review, the Planning Team will work with the departments to identify areas that the Mitigation Plan action items are consistent with the strategic and budget documents to ensure the Mitigation Plan goals and action items are implemented in a timely fashion.

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 Fund (Operating Budget and Capital Improvement Program - see Mitigation Actions Matrix for links between individual action items and associated planning mechanism). The annual 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 the City of Hermosa Beach's planning documents and procedures.

Specifically, the Planning Team will utilize the updates of the following documents to implement the Mitigation Plan:

- ✓ Risk Assessment, City Profile, Planning Process (stakeholders) – Emergency Operations Plan, etc.
- ✓ Mitigation Actions Matrix – General Fund, Capital Improvement Program, Grants

Economic Analysis of Mitigation Projects

FEMA's approach to identifying 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.

Evaluating and Updating the Plan

Q&A | ELEMENT D: PLAN MAINTENANCE | D2-b.
Q: Does the plan describe the process that will be followed to evaluate the plan for effectiveness? This process must identify the criteria that will be used to evaluate the information in the plan, along with when this process will occur and who will be responsible. (Requirement 44 CFR § 201.6(c)(4)(i))
A: See **Evaluation** below.

Evaluation

As discussed at the beginning of this section, the representatives from the lead departments (as identified in the Mitigation Actions Matrix) will meet annually to gather status updates on the mitigation action items. At the conclusion of the Annual Implementation Meeting each year, the Local Mitigation Officer will lead a discussion with the lead departments on the success (or failure) of the Mitigation Plan to be effective and to meet the plan goals. Examples of measuring the plan's effective will include assessing effectiveness include evaluating whether new hazards have emerged, whether community vulnerability has shifted, and whether stated mitigation strategies are still appropriate for the community's circumstances. The plan goals are defined in the beginning of the Mitigation Strategies Section and each of the mitigation action items is aligned with a goal or goals.

The results of that discussion will be added to the Evaluation portion of the Annual Implementation Report and inclusion in the 5-year update to the Plan. Efforts will be made immediately by the Local Mitigation Officer to address any failed plan goals.

Q&A | ELEMENT D: PLAN MAINTENANCE | D2-c.

Q: Does the plan describe the process that will be followed to update the plan, along with when this process will occur and who will be responsible for the process? (Requirement 44 CFR § 201.6(c)(4)(i))

A: See **Formal Update Process** below.

Formal Update Process

As identified above, the Mitigation Action Items will be monitored for status on an annual basis as well as an evaluation of the Plan's goals. The Local Mitigation Officer or designee will be responsible for contacting the coordinating agency members and organizing the annual meetings which will take place based on the month of the Plan's approval. Planning Team members will also be responsible for participating in the formal update to the Plan every fifth year of the planning cycle. In the event the City desires to seek grant funding for the update, the application process should begin 2 years in advance of the plan's expiration. Even without grant funding, the planning process should begin at least 1.5 years ahead of the plan's expiration.

The Planning Team will begin the update process with a review of the goals and mitigation action items to determine their relevance to changing situations within the City of Hermosa Beach 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 lead departments 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. Amendments will be made to the Mitigation Actions Matrix and other sections in the Plan as deemed necessary by the Planning Team.

Q&A | ELEMENT D: PLAN MAINTENANCE | D1-a.

Q: Does the plan describe how communities will continue to seek future public participation after the plan has been approved? (Requirement 44 CFR § 201.6(c)(4)(iii))

A: See **Continued Public Involvement** below.

Continued Public Involvement

The City of Hermosa Beach is dedicated to involving the public directly in the continual review and updates to the Mitigation Plan. Copies of the plan will be made available at the City of Hermosa Beach City Hall Complex and on the City's website. The existence and location of these copies will be publicized in the City's monthly E-Newsletter and on the website. This site will also contain an email address and phone number for individual's comments, questions, and concerns. At the discretion of the Local Mitigation Officer, a public meeting may be held after the Annual Implementation Meeting. The meeting would provide the public with a forum in which interested individuals and/or agencies could express their concerns, opinions, or ideas about the plan. The Local Mitigation Officer will be responsible for using the City of Hermosa Beach resources to publicize any public meetings and always free to maintain public involvement through social media, web page, and the community's E-Newspaper.

Chapter 7: Plan Review, Adoption and Approval

The plan is required to go through a formal review with Cal OES and FEMA. Once the Planning Team reviewed the Initial Draft Plan and revisions made, the First Draft Plan was made available to the public and stakeholders. The plan was posted and notices distributed advertising the plan's available for input. See **Chapter 1: Planning Process** for details.

Comments gathered on the First Draft Plan were incorporated into the Second Draft Plan which was submitted to Cal OES along with a completed FEMA Plan Review Tool. In the event changes were required, a revised version and updated Plan Review Tool will be submitted to Cal OES or FEMA. Upon acceptance by FEMA, the Approvable Pending Adoption notice was sent on _____ to the City requesting that the Final Draft Plan be submitted to the City Council for adoption. Once proof of adoption is forwarded to FEMA, a Letter of Approval will be issued. The Letter of Approval will be entered into the Final Plan.

Q&A | ELEMENT F: PLAN ADOPTION | F1-a.
Q: Does the participant include documentation of adoption? (Requirement 44 CFR § 201.6(c)(5))
A: See **Plan Adoption Process** below.

Plan Adoption Process

Adoption of the plan by the local governing body demonstrates the City of Hermosa Beach's commitment to meeting mitigation goals and objectives. Governing body approval legitimizes the plan and authorizes responsible agencies to execute their responsibilities.

The City Council must adopt the Hazard Mitigation Plan before the Plan can be approved by FEMA.

In preparation for the public meeting with the City Council, the Planning Team posted the Final Draft Plan on the City's website. Notification of the Plan's availability was also distributed via the mediums utilized during the community outreach phase. Also, the Team prepared a Staff Report including an overview of the Planning Process, Risk Assessment, Mitigation Goals, and Mitigation Actions. The staff presentation concluded with a summary of the input received during the public review of the document. The meeting participants were encouraged to present their views and make suggestions on possible mitigation actions.

The City Council heard the item on _____ (to be inserted upon receipt). The City Council voted to adopt the Hazard Mitigation Plan. The Resolution of adoption by the City Council is in the **Attachments**.

Plan Approval

Upon adoption by the City Council, the resolution was forwarded to FEMA. The FEMA Letter of Approval was issued on _____ (to be inserted upon receipt). FEMA issued a Letter of Approval on _____ is located in the **Attachments**.

Attachments

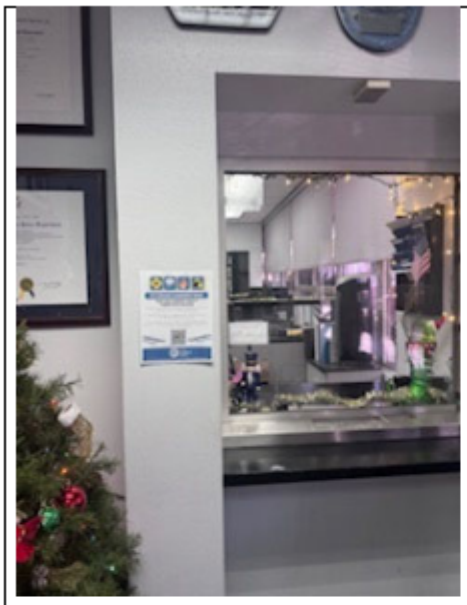
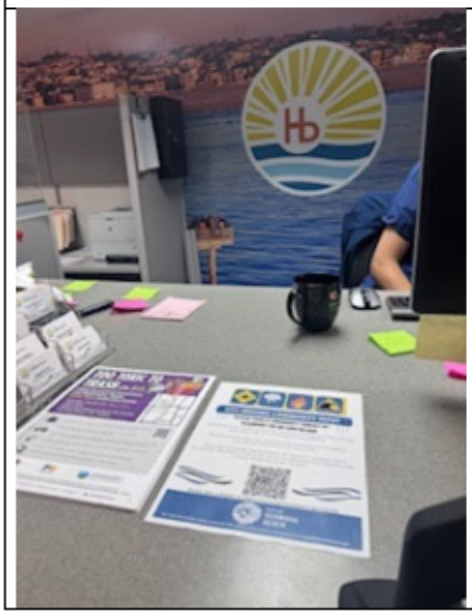
Web Posting and Notifications

Community Survey

Survey participation was garnered through an online survey (utilizing Microsoft forms). The survey was available to the public from December 4, 2023, through December 18, 2023. The Survey was posted on the City's website, sent out to residents via the community E-Newsletter, advertised on social media and posted at the following locations:

- Public Works
- Finance/Cashier's
- Community Development
- Police
- Los Angeles County- Hermosa Beach Branch Library
- Community Resources
- City Hall Bulletin Board

	**Hermosa Beach Community Center**, 710 Pier Avenue, Hermosa Beach, CA 90254
	**City Hall**- Bulletin Board, First Floor 1315 Valley Drive, Hermosa Beach, CA 90254

	**Hermosa Beach Police Department** 1315 Valley Drive, Hermosa Beach, CA 90254
	**City of Hermosa Beach, Public Works Counter** 1315 Valley Drive, Hermosa Beach, CA 90254

	**City of Hermosa Beach, Finance Counter** 1315 Valley Drive, Hermosa Beach, CA 90254
	**City of Hermosa Beach, Community Development Counter** 1315 Valley Drive, Hermosa Beach, CA 90254

Los Angeles Public Library (Hermosa Beach Branch), 550 Pier Avenue, Hermosa Beach, CA 90254

The Survey was emailed to the following community organizations:

Educational Organizations

- Hermosa Beach City School District, Jason Johnson
- Our Lady of Guadalupe, April Beuder
- Mira Costa High School, Karina Gerger

Community Organizations

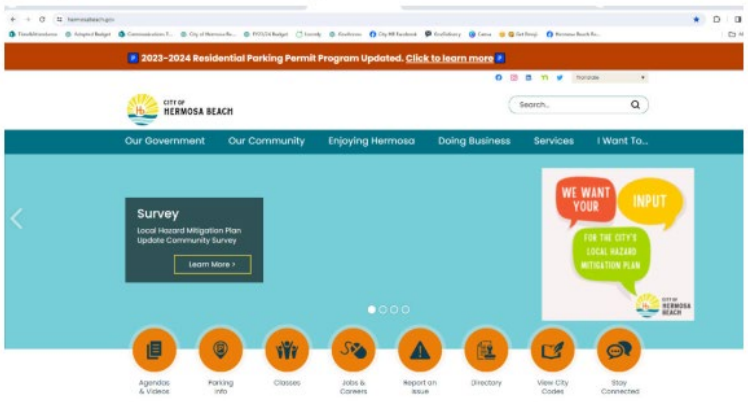
- Kiwanis Hermosa Beach, Glenn Menard

Religious Organizations

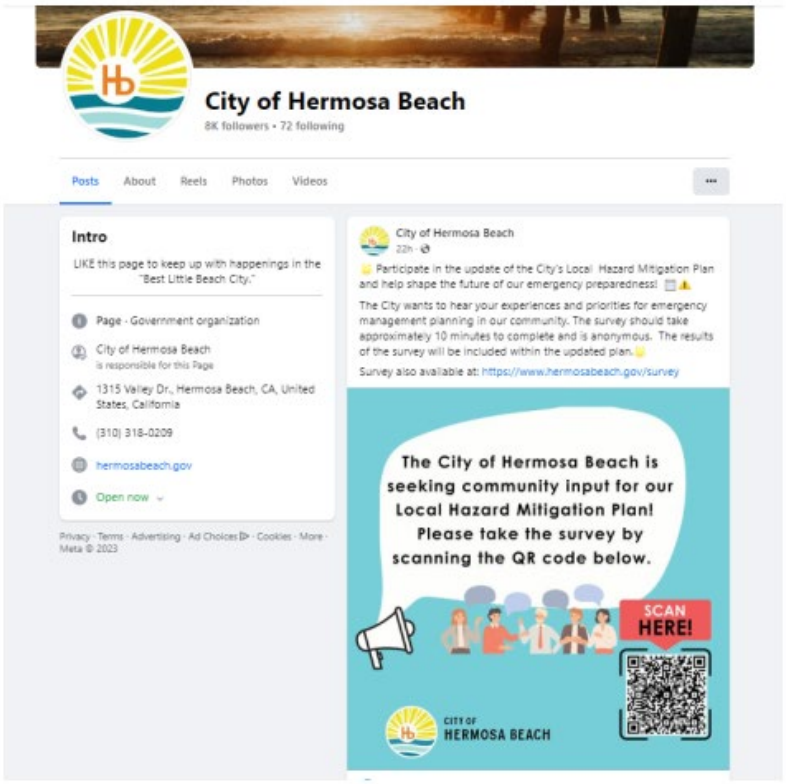
- Hope Chapel Hermosa Beach, Zac Nazarian
- Temple Shalom of the South Bay, Toba August
- Flourishing Church, Marcus Goodloe
- St Cross Episcopal Church, Rev. Dr. Rachel Anne Nyback
- Our Lady of Guadalupe, Rev. Paul Gawlowski

Community Survey – Postings

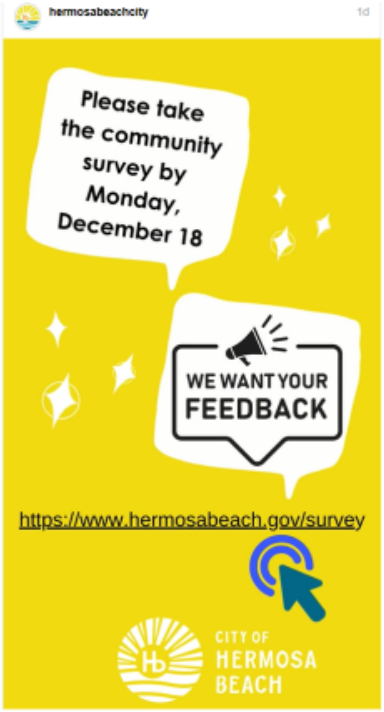
City's Website: Survey Posted on December 4, 2023



Facebook: Survey Announcement, Post #1 on December 4, 2023

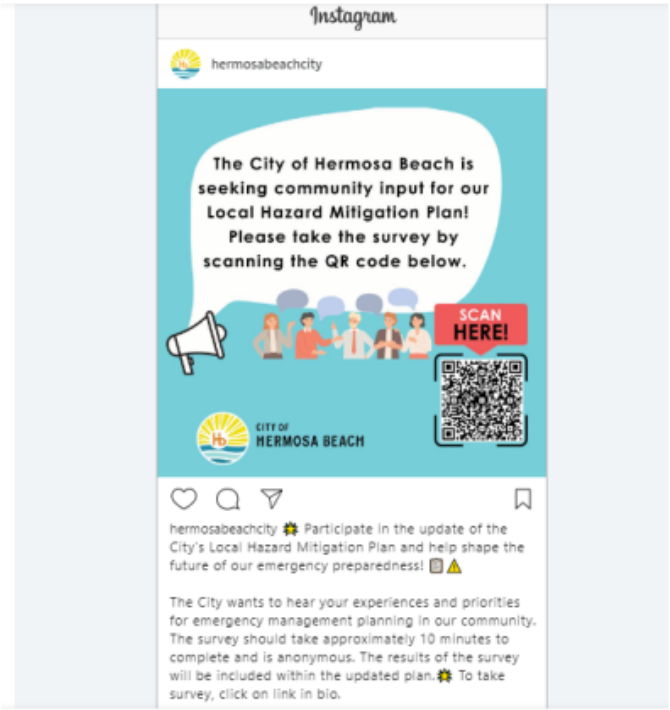


2nd Announcement, December 12, 2023

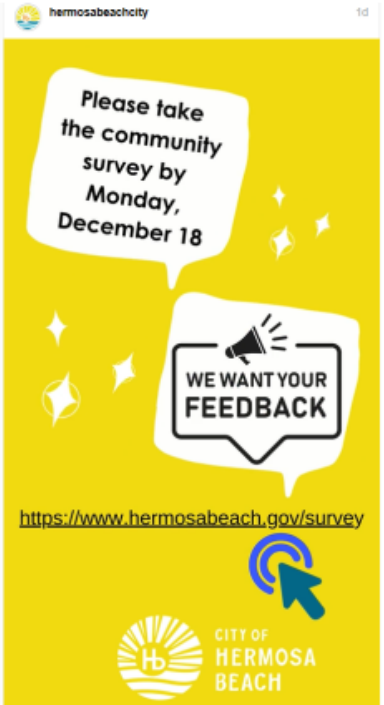


Instagram: Survey Announcement, Post #1 on December 4, 2023

Post details
ID: 17913513695844748



2nd Announcement, December 12, 2023



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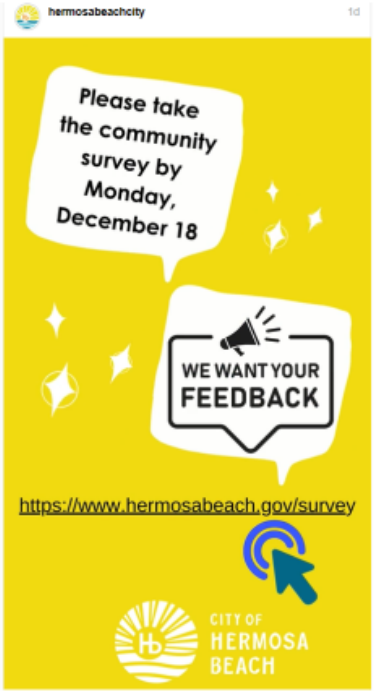
X: Survey Announcement, Post #1 on December 4, 2023

City of Hermosa Beach
@HermosaBchCity

🌟 Participate in the preparation of the City's Local Hazard Mitigation Plan and help shape the future of our emergency preparedness! 📋⚠️
Please take the survey, see QR code below.

6:01 PM · Dec 4, 2023 · **111** Views

2nd Announcement, December 12, 2023



E-Newsletter
December 1, 2023:
https://www.hermosabeach.gov/Home/Components/News/News/3898/28
Link to PDF. Emailed to 9,903 recipients, 9,613 delivered, 3,503 total opens.
December 15, 2023:
https://www.hermosabeach.gov/Home/Components/News/News/3904/639
Link to PDF. Emailed to 10,008 recipients, 9,718 delivered, 5,430 total opens.

E-Newsletter

Font Size: Share & Bookmark Feedback Print

E-Newsletter 12.1.2023 |Construction Updates, Beach Cities Toy Drive, and the Sand Snowman Contest

Post Date: 11/30/2023 4:46 PM

Need to find holiday gifts? From unique handcrafted treasures to artisanal products, our local shops have something for everyone on your list. #ShopHermosa #ShopLocal

Local Hazard Mitigation Plan Community Survey

The City is seeking community feedback for an update to our Local Hazard Mitigation Plan. This plan is a document that outlines the City's long-term strategy to eliminate risk to human life, property, and infrastructure from future natural and man-made disasters.

Please take the **Community Survey today**!

Web Posting – Announcing Survey – December 4, 2023

CITY OF
HERMOSA BEACH

Local Hazard Mitigation Plan
Community Survey

The City of Hermosa Beach is seeking input from the community as we update our Local Hazard Mitigation Plan to help us keep our community safe in future emergencies and disasters.

What is a Local Hazard Mitigation Plan?
A Local Hazard Mitigation Plan is a framework that guides our community in making decisions and developing policies to reduce or eliminate risks to life and property. The plan identifies the types of hazards that threaten our community, evaluates our vulnerability to those threats, and outlines a strategy to reduce or eliminate the risk posed by those threats. This plan is required to be updated every five years.

Why is the Plan Important?
The Federal Disaster Mitigation Act of 2000 requires that a community have an approved hazard mitigation plan to be eligible to apply for and receive certain types of Federal Emergency Management Agency (FEMA) hazard mitigation funds. Receipt of these funds can be critical to the implementation of identified hazard mitigation programs that break the cycle of disaster, damage, restoration, and repeated damage.

When was the City's last plan approved?
The current plan was approved in April 2018. See existing plan
here: https://www.hermosabeach.gov/home/showpublisheddocument/11583/637001018228830000

Why is my input needed?
In order to identify and plan for future disasters, we need your feedback. The City wants to hear your experiences and priorities for our community.

How long will the survey take?
The survey should take approximately 10 minutes to complete and is anonymous. Your information will be kept confidential. The results of the survey will be included within the updated plan.

For questions or comments, please contact the Hermosa Beach Emergency Management Coordinator, at oem@hermosabeach.gov.

Please share this survey link with your neighbors. Thank you for your participation!

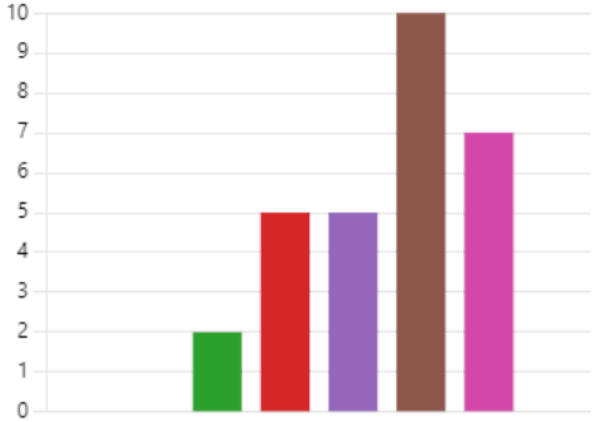
Community Survey – Survey Results

1. Do you (check all that apply)

Live in Hermosa Beach	19
Work in Hermosa Beach	6
Visit Hermosa Beach, but live an...	4

2. What is your age group?

Under 18	0
18-24	0
25-34	2
35-44	5
45-54	5
54-65	10
65 and older	7
Prefer not to answer	0



3. Do you own or rent your home?

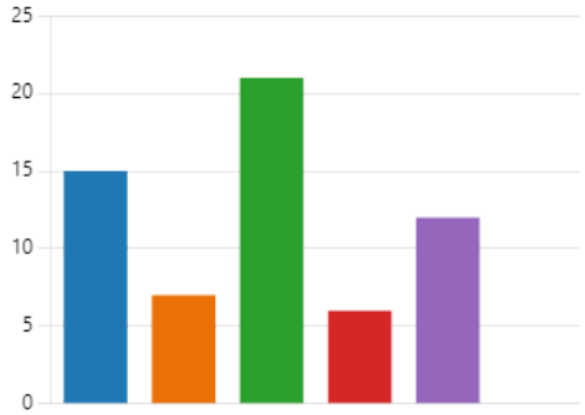
Own	20
Rent/Lease	8
Other	1

4. Do you work in the City of Hermosa Beach

Yes (includes working remotely ...	13
No, I work outside the City	4
No, I am not currently employed	0
No, I am retired	12

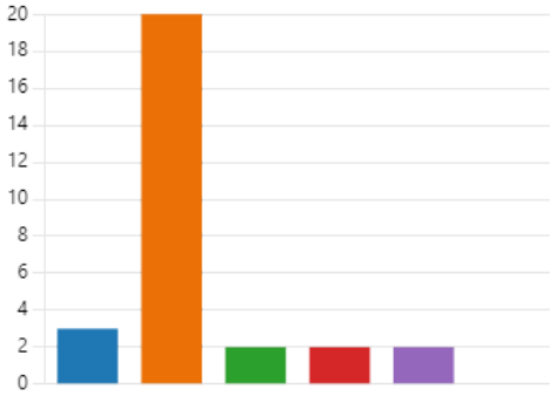
5. If a natural disaster such as a large earthquake were to strike tomorrow... (Check all that apply)

I feel confident that I know how ...	15
I am unsure how to protect mys...	7
I keep an emergency kit with sp...	21
I have practiced an evacuation p...	6
I am unsure where I would go if ...	12
Other	0



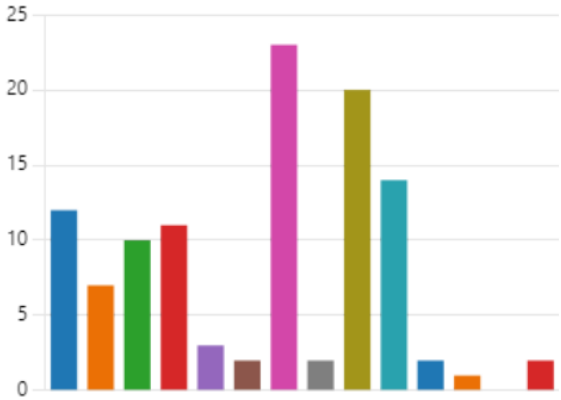
6. How prepared is your household for a natural hazard or disaster (for example, wildfire, flood, earthquake, extended power outage)?

Not at all prepared	3
Somewhat prepared	20
Adequately prepared	2
Well prepared	2
Very well prepared	2
Not Sure	0



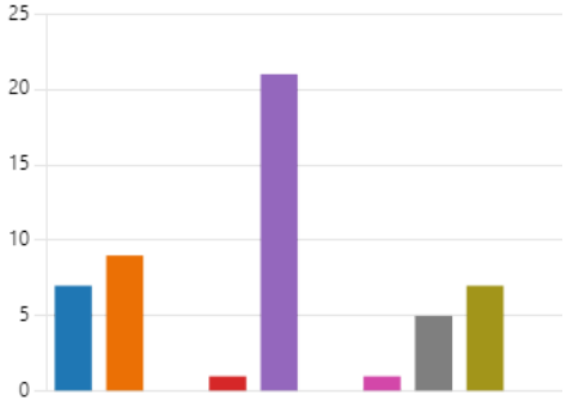
7. Which of the following types of disasters/hazards have you or someone in your household experienced while residing, visiting or working in Hermosa Beach ? (Check all that apply)

Climate Change	12
Civil Unrest	7
Drought	10
Extreme Heat	11
Flood	3
Hazardous Materials Incidents/S...	2
Pandemic	23
Landslide/Debris Flow	2
Earthquake	20
Severe Weather - Windstorms/S...	14
Terrorism/Active Shooter	2
None	1
Other (please specify)	0
Tsunami	2



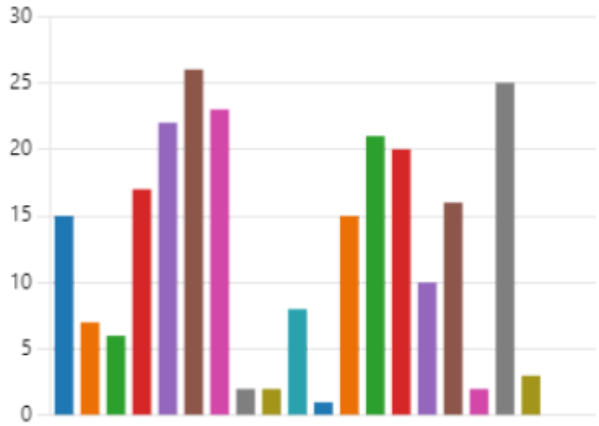
8. Which of the following additional hazards have you ever been impacted by within the City of Hermosa Beach? (Check all that apply)

Civil Unrest (violent public distu...	7
Critical Infrastructure Failure (uti...	9
Cyber Attack or Security Incident	0
Hazardous Materials (spill or rel...	1
Public Health (infectious disease...	21
Radiological Incident	0
Terrorism (threat, hoax, actual in...	1
Transportation Incident (roadwa...	5
None	7
Other	0

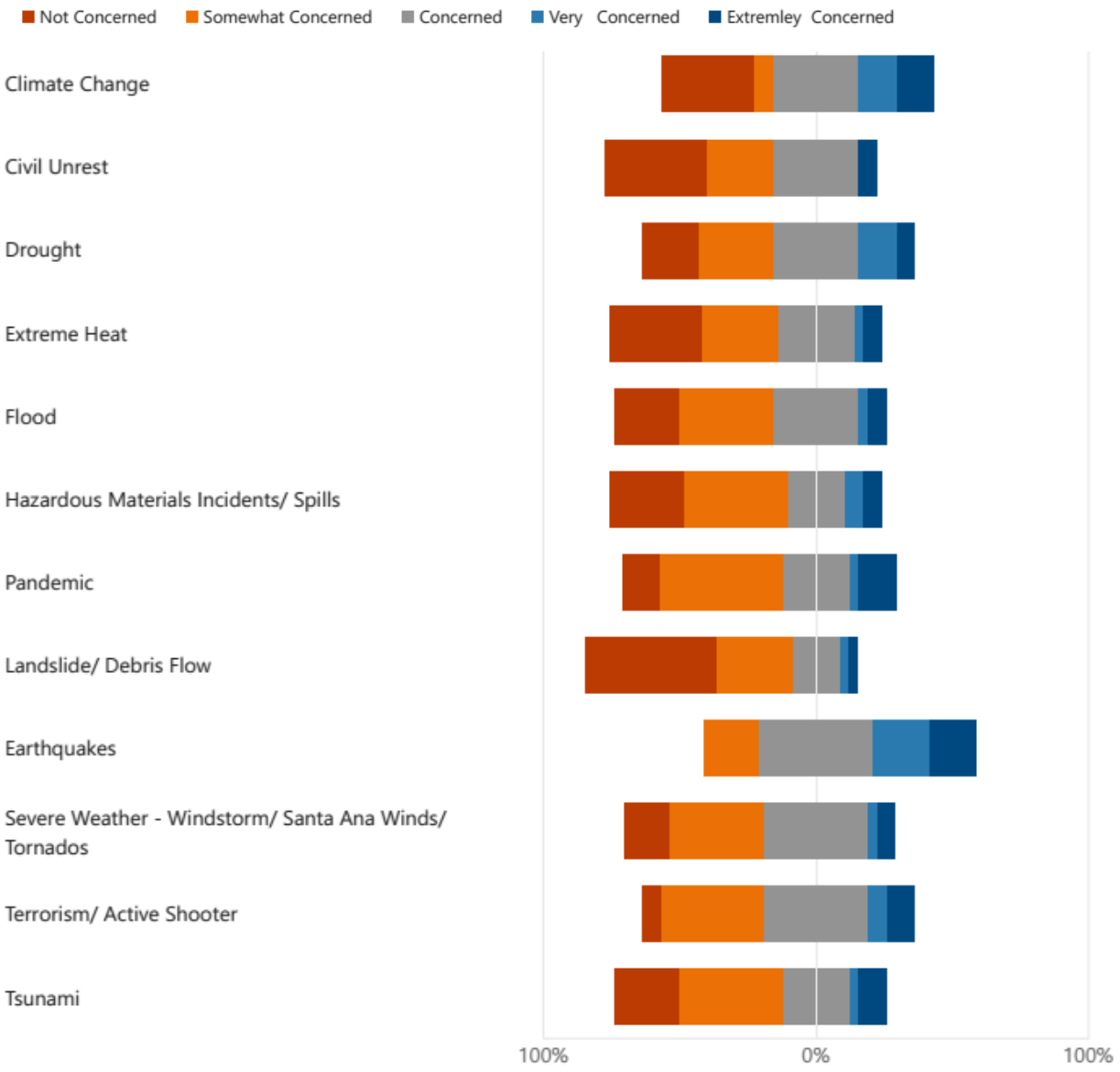


9. What steps has your household taken to prepare for a disaster? (Check all that apply)

Received First Aid/CPR training	15
Made a fire escape plan	7
Designated an evacuation meeti...	6
Identified utility shutoff locations	17
Maintain an emergency supply ...	22
Installed smoke detectors	26
Installed carbon monoxide dete...	23
Written and practiced an individ...	2
Made plans to care for elderly f...	2
Made plans to care for pets duri...	8
Participated in neighborhood pr...	1
Registered for emergency alerts...	15
Maintain a working fire extingui...	21
Maintain extra medical supplies ...	20
Maintain an additional kit for ca...	10
Maintain an emergency potable...	16
Installed an emergency generator	2
Purchased homeowner's or rent...	25
Installed solar panels	3
None	0

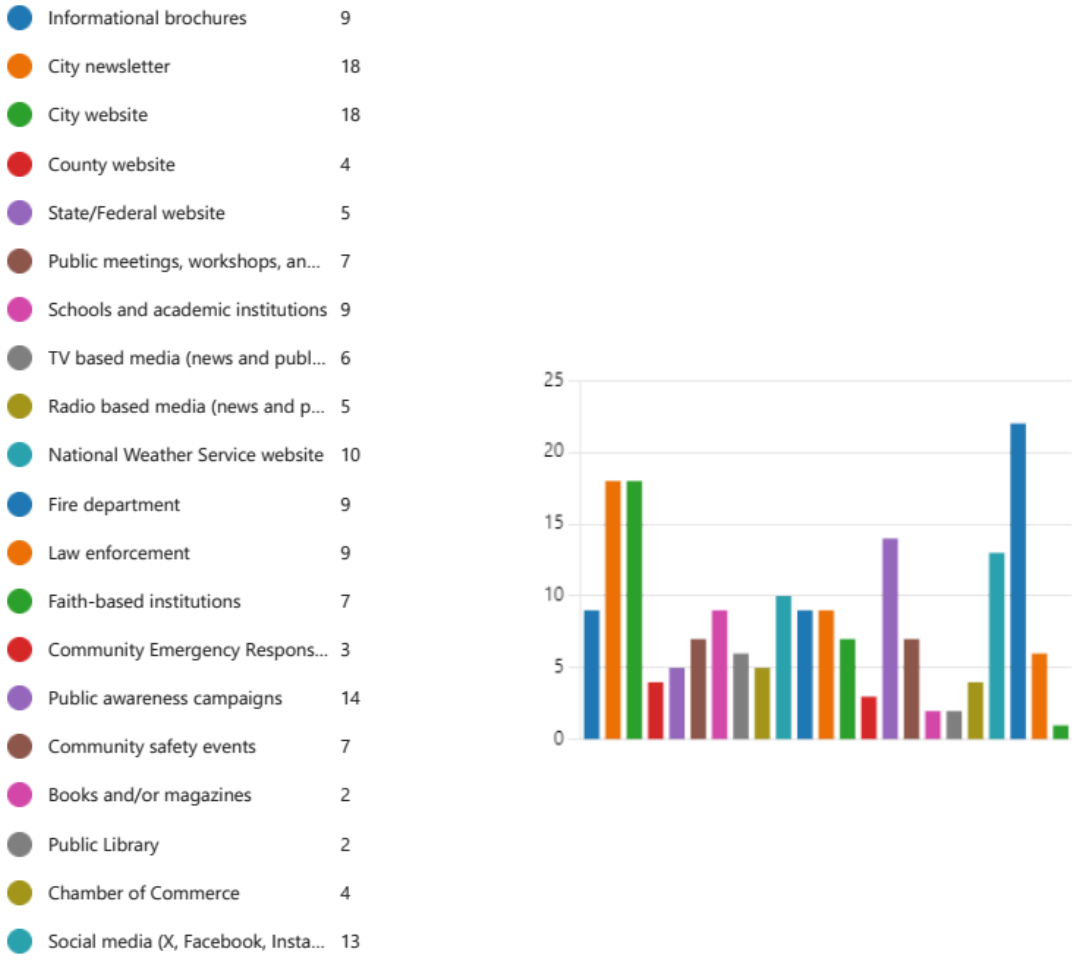


10. The following hazards could potentially impact the City of Hermosa Beach and may be addressed in the Hazard Mitigation Plan. Please indicate the level of concern you perceive for each hazard that may affect you and the City's critical facilities and infrastructure. (Please check ONE response for each hazard)



11. Do you, or anyone in your household:

12. Choose the ways you prefer to receive information about how to make your home and neighborhood more resistant to hazards?



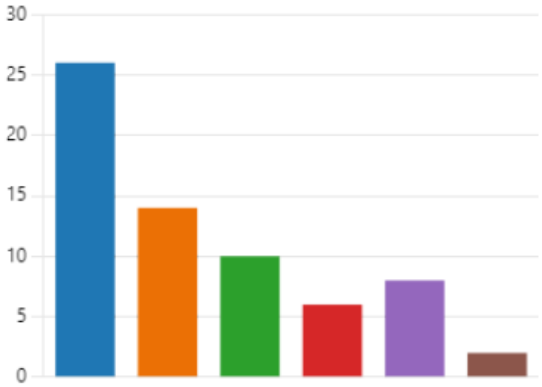
Email	22
Word of mouth	6
Other	1

13. How can the City of Hermosa Beach help you become better prepared for a disaster? Choose all that apply.

Provide effective emergency not...	28
Offer training and education to ...	18
Provide community outreach re...	20
Create awareness of special nee...	14
Other	2

14. What characteristics make members of your community more vulnerable during a hazard event? Consider evacuation, sheltering in place, or recovery actions. Choose all that apply.

Age (children under the age of ...	26
Disability Status	14
Lack of Vehicle or Reliable Trans...	10
Single-Parent Households	6
Poverty Status	8
Other	2



Public and Stakeholder Input to First Draft Plan

Date of Posting	Entity	Name of Recipient	Job Title of Recipient	Response and Resolution
LOCAL AND REGIONAL AGENCIES INVOLVED IN HAZARD MITIGATION ACTIVITIES				
	City of Hermosa Beach Leadership Team			
1/2/2024	City Manager's Office	Suja Lowenthal	City Manager	
1/2/2024		Sara Russo	Senior Management Analyst	
1/2/2024		Alexandria Hildebrand	GIS/IT Analyst	
1/2/2024		Angela Crespi	Deputy City Manager	
1/2/2024		Ann Yang	Executive Assistant	
1/2/2024		Doug Krauss	Environmental Programs Manager	
1/2/2024		Leo Zalyan	Management Analyst	
1/2/2024	Community Resources Department	Brian Sousa	Senior Recreation Supervisor	
1/2/2024		Lisa Nichols	Community Resources Director	
1/2/2024		Nick Shattuck	Recreation Coordinator	
1/2/2024	Community Development Department	Carrie Tai	Community Development Director	**Response**: Several edits provided by the Community Development Department via the Planning Team. **Resolution**: All of the edits were incorporated into the Capability Assessment, Risk Assessment, and Mitigation Actions Matrix.
1/2/2024	Public Works Department	John Cordova	Public Works Superintendent	
1/2/2024		Joseph San Clemente	Public Works Director	
1/2/2024		Lucho Rodriguez	City Engineer	
1/2/2024	Police Department	Mick Gaglia	Police Captain	
1/2/2024		Paul LeBaron	Chief of Police	**Response**: Recommended addition of National Night Out to the Capabilities

Date of Posting	Entity	Name of Recipient	Job Title of Recipient	Response and Resolution
				Assessment and to add language about power outage problems following disasters into the Hazard Profiles. **Resolution**: Incorporated both requests.
1/2/2024		Landon Phillips	Police Captain	
1/2/2024	Consultant	Laura MeCoy	Public Information Officer	
1/2/2024		Ryan Walker	Public Information Officer	
1/2/2024	City Clerk's Office	Myra Maravilla	City Clerk	
1/2/2024		Reanna Guzman	Deputy City Clerk	
1/2/2024	City Attorney's Office	Patrick Donegan	City Attorney	
1/2/2024	Administrative Services	Vanessa Godinez	Human Resources Director	
1/2/2024		Viki Copeland	Finance Director	
	Hermosa Beach Hazard Mitigation Planning Team			
City Representatives				
1/17/24	City Manager's Office	Angela Crespi	Deputy City Manager	Observations and recommendations gathered during Planning Team #4
1/17/24	City Manager's Office	Doug Krauss	Environmental Programs Manager	Observations and recommendations gathered during Planning Team #4
1/17/24	City Manager's Office	Alexandria Hildebrand	GIS/IT Analyst	Observations and recommendations gathered during Planning Team #4
1/17/24	City Manager's Office	Sara Russo	Senior Management Analyst	Observations and recommendations gathered during Planning Team #4
1/17/24	Community Development Department	Guillermo Hobelman	Building & Code Enforcement Official	Observations and recommendations gathered during Planning Team #4
1/17/24	Police Department	Joanne Loeza	Management Analyst	Observations and recommendations

Date of Posting	Entity	Name of Recipient	Job Title of Recipient	Response and Resolution
				gathered during Planning Team #4
1/17/24	Public Works Department	Lucho Rodriguez	City Engineer	Observations and recommendations gathered during Planning Team #4
1/17/24	Public Works Department	John Cordova	Public Works Superintendent	Observations and recommendations gathered during Planning Team #4
1/17/24	Public Works Department	Ana Tenorio	Assistant Public Works Superintendent	Observations and recommendations gathered during Planning Team #4
Los Angeles County Representatives				
1/17/24	Los Angeles County Fire Department	Brian Bennett	Assistant Fire Chief	Observations and recommendations gathered during Planning Team #4
1/17/24	Los Angeles County DMAC	Brandy Villanueva	Disaster Management Area G Coordinator	Observations and recommendations gathered during Planning Team #4
	Hermosa Beach Emergency Preparedness Advisory Board			
12/2/23		Alan Benson	Community Member	
12/2/23		Dave Buckland	Hermosa Beach Volunteer in Policing & HbCERT	
12/2/23		Bill Hallet	Community Member	
12/2/23		Jeff Raedy	Renters Association	
12/2/23		Nick Shattuck	City of Hermosa Beach Parks & Recreation	
12/2/23		Nadine Skye-Davis	South Bay Animal Response Team	**Response**: on 1.31.2024 Wanted mention included of the work the City has done relating to pets in disaster. Activities have included purchase and acquisition of animal disaster response supplies. Also,

Date of Posting	Entity	Name of Recipient	Job Title of Recipient	Response and Resolution
				discussion on training Hermosa Beach CERT Volunteers for animal disaster response and partnering with South Bay Animal CERT for sheltering animals after a disaster. **Resolution**: All 3 items were added to the Mitigation Actions Matrix.
12/2/23		Megan Vixie	Beach Cities Health District	
AGENCIES WITH AUTHORITY TO REGULATE DEVELOPMENT				
	City of Hermosa Beach Leadership			
	City Manager's Office	Angela Crespi	Deputy City Manager	
	Public Works	John Cordova	Public Works Superintendent	
	Community Development	Carrie Tai	Community Development Director	
	Building Inspection	Guillermo Hobelman	Building & Code Enforcement Official	
	Engineering	Lucho Rodriguez	City Engineer	
	Los Angeles County Fire	Brian Bennett	Assistant Division Chief	
	Los Angeles County Public Health	Katayoun Kashani	Staff Analyst, Government Affairs	
	Hermosa Beach Planning Commission			
1/16/24		David Pederson	Commissioner	
1/16/24		Kate Hirsh	Commissioner	
1/16/24		Stephen Izant	Commissioner	
1/16/24		Michael Flaherty	Commissioner	
1/16/24		Peter Hoffman	Commissioner	
	Hermosa Beach Public Works Commission			
1/17/24		Janice Brittain	Commissioner	
1/17/24		Scott Hayes	Commissioner	
1/17/24		David Grethen	Commissioner	During presentation at the 1/17/24 Commission meeting, Mr. Grethen asked

Date of Posting	Entity	Name of Recipient	Job Title of Recipient	Response and Resolution
				about the incorporation of the 2018 HMP, the project timeline, and role of City Council in approval. Separately, Mr. Grethen submitted a detailed analysis of the First Draft Plan (see Attachments). His observations and recommendations were considered and incorporated into various Chapters in the Second Draft Plan.
1/17/24		Thor L. Legvold	Commissioner	No input
1/17/24		Kathy Dunbabin	Commissioner	No input
	Parks, Recreation, & Community Resources Advisory Commission			
Will be included in future distributions		Jani Lange	Commissioner	
Will be included in future distributions		Lauren Pizer Mains	Commissioner	
Will be included in future distributions		Barbara Ellman	Commissioner	
Will be included in future distributions		Traci Horowitz	Commissioner	
Will be included in future distributions		E. Thomas Moroney	Commissioner	
	Jurisdiction-supported Volunteer Groups			
Will be included in	**CERT**	Jeffrey Wolfe	CERT Volunteer	

Date of Posting	Entity	Name of Recipient	Job Title of Recipient	Response and Resolution
future distributions				
Will be included in future distributions		Ken Hartley	CERT Volunteer	
Will be included in future distributions		Tracy Jack	CERT Volunteer	
Will be included in future distributions		Karen Nowicki	CERT Volunteer	
Will be included in future distributions		Baum Jennifer	CERT Volunteer	
Will be included in future distributions		Mike Miller	CERT Volunteer	
NEIGHBORING JURISDICTIONS				
	Los Angeles County			
1/17/24	Office of Los Angeles County 2nd District Supervisor Holly Mitchell	Jessalyn Waldron	Deputy of Constituent Engagement	
1/17/24	Los Angeles County Lifeguards	Arthur Lester IV	Marine Battalion Chief	
Will be included in future distributions	Los Angeles County Beaches and Harbor	Randy Dean	Safety Officer	
Will be included in future distributions	Los Angeles County Public Library	Sara Harper	Community Library Manager	
	Neighboring Cities and Los Angeles County Area G Cities			
1/17/24	City of El Segundo	Todd DeVoe	Emergency Management Coordinator	

Date of Posting	Entity	Name of Recipient	Job Title of Recipient	Response and Resolution
1/17/24	City of Gardena	Vicente Osorio	Emergency Management Coordinator	
1/17/24	City of Gardena	Tim Tran	Emergency Management Coordinator	
1/17/24	City of Hawthorne	Samuel English	Legal Risk Specialist	
1/17/24	City of Inglewood	Brian Walker	Emergency Services Manager	
1/17/24	City of Inglewood	Jeffrey Snoddy	Program Coordinator	
1/17/24	City of Inglewood	Crystal McGlover	Emergency Preparedness Coordinator	
1/17/24	City of Lawndale	Michael Reyes	Director of Municipal Services	
1/17/24	City of Lomita	Lina Hernandez	Senior Management Analyst	
1/17/24	City of Lomita	Juan Ibarra	Administrative Analyst	
1/17/24	City of Manhattan Beach	Michael E. Lang	Fire Chief	
1/17/24	City of Manhattan Beach	Amanda MacLennan	Emergency Preparedness Administrator	
1/17/24	City of Palos Verdes Estates	Merlin David	Community Relations Officer	
1/17/24	City of Rancho Palos Verdes	Jesse Villalpando	Emergency Management Coordinator	
1/17/24	City of Redondo Beach	Patrick Butler	Fire Chief / Harbor Master	
1/17/24	City of Rolling Hills Estates	Alexa Davis	Assistant City Manager	
1/17/24	City of Rolling Hills Estates	Jessica Slawson	Management Analyst	
1/17/24	City of Torrance	Eunique Day	Office of Emergency Services Coordinator	
1/17/24	City of Torrance	Jason Nishiyama	Deputy Finance Director	
	Special Districts			
1/17/24	Hermosa Beach City School District	Jason Johnson	Superintendent	
1/17/24	Mira Costa High School	Karina Gerger	Principal	
	Service Organizations			
1/17/24	American Red Cross	Luka Lezhanskyy	Disaster Program Manager	

Date of Posting	Entity	Name of Recipient	Job Title of Recipient	Response and Resolution
BUSINESS ORGANIZATION, ACADEMIA, AND OTHER PRIVATE ORGANIZATIONS (includes Community Lifelines)				
	Chamber of Commerce	Jessica Accamando	President / CEO	
	Private Schools			
	Our Lady of Guadalupe	April Beuder	Principal	
Will be included in future distributions	**Major Employers**			
	Von's			
	Lazy Acres			
	Trader Joe's			
Community Lifelines				
	Safety & Security			
	Hermosa Beach Police Department	Paul Labaron	Chief of Police	See Above
	Hermosa Beach Police Department	Landon Phillips	Police Captain	See Above
Will be included in future distributions	Hermosa Beach Police Department	Eric Cahalan	Police Captain	
Will be included in future distributions	Los Angeles County Fire Department	Brian Kane	Acting Assistant Fire Chief	
Will be included in future distributions	Los Angeles County Fire Department Lifeguard Division	Kenichi Haskett	Battalion Chief for Marine Battalion 100	
Will be included in future distributions	Los Angeles County Fire Department Lifeguard Division	Danielle McMillion	Battalion Chief for Marine Battalion 100	
Will be included in future distributions	HB Community Emergency Response Team	Maurice Wright	Emergency Management Coordinator	
Will be included in future distributions	Neighborhood Watch	Carlos Burgos	Community Services Supervisor	
	Hazardous Materials (HHMD)	Brian Kane	Acting Assistant Fire Chief	
	Food, Water, Shelter			

Date of Posting	Entity	Name of Recipient	Job Title of Recipient	Response and Resolution
Will be included in future distributions	California Water Service	Roberth Thompson	Operations Manager	
	Health & Medical			
Will be included in future distributions	McCormick Ambulance	Joseph Chidley	Chief Executive Officer	
Will be included in future distributions	Beach Cities Health District	Tom Bakaly	Chief Executive Officer	
Will be included in future distributions	Beach Cities Health District	Megan Vixie	Chief Engagement Officer	
	Energy			
Will be included in future distributions	Southern California Edison	Christian Torres	Key Accounts Advisor	
Will be included in future distributions	Southern California Edison	Celina Luna	Government Relations Manager	
Will be included in future distributions	SoCalGas	Ben Steinberger	Public Affairs Manager	
	Transportation			
Will be included in future distributions	Beach Cities Transit	Elizabeth Hause	Director	
Will be included in future distributions	Torrance Transit	David Match	Planning Manager	
Will be included in future distributions	Metro	Stephanie Wiggins	Chief Executive Officer	
	Communication			
Will be included in future distributions	Alert South Bay	Soraya Sutherlin	Administrator	

Date of Posting	Entity	Name of Recipient	Job Title of Recipient	Response and Resolution
NONPROFIT AND COMMUNITY-BASED ORGANIZATIONS SUPPORTING UNDERSERVED COMMUNITIES AND SOCIALLY VULNERABLE POPULATIONS				
Nonprofit Organizations				
	Faith-Based Organizations			
1/17/24	Hope Chapel Hermosa Beach	Zac Nazarian	Lead Pastor	
1/17/24	Temple Shalom of the South Bay	Toba August	Rabbi	
1/17/24	Flourishing Church	Marcus Goodloe	Elder	
1/17/24	St Cross Episcopal Church	Rev. Dr. Rachel Anne Nyback	Rector	
	Disability Services Agencies			
Will be included in future distributions	Beach Cities Health District	Tom Bakaly	Chief Executive Officer	
	Health and Social Services Department			
Will be included in future distributions	Beach Cities Health District	Tom Bakaly	Chief Executive Officer	
Will be included in future distributions	Beach Cities Health District	Megan Vixie	Chief Engagement Officer	
Will be included in future distributions	Public Health	Robert Luna	Emergency Preparedness Public Health Nurse	
Will be included in future distributions	Behavioral Health Services	Denise Shook	President/CEO	
Will be included in future distributions	South Bay Workforce Investment Board	Maria Aleman	Academic Counselor	
Will be included in future distributions	Beach Cities Cycling Club, South Bay	Gary Parsons	President	
Will be included in	Grades of Green	Kim Siehl	Director	

Date of Posting	Entity	Name of Recipient	Job Title of Recipient	Response and Resolution
future distributions				
Will be included in future distributions	Heal the Bay	Tracy Quinn	Chief Executive Officer	
Will be included in future distributions	South Bay Bicycle Coalition	Jim Hannon	Chief Executive Officer	
Will be included in future distributions	South Bay Families	Annmarie Whitney	Board Chair	
Will be included in future distributions	Surfrider South Bay	Sarah Lim	Chair of the Board	
	Housing Agencies and Housing Advocacy Groups			
Will be included in future distributions	Harbor Interfaith Services	Ramon Rendon	Manager	
Service Clubs				
Will be included in future distributions	Hermosa Beach Kiwanis Club	Rick Koenig	Club President	
Will be included in future distributions	Rotary Club of Hermosa Beach	Todd Saks	Club President	
Will be included in future distributions	Friends of the Library	Nancy Dominguez	Manager	
Will be included in future distributions	Women's Club of Hermosa Beach	Janice Brittain	Member	
Will be included in future distributions	Leadership Hermosa	Karlene Apeit	President	
Community-Based Organizations				

Date of Posting	Entity	Name of Recipient	Job Title of Recipient	Response and Resolution
Will be included in future distributions	Hermosa Beach Little League	Mark Manber	Commissioner	
Will be included in future distributions	Beach Cities Toy Drive	Peter Tucker		
Will be included in future distributions	Hermosa Friends Foundation	Dorothy Forba	Director	
Will be included in future distributions	Hermosa Circle	Kaci Mccrossen	President	
Will be included in future distributions	Sandpipers	Dayna Bubenicek	President	
Will be included in future distributions	South Bay Cities Council of Governments	Kim Fuentes		
Public				
1/16/2024				No input received on the First Draft Plan.

Stakeholder Email Invitation

Stakeholders listed above were invited via email and web link to participate in the video, survey, and providing input to the First Draft Plan.

Dear Jason,

The City of Hermosa Beach in the process of updating its Local Hazard Mitigation Plan and input from our community is critical to shaping the future of our community's emergency preparedness efforts. As a valuable community partner, we are reaching out to see if you can assist us with getting the word out regarding opportunities for community participation in the process.

What is a Local Hazard Mitigation Plan?

The Local Hazard Mitigation Plan is a document that outlines the City's long-term strategy to eliminate risk to human life, property and infrastructure from future natural and man-made disasters. To stay relevant and complete, the plan is updated every 5 years. With our last plan adopted in 2018, we are actively working on our update. In addition to preparing our City and community members, an up-to-date plan ensures that the City remains eligible for State and Federal emergency funds.

What can residents and community partners do to help?

To gather valuable information, we have created a brief confidential survey on emergency preparedness and we invite everyone to participate. This survey will close on Monday, December 18, 2023, so that the feedback may be incorporated into the next draft of the plan. The survey only takes a few minutes to complete, and community insights will play a vital role in ensuring the safety and well-being of our community.

If you could please share this information and survey link or QR code with your organization, we would greatly appreciate it. We will be sure to send along additional opportunities to participate as we move through the plan update process.

Thank you and happy holidays,

Margaret Talamantes | Senior Management Analyst
Office of the City Manager
City of Hermosa Beach
1315 Valley Dr., Hermosa Beach, CA 90254
o: 310-318-0213
e: mtalamantes@hermosabeach.gov
hermosabeach.gov
Facebook | Instagram | LinkedIn | Twitter | YouTube
Subscribe to E-Notifications

CITY SEEKING COMMUNITY INPUT

PLEASE TAKE A COMMUNITY SURVEY BY SCANNING THE QR CODE BELOW

Participate in the update of the City's Local Hazard Mitigation Plan and help shape the future of our emergency preparedness.

The City wants to hear your experiences and priorities for emergency management planning in our community.

The survey should take approximately 10 minutes to complete and is anonymous. The results of the survey will be included within the updated plan.

~ Survey closes December 18, 2023 ~

Survey also available at: https://www.hermosabeach.gov/survey

CITY OF HERMOSA BEACH

For more information, please email the City's Office of Emergency Management at oem@hermosabeach.gov

Hazard Mitigation Overview Individual Slides and Script

On behalf of the City of Hermosa Beach, it's my pleasure to welcome you to the overview of the planning process to update the City's Hazard Mitigation Plan.

As a bit of background, the Disaster Mitigation Act of 2000 was passed by Congress "to reduce the loss of life and property, human suffering, economic disruption, and disaster assistance costs resulting from natural disasters".

Disasters can cause loss of life; damage to buildings and infrastructure; and have devastating consequences on a community's economic, social, and environmental well-being.

Hazard mitigation reduces disaster damage and is defined by FEMA as "sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards".

Examples of mitigation actions include outreach programs that increase risk awareness, projects to protect critical facilities, and the removal of structures from flood hazard areas.

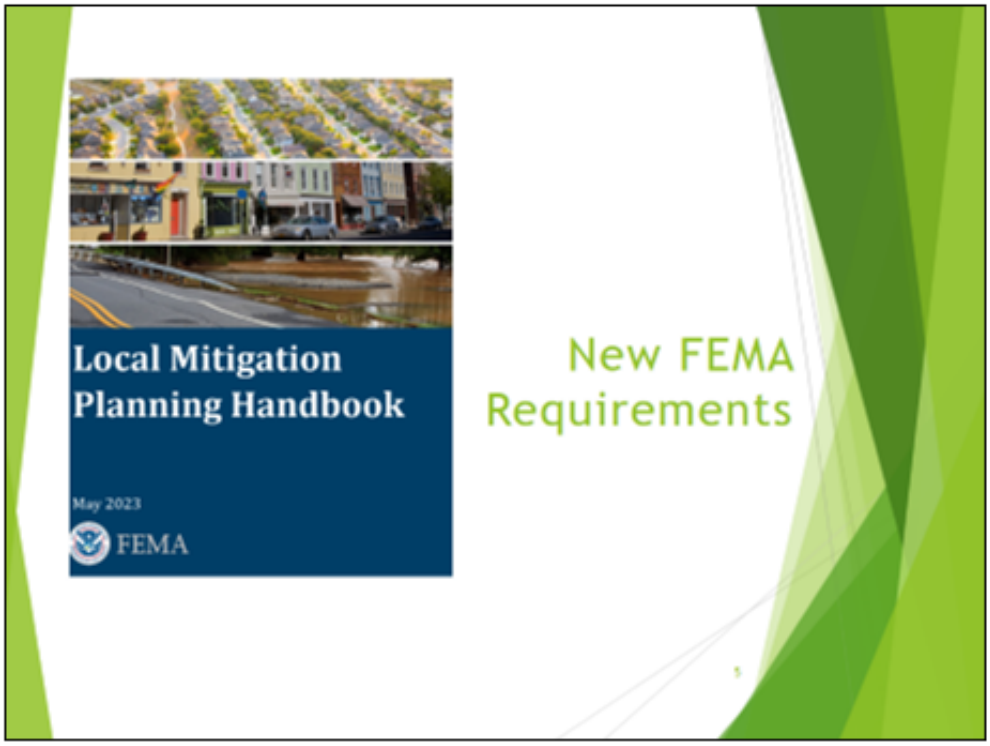
In 2019, the National Institute of Building Sciences issued an update to its landmark report "Natural Hazard Mitigation Saves". The study analyzed the benefit cost ratio of a range of mitigation activities including mitigation planning and building retrofits.

The findings revealed a dramatic return on investment.

- For mitigation activities, every dollar spent yielded a six dollar return on avoided losses in the future.
- For building retrofits, every dollar spent yielded a four dollar return on avoided losses in the future.

According to the National Institute of Building Sciences report, the benefits of mitigation include reductions in:

- Deaths, injuries, and post-traumatic stress disorder.
- Property repair costs for damaged buildings and contents.
- Additional living expenses including sheltering costs for displaced households.
- Direct business interruption: loss of revenue and other business-interruption costs to businesses whose property is damaged.
- Indirect business interruption: loss of economic activity in the broader community.
- Urban search and rescue costs.



In 2023, FEMA issued new standards regarding preparation of hazard mitigation plans. In addition to the previous regulations from 2011, jurisdictions are now required to discuss climate change and the impacts on natural hazards. Also, now there are standards requiring focused outreach to disadvantaged communities and socially vulnerable populations.

Mitigation plans are key to breaking the cycle of disaster damage and reconstruction. Mitigation planning begins with state, tribal and local governments identifying natural disaster risks and vulnerabilities that are common in their area.

After identifying these risks, they develop long-term strategies for protecting people and property from similar events.

Local governments are eligible to prepare a mitigation plan and receive mitigation funds through federal and state grants as well as funds following a major disaster.

The purpose of today's overview is to introduce the planning process used by Hermosa Beach to update its 2018 Hazard Mitigation Plan.

FEMA's 2023 Local Mitigation Planning Handbook identifies a successful planning process with four steps:

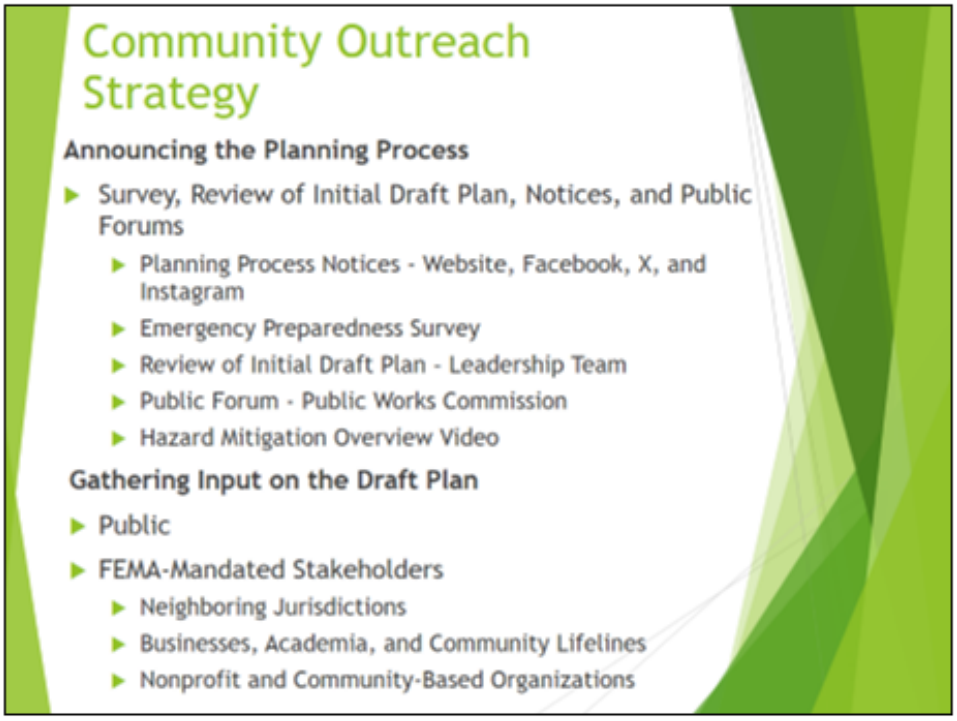
Step #1 is to organize the planning process and resources which included creation of a Planning Team to assist with research and writing as well as creation of a Community Outreach Strategy.

Step #2 is to assess risks and capabilities including a risk and vulnerability assessment as well as a review of the City's capability to respond and recover from a major disaster.

Step #3 is to develop a mitigation strategy which includes a comprehensive list of mitigation actions and projects.

Step #4 is to adopt and implement the plan which includes a formal review by Cal OES and FEMA and adoption by the Hermosa Beach City Council.

This is the 4-step planning process followed by the Hermosa Beach Planning Team.



The **Community Outreach Strategy** consisted of two phases:

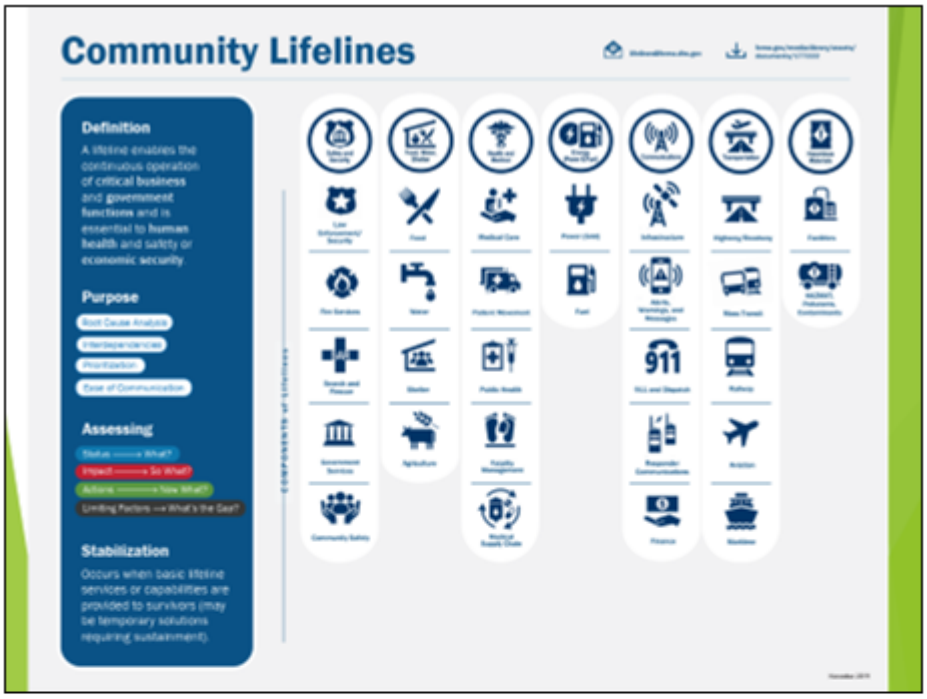
The first phase was "**Announcing the Planning Process**" which included:

- Posting of an Emergency Preparedness Survey
- Review of Initial Draft Plan by the City's Leadership Team
- Presentations at Public Forums including the City Council and Public Works Commission
- Public Notices on the City's Website, Facebook, X, and Instagram concerning the update to the Hazard Mitigation Plan
- And …the development and posting of today's Hazard Mitigation Overview Video

The second phase will be "**Gathering Input on the Draft Plan**" which will include inviting the public and external stakeholders to provide input to the Plan.

FEMA-mandated external stakeholders include:

- Neighboring Jurisdictions
- Businesses, Academia, and Community Lifelines
- Nonprofit and Community-Based Organizations



Community Lifelines are the vital services in a community. When stabilized, they enable all other aspects of society to function.

The eight services areas including:

- ❖ Safety and Security
- ❖ Food, Hydration, and Shelter
- ❖ Health and Medical
- ❖ Water Systems
- ❖ Energy
- ❖ Communications
- ❖ Transportation
- ❖ Hazardous Material

Identifying hazards with the potential for significant impacts involved reviewing a range of hazard-focused studies and plans.

The list included: the City's 2018 Hazard Mitigation Plan, Annual Budget, General Plan – Public Safety Element and Infrastructure Element.

Also, mitigation plans from the State of California and the County of Los Angeles were reviewed.

Hazards identified in the state and county plans were analyzed and ranked by the Planning Team.

Of the eleven hazards analyzed, it was determined that earthquake, flooding, tsunami, severe weather, and major disease outbreaks pose the greatest threat to the City's facilities and capability to provide important services.

The City's "capabilities" were mentioned in the previous slide.

One of the FEMA requirements is to identify existing capabilities to increase resilience.

Also, the mitigation plan is required to identify ways to expand existing capabilities.

The capability categories include Planning and Regulatory, Administrative and Technical, Financial, and Education and Outreach.

The Mitigation Strategy section of the plan includes the plan goals as well as methods for coordinating with the General Plan Elements and Capital Improvement Program.

Most importantly, the Mitigation Strategy includes a comprehensive range of actions and projects capture ongoing activities along with ideas for the future. Although the lifespan of the plan is only 5-years, there's no harm in identifying projects that will take 10- or even 20-years to complete.

Each action item identifies a lead department, timeline, plan goals met, projected funding source, and benefits, costs, and priority.

Here's a sample action items out of the Draft 2024 Hazard Mitigation Plan:

"Consider the combined effects of sea level rise when evaluating potential tsunami and storm surge impacts." This idea was pulled from the General Plan – Public Safety Element. By adding this action item to the mitigation plan, it is one step closer to being funded and implemented. This is a great example of the importance of coordinating the various policy documents tied to increasing resilience within the City of Hermosa Beach.

Following drafting of the plan by the Planning Team and gathering input from the public and other stakeholders, the document will be submitted to Cal OES for a formal review.

Utilizing FEMA's Plan Review Tool and updated regulations, the Cal OES staff will review the City's plan for conformance. Once Cal OES is satisfied that all the requirements have been met, the document is forwarded to FEMA. Altogether, the formal review typically lasts 4-6 months. Once FEMA is satisfied, a letter will be sent authorizing the City to take the document to the City Council for adoption. When proof of adoption is received, FEMA will issue a Letter of Approval.

This concludes the Hazard Mitigation Overview. Please watch for the posting of the Draft Hazard Mitigation Plan. We look forward to hearing your questions, thoughts, and suggestions. On behalf of the City of Hermosa Beach, thank you for taking time to learn about the importance of increasing resilience through mitigation planning.

Web Posting of First Draft Plan & Video – January 16, 2024

Hazard Mitigation Plan

2024 Local Hazard Mitigation Plan Update

The City of Hermosa Beach is seeking input from the community as we update our Local Hazard Mitigation Plan to help us keep our community safe in future emergencies and disasters. To review the draft plan please click here.

To send feedback, please contact the Hermosa Beach Emergency Management Coordinator, at **oem@hermosabeach.gov** or 310-318-0340 by Monday, February 5, 2024.

What is a Local Hazard Mitigation Plan?

A Local Hazard Mitigation Plan is a framework that guides our community in making decisions and developing policies to reduce or eliminate risks to life and property. The plan identifies the types of hazards that threaten our community, evaluates our vulnerability to those threats, and outlines a strategy to reduce or eliminate the risk posed by those threats. This plan is required to be updated every five years.

Why is the Plan Important?

The Federal Disaster Mitigation Act of 2000 requires that a community have an approved hazard mitigation plan to be eligible to apply for and receive certain types of Federal Emergency Management Agency (FEMA) hazard mitigation funds. Receipt of these funds can be critical to the implementation of identified hazard mitigation programs that break the cycle of disaster, damage, restoration, and repeated damage.

Community Meetings

Community meetings to discuss updates to the Local Hazard Mitigation Plan are happening in 2024. If you'd like to see a video recording of the presentation please click here.

Contact Information:

For questions or comments, please contact the City of Hermosa Beach Emergency Management Coordinator, at **oem@hermosabeach.gov**

Live Deliveries

EPC President Carolyn Harshman made a virtual delivery to a live Public Works Commission meeting on January 14, 2024. She explained that the First Draft Plan had just been posted on the City's webpage dedicated to the hazard mitigation planning process along with meeting agendas, minutes, PowerPoints, and other materials associated with the project.

Next, Ms. Harshman presented the Hazard Mitigation Overview PowerPoint (see above) including an elaboration of the process for selecting the profiled hazards and FEMA's regulations relating to the need for outreach and gathering of input from the underserved communities and socially vulnerable populations. Following the presentation, she took questions from the Commissioners (see Table: **Stakeholder Input** for details).

Comments from Public Works Commissioner David Grethen – February 5, 2024

Local Hazard Mitigation Plan - D. Grethen Comments - 5 Feb 2024

My comments are organized into the following two categories (1) storm drains/sewers/flooding/water and (2) general/risk assessments.

Storm Drains/Sewers/Flooding/Water

A broad comment here is that the plan should be enhanced to emphasize the joint roles and responsibilities, and collaboration, between Hermosa Beach and county/regional entities related to storm drains and sewers, associated programs and projects, and effects on flooding, water quality, water supply/reuse, and sanitary effluent discharge.

Another broad area of comments has to do with emphasizing the role of storm drain maintenance operations (versus projects), and clarifying the characterization of flood risk as citywide. These may be related.

I will leave it to the plan authors and city staff (e.g. Public Works, Environmental Programs) to consider how the following specific assertions and suggestions below can be integrated (validated as needed) into the plan document in support of the broader comment objectives above. My hope is that such specificity will help identify where best to do so.

1. LA County has "ownership" of a very large portion of the storm drains in Hermosa Beach. See Storm Drain master plan document. This seems worth highlighting.
2. LA County has some degree of "ownership" over sanitary sewers but some of these elements are significant such as large trunk lines. See Sanitary Sewer master plan document. This seems worth highlighting.
3. LA County Public Works should probably be mentioned specifically in some places, as opposed to LA County in general.

4. LA County, as I understand it, includes the county Flood Control District, so they should be mentioned specifically in some places.
5. The Watershed Management Group in the Beach Cities / South Bay includes Hermosa Beach and as such is another collaborator, This affects water quality and perhaps flood risk. The WMG should be mentioned somewhere.
6. The characterization of flood risk as "Citywide" (including at least one of the table figures) may be somewhat overstated, or at least needs to be explained especially to distinguish between low-lying areas near the beach and areas further inland and/or at higher elevation.
7. My interpretation that the "Citywide" assignment may have been based on the following two reasons, which could be better explained if so. The first one is the acknowledgement of certain challenging areas of town where pooling may occur for various reasons (as I recall from the master plan). Another reason for "Citywide", including why inland and/or higher elevation areas may be susceptible to flooding, is if we fail to keep our storm drains and outfalls clear via regular and effective maintenance operations. Regardless…
8. Regular storm drain and outfall maintenance/clearance programs need to be additionally stressed in the plan as critically. complementary to improvement projects.
9. There is a specific table figure identifying other government entities and collaborators. This is among the opportunities in the plan to acknowledge LA County Public Works and LA County Flood Control District and Watershed Management Group.
10. The approach to integrate the city CIP into the plan as a key vehicle for implementation is acknowledged. If there are any suggested future projects, these should be clearly distinguished as such if they are not.
11. Consider or confirm whether the existing city sanitary sewer fee is mentioned as a revenue source as appropriate.
12. Consider or confirm whether the recent Measure W is mentioned as a revenue source as appropriate.

General/Risk Assessments

These comments mainly regard risk assessments.

1. In the table "Calculated Priority Risk Index Ranking for the City of Hermosa Beach", it may be difficult to ascertain the assignment of H/M/L levels in the Hazard Priority Ranking column with other values in the table and with the methodology description at the bottom of the table. If I understand it correctly, however, I think it would be useful to explicitly include a new "Hazard Priority Score" column that is the sum described by that description. (e.g. Earthquake would have a value of 3.25 + 4 = 7.25 > 6 and therefore High. Flood would be 2.45 + 3 = 5.45 and therefore Medium).
2. The earthquake risk figures (colored maps) indicate they are based on certain earthquake magnitude values denoted at the top of the figure. However, these values do not always agree very well with the ranges of values described in the associated text paragraphs for the respective faults (e.g. Palos Verdes 7.7 versus 7.0). Consider reconciling the figures/headings with the text (even if it means regenerating analysis and figures), noting that these are all very large values regardless and may not change the overall risk assessment.
3. There are several references to Tropical Storm Hilary with dates that do not explicitly include the year 2023. While this context may be implicit for a reader today, it is recommended that "2023" be explicitly included in all places for proper context for future readers years from now.

PBS Article 2022

A **PUBLIC MEDIA** INITIATIVE FROM THE WNET GROUP

PERIL & PROMISE

Tip of the Iceberg

How Climate Change Impacts Each Type of Natural Disaster

SEPTEMBER 7, 2022

By Megan Crimmins

The term natural disaster is defined as "a sudden and terrible event in nature that usually results in serious damage and many deaths." According to the World Economic Forum, the most common natural disasters include floods, storms, earthquakes, extreme temperatures, landslides, droughts, wildfires, and volcanic activity. How does climate change impact each of these extreme events?

FLOODS

Floods are the most frequent natural disaster and have impacted every U.S. state and nearly every country. The connection between floods and climate change comes down to a few ways that climate change is impacting water. First, higher temperatures lead to increased levels of evaporation, creating denser clouds that hold more water. This eventually leads to heavier precipitation that can cause flooding. Second, more frequent and intense storms such as hurricanes can lead to floods. Finally, higher sea levels due to melting glaciers can also prompt coastal flooding.

Floods can also be exacerbated by how humans manage waterways and spur urbanization.

STORMS

Storms are impacted by climate change in the same way that some floods are, via the effect that higher temperatures have on evaporation and subsequent precipitation. With clouds holding increased amounts of water vapor, more powerful storms develop.

EARTHQUAKES

The connection between earthquakes and climate change is slightly less straightforward, and certainly less influential. Most earthquakes occur when tectonic plates within the Earth's crust change or move. Many things can lead to this, but where climate change comes into play is once again related to water. Earthquakes can be triggered or prevented by variability in stress on a fault

between tectonic plates. Stress on these faults is impacted by surface water from rain or snow. When there is heavier rainfall, this precipitation and any subsequent flooding increases stress and decreases seismicity. When the season dries up and there's less water, the weight on the Earth's crust decreases and this can lead to microseismicity.

As of now, the majority of the connection between earthquakes and climate change is with microseismicity, or tiny earthquakes, which have magnitudes of less than zero and are so small that humans can't feel them. While additional connections can be made, such as impacts from pumping groundwater during droughts, connections between larger earthquakes and climate change have largely not been proven, though the rapid movement of glaciers has also been shown to cause glacial earthquakes.

EXTREME TEMPERATURES

Climate change can lead to both extreme high temperatures and extreme low temperatures. The connection with extreme high temperatures is more intuitive — greenhouse gases are being trapped in the atmosphere and this leads to warming. However, the connection to extreme low temperatures can be harder for some people to make. Lower temperatures in some regions are a result of the polar vortex being warmer, causing it to weaken and dip down further than it normally would, bringing with it colder temperatures. This is further exacerbated by impacts to the jet stream that change the pattern of where and when hot and cold temperatures typically occur. These two combined have led to hotter summers and harsher winters in some areas.

LANDSLIDES

Landslides are connected to rainfall as well. Due to climate change's impact on evaporation and precipitation, more frequent and intense rainfall events can lead to more landslides.

DROUGHTS

On the other side of the water spectrum are droughts, though they result from the

same process. Droughts are a natural part of the climate cycle, but climate change is making them more frequent, severe, and prolonged. While higher levels of evaporation lead to eventual severe rainfall, in some regions, this shift means drier conditions due to the loss of the evaporated water, which can lead to drought and dried out soils and vegetation. With climate change, places that are traditionally dry are becoming drier through the higher levels of evaporation and places that are traditionally wet are becoming wetter through the higher levels of rainfall that result.

WILDFIRES

Wildfires are a consequence of the drier conditions caused by climate change in some areas. The wildfire season is much longer than in previous years and the number of wildfires per season has tripled. Severe heat and drought provide fuel for fires through drier soils and vegetation that is more flammable. Additionally, due to warmer temperatures, snowpacks are melting earlier, meaning that forests are drier for longer periods of time and increasingly at risk of fires.

VOLCANIC ACTIVITY

Similar to earthquakes, volcanic activity has a less direct relationship with climate change. Volcanoes do contribute to changes in Earth's atmosphere through spewing CO2, aerosols, ash, and metals into the atmosphere, but they have a net cooling effect. This is due to the impact that aerosols have on cooling versus warming.

On the flip side, there is some evidence to suggest that climate change could increase eruptions in a similar way that they impact seismic activity, through lessening the pressure on the Earth's surface. In this case, this decreased pressure causes more hot magma to come in contact with aquifers, which triggers eruptions. Additionally, melting glaciers are exposing more volcanoes.

Q&A | ELEMENT C: Mitigation Strategy | C2-a.

Q: Does the plan contain a narrative description or a table/list of their participation activities? (Requirement 44 CFR § 201.6(c)(3)(ii))

A: See **Floodplain Ordinance** below.

Floodplain Ordinance

City of Hermosa Beach
NFIP Substantial Improvement/Damage Calculation For Residential Construction

Please contact the City of Hermosa Beach if you have questions about the substantial improvement and substantial damage requirements. Your building may have to be brought into compliance with the floodplain management requirements for new construction.

To be considered "substantially damaged," a building in a flood hazard area must meet a set of criteria and comply with certain requirements.
FEMA uses the term "substantial damage" to trigger a review of compliance with building code requirements applied to damaged buildings in flood hazard areas.

Those requirements are:

1. The current City of Hermosa Beach floodplain management regulations; and
2. The flood provisions of the International Codes.

Substantial damage does not trigger all building code requirements for new construction. Buildings must comply with flood provisions when the cost of restoring the structure to its previously damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Communities participating in the National Flood Insurance Program are required to determine if any damage meets the criteria for Substantial Damage when the damage is to a structure located in a mapped 100-year floodplain.

1. This notice/worksheet is required for projects being remodeled within a Special Flood Hazard Area or City Floodplain Overlay Zone.
2. You must attach information from either the County of Los Angeles Assessor or independent appraiser showing the current value of the structure only.
3. You must attach a detailed estimate of the cost of construction with supporting documentation as required.
4. You must fill out the Substantial Improvement Worksheet contained in this document. The City will utilize the FEMA Substantial Damage Estimator (SDE) to perform Substantial Damage Determinations.
5. Unknown conditions that are uncovered during the work and increase the value of the work are not exempt from the 50% limit for substantial improvements. Stop work if you find that increases in the construction costs

1

are going over the 50% limit and contact the City Floodplain Administrator for assistance.

6. The City of Hermosa Beach is a participating community in the National Flood Insurance Program and your information, project, estimates, and worksheets are subject to FEMA review.
7. The City of Hermosa Beach has the jurisdiction to determine if your values and estimates are acceptable.

City of Hermosa Beach

Requirements for Permit Applications

Substantial Improvements/Damage

Applications for permits to work on existing buildings that are located in Special Flood Hazard Areas must include the following:

- Current photographs of the exterior (front, rear, sides)
- If your building has been damaged, include photographs of the interior and exterior; provide pre-damage photos of the exterior, if available
- Detailed description of the proposed improvement (rehabilitation, remodeling, addition, etc.) or repairs.
- Cost estimate of the proposed improvement or the cost estimate to repair the damaged building to its before-damage condition.
- Elevation certificate or elevation survey.
- You may submit a market value appraisal prepared by a licensed professional appraiser or we will use the tax assessment value of the building.
- Owner's affidavit (signed and dated).
- Contractor's affidavit (signed and dated).

Costs for Substantial Improvements and Repair of Substantial Damage

Included Costs

Items that must be included in the costs of improvement or costs to repair are those that are directly associated with the building. The following list of costs that must be included is not intended to be exhaustive, but characterizes the types of costs that must be included:

- Materials and labor, including the estimated value of donated or discounted materials and owner or volunteered labor
- Site preparation related to the improvement or repair (foundation excavation, filling in basements)
- Demolition and construction debris disposal
- Labor and other costs associated with demolishing, moving, or altering building components to accommodate improvements, additions, and making repairs
- Costs associated with complying with any other regulation or code requirement that is triggered by the work, including costs to comply with the requirements of the Americans with Disabilities Act (ADA)
- Costs associated with elevating a structure to an elevation that is lower than the BFE
- Construction management and supervision
- Contractor's overhead and profit
- Sales taxes on materials
- Structural elements and exterior finishes, including:
  * Foundations (e.g., spread or continuous foundation footings, perimeter walls, chain walls, pilings, columns, posts, etc.)
  * Monolithic or other types of concrete slabs
  * Bearing walls, tie-beams, trusses
  * Joists, beams, subflooring, framing, ceilings
  * Interior non-bearing walls
  * Exterior finishes (e.g., brick, stucco, siding, painting, and trim)
- Structural elements and exterior finishes (cont.):
  * Windows and exterior doors
  * Roofing, gutters, and downspouts
  * Hardware
  * Attached decks and porches
- Interior finish elements, including:
  * Floor finishes (e.g., hardwood, ceramic, vinyl, linoleum, stone, and wall-to-wall carpet over subflooring)
  * Bathroom tiling and fixtures
  * Wall finishes (e.g., drywall, paint, stucco, plaster, paneling, and marble)
  * Built-in cabinets (e.g., kitchen, utility, entertainment, storage, and bathroom)
  * Interior doors
  * Interior finish carpentry
  * Built-in bookcases and furniture
  * Hardware
  * Insulation
- Utility and service equipment, including:
  * HVAC equipment
  * Plumbing fixtures and piping
  * Electrical wiring, outlets, and switches
  * Light fixtures and ceiling fans
  * Security systems
  * Built-in appliances
  * Central vacuum systems
  * Water filtration, conditioning, and re-circulation systems

4

Excluded Costs

Items that can be excluded are those that are not directly associated with the building. The following list characterizes the types of costs that may be excluded:

- Clean-up and trash removal
- Costs to temporarily stabilize a building so that it is safe to enter to evaluate required repairs
- costs to obtain or prepare plans and specifications
- Land survey costs
- Permit fees and inspection fees
- Carpeting and re-carpeting installed over finished flooring such as wood or tiling
- Outside improvements, including landscaping, irrigation, sidewalks, driveways, fences, yard lights, swimming pools, pool enclosures, and detached accessory structures (e.g., garages, sheds, and gazebos)
- Costs required for the minimum necessary work to correct existing violations of health, safety, and sanitary codes
- Plug-in appliances such as washing machines, dryers, and stoves

Owner's Affidavit: Substantial Improvement or Repair of Substantial Damage

Property Address:

Parcel ID Number:

Owner's Name:

Owner's Address/Phone:

Contractor:

Contractor's License Number:

Date of Contractor'sEstimate:

I hereby attest that the description included inthe permitapplication forthework onthe existingbuildingthat islocated at the property identified above, is all of the work that will be done, includingallimprovements,rehabilitation,remodeling,repairs,additions,andany other form of improvement.

Ifurther attest thatIhaverequested the above-identified contractortoprepare acost estimate for all of the work, including the contractor's overhead and profit.

I acknowledge that if, during the course of construction, I decide to add more work or to modifythe workdescribed, thatthe City of Hermosa Beach willre-evaluateits comparison of the costofwork tothemarketvalueofthebuildingtodetermineif theworkis a substantial improvement. Such re-evaluationmayrequire revisionofthepermitandmay subjectthe property to additional requirements.

I also understand that I am subject toenforcementactionand/orfines if inspection of the propertyrevealsthatIhavemadeorauthorizedrepairsorimprovementsthatwerenot included in the descriptionofwork and the cost estimateforthatworkthatwere the basisfor issuance of a permit.

Owner's Signature:

Date:

Notarized:

6

Contractor's Affidavit: Substantial Improvement or Repair of Substantial Damage

Property Address:

Parcel ID Number:

Owner's Name:

Owner's Address/Phone:

Contractor:

Contractor's License Number:

Date of Contractor'sEstimate:

I hereby attest that I have personally inspected the building located at the above-referenced address and discussed the nature and extent of the work requested by the owner, including all improvements, rehabilitation, remodeling, repairs, additions, and any other form of improvement.

At the request of the owner, I have prepared a cost estimate for all of the improvement work requested by the owner and the cost estimate includes, at a minimum, the cost elements identified by the City of Hermosa Beach that are appropriate for the nature of the work. If the work is repair of damage, I have prepared a cost estimate to repair the building to its pre-damaged condition.

I acknowledge that if, during the course of construction, the owner requests more work or modification of the work described in the application, that a revised cost estimate must be provided to the City of Hermosa Beach, which will re-evaluate its comparison of the cost of work to the market value of the building to determine if the work is a substantial improvement. Such re-evaluation may require revision of the permit and may subject the property to additional requirements.

I also understand that I am subject to enforcement action and/or fines if inspection of the property reveals that I have made or authorized repairs or improvements that were not included in the description of work and the cost estimate for that work that were the basis for issuance of a permit from the City.

Contractor's Signature:

Date:

Notarized:

7

Substantial Improvement Worksheet for Floodplain Construction

(for reconstruction, rehabilitation, addition, or other improvements, and repair of damage from any cause)

Property Owner: _____

Address: _____

Permit No.: _____

Location: _____

Description of improvements: _____

Present Market Value of structure ONLY (market appraisal or adjusted assessed value, BEFORE improvement, or if damaged, before the damage occurred), not including land value: $ _____

Cost of Improvement - Actual cost of the construction** (see items to include/exclude)

Include volunteer labor and donated supplies.

$ _____

Ratio = $\frac{\text{Cost of Improvement (or Cost to Repair)}}{\text{Market Value}} \times 100$ _____ %

If ratio is 50 percent or greater (**Substantial Improvement**), entire structure including the existing building must be elevated to the base flood elevation (BFE) and all other aspects brought into compliance.

Important Notes:

1. Review cost estimates to ensure that all appropriate costs are included or excluded.
2. If a residential pre-FIRM building is determined to be substantially improved, it must be elevated to or above the BFE. If a non-residential pre-FIRM building is substantially improved, it must be elevated or dry floodproofed to the BFE.
3. Proposals to repair damage from any cause must be analyzed using the formula shown above.
4. Any proposed improvements or repairs to a post-FIRM building must be evaluated to ensure that the improvements or repairs comply with floodplain management regulations and to ensure that the improvements or repairs do not alter any aspect of the building that would make it non-compliant.
5. Alterations to and repairs of designated historic structures may be granted a variance or be exempt under the substantial improvement definition) provided the work will not preclude continued designation as a "historic structure."
6. Any costs associated with directly correcting health, sanitary, and safety code violations may be excluded from the cost of improvement. The violation must have been officially cited prior to submission of the permit application.

Determination completed by: _____

Date: _____

10

DEPARTMENT OFHOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

ADJUSTER PRELIMINARY DAMAGE ASSESSMENT

NATIONAL FLOOD INSURANCEPROGRAM

O.M.B. No. 1660-0005
Expires September 30,2010

Privacy Act Statement

The information requested is necessary to process the subject loss. The authority to collect the information is Title 42, U.S. Code, Section 4001 to 4028. It is voluntary on your part to furnish the information. However, omission of an item may preclude processing of the form. The information will not be disclosed outside of the Federal Emergency Management Agency, except to the servicing agent, acting as the government's fiscal agent; to claims adjusters to enable them to confirm coverage and the location of insured property; to certain Federal, State, and Local Government agencies for determining eligibility for benefits and for verification ofnonduplication of benefits; to the Department of Justice forJ>UIPOses of litigation or as required by law; and to State and Local agencies for acquisition and relocation related projects, cODBistent with the National Flood Insurance Program and consistent with the routine uses described in the program's system of record. Failure by you to provide some or all of the information may result in delay in processing or denial of this claim and/or application.

Paperwork Borden Disclosure Notice

Public reporting burden for this form is estimated to average 15 minutes per response. The burden estimate includes the time, effort or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to the Mitigation Division or its agent. You are not required to respond to this collection of information unless a currently valid 0MB control number and expiration date is displayed in the upper right corner of the these forms. Send comments regarding the accuracy of the burden estimate and suggestions for reducing the burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, S.W., Washington, OC 20472, and Paperwork Reduction Project (1660-0005). NOTE: **Do not send your completed form to this address. Send completed forms to: NFIP Bureau & Statistical A2ent, Certification Coordinator, P.O. box 310,Lanham, MD** 10703-

WYO COMPANY	DATE OFLOSS	ADJUSTER	FICO NUMBER

This form is to be used for advisory imposes in helping FEMA and communities identify potential substantially damaged buildings. The adjuster will use "replacement cost" when completing this form; however, the community is required under the National Flood Insurance Program to use "market value" in determining substantial damage.

PLEASE PRINT LEGIBLY

POLICY HOLDER	POLICY NUMBER
PROPERTY ADDRESS *(Include zipcode)*	

PROBABLEREPAIRCOST	BUILDING REPLACEMENT COST VALUE	BUILDINGACTUAL CASHVALUE
	$	$

POLICY HOLDER	POLICY NUMBER
PROPERTY ADDRESS *(Include zipcode)*	

PROBABLEREPAIRCOST	BUILDING REPLACEMENTCOST VALUE	BULIDING ACTUAL CASH VALUE
	$	$

POLICY HOLDER	POLICY NUMBER
PROPERTY ADDRESS *(Include zipcode)*	

...PROBABLE REPAIR COST	BUILDING REPLACEMENT COST VALUE	BUILDINGACTUAL CASHVALUE
	$	$

••This is an estimate of the cost to repair the building to its pre-flood condition.

FEMA Form B1-109,0CT07 REPLACES ALLPREVIOUSEDITIONS. F-674

8