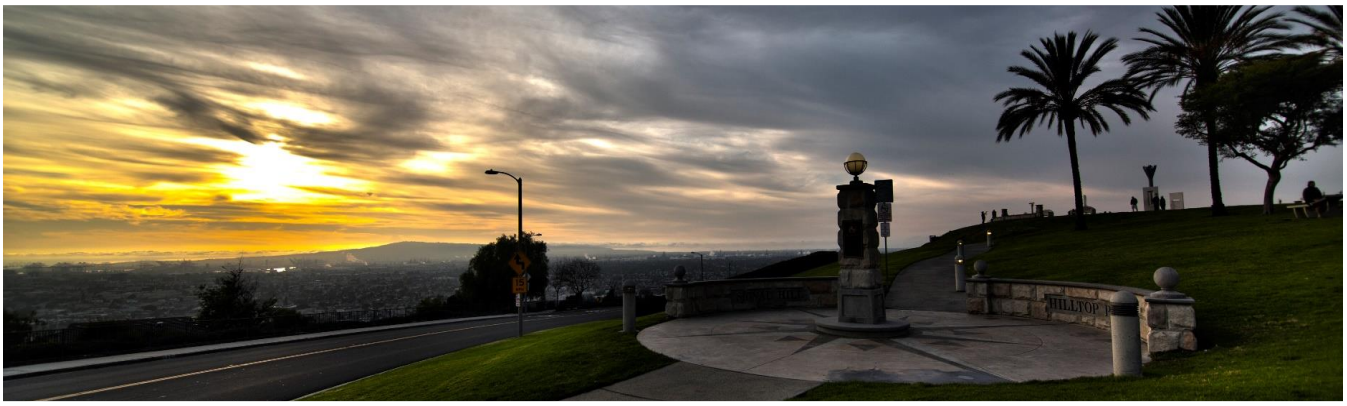
September 29, 2025

Hazard Mitigation Plan



emergency planning consultants

CITY OF SIGNAL HILL
Est. 1924
A BEACON OF PROGRESS

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 Signal Hill		
Yvette Aguilar	Community Services	Director
Thomas Bekele	Public Works	Director
Wayne Byerley	Police	Chief of Police
Carl Charles	Police	Former Interim Chief of Police
Grissel Chavez	Administration	Deputy City Manager
Sharon Del Rosario	Finance	Director
Colleen Doan	Community Development	Director
Joe Hoefgen	Administration	Interim City Manager
Desiree Jimenez	Public Works	Public Management Analyst
Brian Leyn	Police	Former Captain
Rebecca Lopez, Chair	Police	Emergency Management Coordinator
Carlos Luis	Community Development	Planning Manager
Donald Moreau	Police	Senior Officer
Karla Santillan	Police	Support Services Manager
Emergency Planning Consultants		
Carolyn J. Harshman	Emergency Planning Consultants	President

Acknowledgements

City of Signal Hill City Council

- ✓ Tina L. Hansen, Mayor
- ✓ Lori Y. Woods, Vice Mayor
- ✓ Robert D. Copeland, Council Member
- ✓ Keir Jones, Council Member
- ✓ Edward H. J. Wilson, Council Member

Point of Contact

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Consulting Services

Emergency Planning Consultants

- ✓ Planning Director: Carolyn J. Harshman, CEM
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Mapping

The maps in this plan were provided by the City of Signal Hill, 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 Signal Hill 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:

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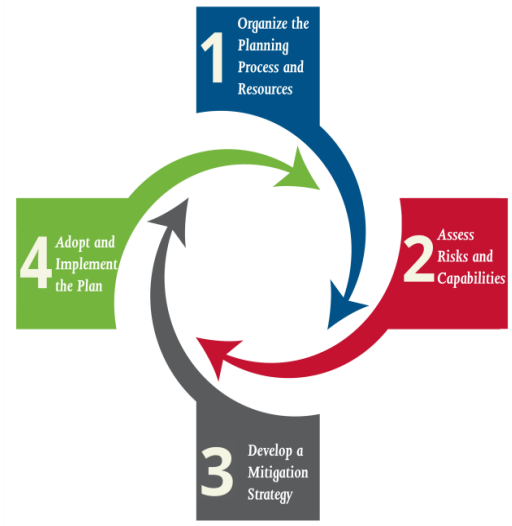
Executive Summary - English

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. This is an update to the City's 2018 Hazard Mitigation Plan.

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.

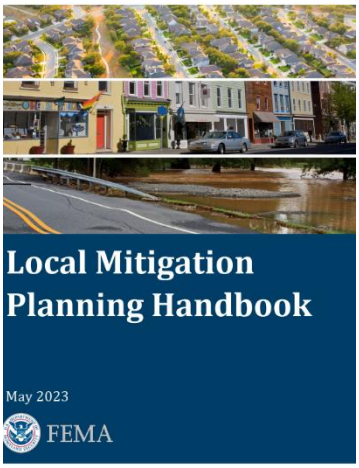


FEMA's mitigation website recommends 4 steps in the overall planning process: Step #1 is to organize the planning process and resources which includes creation of a Planning Team to assist with research and writing as well as the development of a Community Outreach Strategy. Step #2 is to assess risks 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, risk assessment, vulnerability and impact assessment, capability assessment, mitigation strategy, plan maintenance, plan review-adoption-approval.

The City of Signal Hill'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, vulnerability and impact 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, drought, and windstorm.

Signal Hill's geographical setting, climate, demographic trends, economic conditions, transportation infrastructure, community assets, and efforts to address climate change and environmental justice were taken into consideration during the planning and writing of the hazard mitigation plan. The city is primarily residential and light industrial. According to the 2024 Annual Comprehensive Financial Report, the largest employers in the city are Home Depot, Costco Wholesale, Office Depot, and Target.



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 Community Services, Public Works, Police, Administration, Finance, and Community Development. The Team met a total of five 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, 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.

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 Signal Hill 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 Signal Hill. 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.

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 2022, followed by press releases, social media postings, solicitations to participate in a public opinion survey, posting of a hazard mitigation overview video, briefings at various public forums, and presentations to a spectrum of city-sponsored volunteer

groups. Most recently, the Executive Summary, video, survey, press releases, and social media postings have been translated into Spanish and Cambodian.

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.

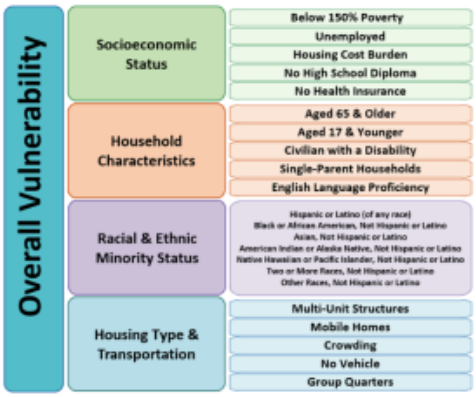
Executive Summary - Spanish

La Ciudad de Signal Hill se complace en compartir el progreso de la actualización del Plan de Mitigación de Riesgos de 2018 de la Ciudad. El plan de 2018 identificó riesgos como terremotos, sequías y tormentas de viento, por lo que la primera tarea de la actualización del plan fue reevaluar las amenazas y los impactos asociados con esos riesgos. El mapeo de la ubicación de estos riesgos fue importante, ya que las instalaciones críticas se consideran al desarrollar elementos de acción de mitigación para minimizar o eliminar las amenazas asociadas con los riesgos. Antes de formar un Equipo de planificación, el Ayuntamiento fue informado en noviembre de 2022 sobre el próximo proceso de planificación. El Equipo de planificación incluyó a representantes de los departamentos de la Ciudad responsables de mantener las instalaciones públicas y regular el desarrollo. Después de la preparación del primer borrador del plan, se anunció la disponibilidad del plan al público y las partes interesadas. Más allá del anuncio del primer borrador del plan, las actividades de comunicación a la comunidad también incluyeron folletos, una descripción general de la mitigación de riesgos y una encuesta sobre preparación y mitigación. El Equipo de planificación se encuentra ahora en el proceso de realizar una segunda campaña de comunicación a la comunidad para abordar las nuevas normas de FEMA para la preparación de planes de mitigación de riesgos. La segunda campaña se ha ampliado para incluir materiales traducidos al español y al camboyano y actualizaciones del video y la encuesta.

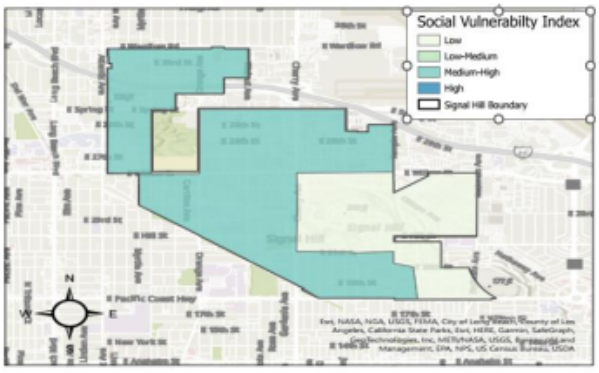
En 2023, FEMA actualizó sus regulaciones relacionadas con la preparación de planes locales de mitigación de riesgos. Las nuevas regulaciones agregaron cuatro áreas de enfoque: 1) impactos del cambio climático en los riesgos, 2) análisis y ubicación de las poblaciones socialmente vulnerables, 3) impactos específicos de los riesgos en las poblaciones socialmente vulnerables y 4) una estrategia de comunicación a la comunidad más sólida para informar e involucrar al público y las partes interesadas.

Para responder al nuevo requisito con respecto a la identificación y comunicación a las poblaciones socialmente vulnerables, el Equipo de planificación utilizará una herramienta en línea de los U.S. Centers for Disease Control (Centros para el Control y Prevención de Enfermedades de EE.UU., CDC) para identificar la ubicación y la clasificación de la población socialmente vulnerable de la comunidad. Los CDC han identificado 16 atributos sociales que se utilizan para determinar los porcentajes de vulnerabilidad social. El Índice de vulnerabilidad social de los CDC fue diseñado para ayudar a los administradores de emergencias a identificar y mapear las comunidades que probablemente necesitarán apoyo antes, durante y después de un desastre. A continuación, se muestra un gráfico de los 16 atributos sociales de la vulnerabilidad social y un mapa que muestra la distribución de la vulnerabilidad social en Signal Hill:

Atributos sociales de la vulnerabilidad social



Vulnerabilidad Social de Signal Hill



Executive Summary - Cambodian

សេចក្តីសង្ខេបសំខាន់

ផែនការកាត់បន្ថយគ្រោះថ្នាក់ (Hazard Mitigation Plans, HMP)
គឺជាក្របខ័ណ្ឌយុទ្ធសាស្ត្រដែលត្រូវបានបង្កើតឡើងដើម្បីកាត់បន្ថយការបាត់បង់អាយុជីវិត
និងទ្រព្យសម្បត្តិដោយកាត់បន្ថយផលប៉ះពាល់នៃគ្រោះមហន្តរាយ។ គោលដៅចម្បងរបស់ HMP
គឺដើម្បីកំណត់អត្តសញ្ញាណគ្រោះថ្នាក់ដែលអាចកើតមាន វាយតម្លៃហានិភ័យរបស់ពួកគេ
និងអនុវត្តយុទ្ធសាស្ត្ររយៈពេលវែងដើម្បីកាត់បន្ថយផលប៉ះពាល់របស់វាលើសហគមន៍មួយ។
ផែនការដ៏ទូលំទូលាយនេះពាក់ព័ន្ធនឹងដំណើរការជាប្រព័ន្ធនៃការកំណត់អត្តសញ្ញាណគ្រោះថ្នាក់
ការវាយតម្លៃភាពងាយរងគ្រោះ និងការបង្កើតសកម្មភាពដើម្បីកាត់បន្ថយការខូចខាត
និងការខានដែលបណ្តាលមកពីព្រឹត្តិការណ៍គ្រោះធម្មជាតិ។

មុនពេលយើងចូលទៅក្នុងសេចក្តីលម្អិតនៃដំណើរការរៀបចំផែនការ
វាមានសារៈសំខាន់ណាស់ក្នុងការកំណត់ការបន្ទរបន្ថយគ្រោះថ្នាក់ជាសកម្មភាពដែលបានធ្វើឡើងដើម្បីកាត់បន្ថយ
ឬលុបបំបាត់ការគំរាមកំហែងដែលទាក់ទងនឹងគ្រោះថ្នាក់។

នៅឆ្នាំ 2019 វិទ្យាស្ថានជាតិនៃវិទ្យាសាស្ត្រអគារបាន (National Institute of Building Sciences)
ចេញការធ្វើបច្ចុប្បន្នភាពចំពោះរបាយការណ៍សំខាន់របស់ខ្លួន
"ការការពារទុកការកាត់បន្ថយគ្រោះធម្មជាតិ"។
ការសិក្សាបានវិភាគសមាមាត្រតម្លៃអត្ថប្រយោជន៍នៃសកម្មភាព
កាត់បន្ថយជាច្រើន រួមទាំងការធ្វើផែនការកាត់បន្ថយ
និងការបង្កើតឡើងវិញ។ ការរកឃើញនេះបានបង្ហាញពីផល
ចំណេញយ៉ាងខ្លាំងលើការវិនិយោគ។
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នដុល្លារលើការខាតបង់ដែលជៀសវាងនាពេលអនាគត។

គោលទំព័រកាត់បន្ថយរបស់ FEMA ផ្តល់អនុសាសន៍ 4
ជំហានក្នុងដំណើរការធ្វើផែនការទាំងមូល៖ ជំហានទី #1
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ការស្រាវជ្រាវ និងការសរសេរ
ក៍ដូចជាការបង្កើតយុទ្ធសាស្ត្រផ្សព្វផ្សាយសហគមន៍។ ជំហានទី 2
គឺការវាយតម្លៃហានិភ័យ និងសមត្ថភាព
រួមទាំងការវាយតម្លៃហានិភ័យ និងភាពងាយរងគ្រោះ
ព្រមទាំងការពិនិត្យឡើងវិញនូវសមត្ថភាពរបស់ទីក្រុងក្នុងការ
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ន្ថយ។ ជំហានទី 4 គឺដើម្បីយល់ព្រម
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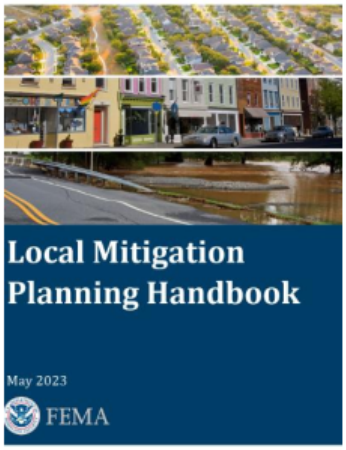
យ Cal OES និង FEMA និងការយល់ព្រមដោយក្រុមប្រឹក្សាក្រុង។

ឧបករណ៍ដែលប្រើដើម្បីវិនិច្ឆ័យភាពគ្រប់គ្រាន់នៃផែនការត្រូវបានសំដៅលើជាឧបករណ៍ត្រួតពិនិត្យផែនការ (Plan Review Tool, PRT)។ នៅក្នុង PRT
តម្រូវការផែនការត្រូវបានបែងចែកទៅជាធាតុរួមបញ្ចូលទាំងដំណើរការធ្វើផែនការ
ការកំណត់អត្តសញ្ញាណគ្រោះថ្នាក់ ការវាយតម្លៃហានិភ័យ ការវាយតម្លៃភាពងាយរងគ្រោះនិងផលប៉ះពាល់
ការវាយតម្លៃសមត្ថភាព យុទ្ធសាស្ត្រកាត់បន្ថយ ការថែរក្សាផែនការ ការត្រួតពិនិត្យ-យល់ព្រម-អនុម័តផែនការ។

ផែនការរបស់ទីក្រុង Signal Hill ត្រូវបានបង្ហាញជាប្រាំពីរជំពូក៖ ដំណើរការធ្វើផែនការ
កម្រងព័ត៌មានផ្ទាល់ខ្លួនសហគមន៍ ការវាយតម្លៃហានិភ័យ ការវាយតម្លៃភាពងាយរងគ្រោះនិងផលប៉ះពាល់
ការវាយតម្លៃសមត្ថភាព យុទ្ធសាស្ត្រកាត់បន្ថយ ការថែរក្សាផែនការ ការត្រួតពិនិត្យ-យល់ព្រម-អនុម័តផែនការ។
ជំពូកស្តីពីហានិភ័យ ភាពងាយរងគ្រោះ
និងផលប៉ះពាល់ផ្តោតលើព្រឹត្តិការណ៍គ្រោះថ្នាក់ដែលបង្កការគំរាមកំហែងខ្លាំងបំផុតដល់សហគមន៍។
ជំពូកស្តីពីយុទ្ធសាស្ត្រកាត់បន្ថយកំណត់នូវគោលនយោបាយ និងគម្រោងបច្ចុប្បន្ន និងអនាគត ដើម្បីកាត់បន្ថយ
ឬលុបបំបាត់ការគំរាមកំហែងដែលទាក់ទងនឹងគ្រោះថ្នាក់ជាអាទិភាព ដោយរួមបញ្ចូលទាំងការរញ្ជួយដី
គ្រោះរាំងស្ងួត និងខ្យល់ព្យុះ។

ការកំណត់ភូមិសាស្ត្រ អាកាសធាតុ និន្នាការប្រជាសាស្ត្រ លក្ខខណ្ឌសេដ្ឋកិច្ច ហេដ្ឋារចនាសម្ព័ន្ធដ៏កជញ្ជួន
ទ្រព្យសម្បត្តិសហគមន៍ និងការខិតខំប្រឹងប្រែងដើម្បីដោះស្រាយការប្រែប្រួលអាកាសធាតុ
និងយុត្តិធម៌ផ្នែកបរិស្ថានរបស់ Signal Hill ត្រូវបានយកមកពិចារណាក្នុងអំឡុងពេលរៀបចំផែនការ
និងការសរសេរផែនការកាត់បន្ថយគ្រោះថ្នាក់។ ទីក្រុងជាចម្បងសម្រាប់ល់នៅដ្ឋាន និងឧស្សាហកម្មធុនស្រាល។
យោងតាមផែនការទូទៅ និយោជកធំជាងគេនៅក្នុងទីក្រុងគឺ Office Depot, Costco, និង Oil Well Service Company។



ការអភិវឌ្ឍន៍នៃផែនការនេះត្រូវបានដឹកនាំដោយមគ្គុទ្ទេសក៍គោលនយោបាយ
រៀបចំផែនការកាត់បន្ថយមូលដ្ឋានឆ្នាំ (Local Mitigation Planning Policy Guide) 2023 របស់ FEMA
និងសៀវភៅណែនាំរៀបចំផែនការកាត់បន្ថយមូលដ្ឋានឆ្នាំ (Local Mitigation Planning Handbook) 2023។
ឯកសារមានគោលនយោបាយផ្លូវការដែលបានធ្វើបច្ចុប្បន្នភាពលើ
និងការបកស្រាយអំពីរូបចម្លាក់ដែលអាចអនុវត្តបាន
និងបទប្បញ្ញត្តិរៀបចំផែនការកាត់បន្ថយនៅក្នុងបទបញ្ញត្តិសហព័ន្ធ 44 (44 Code of Federal Regulations (CFR))
ដែលត្រូវបានគេស្គាល់ជាទូទៅថាជាច្បាប់កាត់បន្ថយគ្រោះមហន្តរាយឆ្នាំ 2000 (Disaster Mitigation Act of 2000)។ FEMA
គឺជាអង្គភាពតែមួយគត់ដែលត្រូវបានអនុញ្ញាតឱ្យអនុម័តផែនការកាត់បន្ថយ
។

ក្នុងការអភិវឌ្ឍន៍ HMP ក្រុមរៀបចំផែនការត្រូវបានបង្កើតឡើងដើម្បីអនុវត្តការវិភាគលម្អិតអំពីហានិភ័យ
និងបញ្ហាប្រឈមពិសេសរបស់សហគមន៍។ ក្រុមការងាររួមមានអ្នកតំណាងនាយកដ្ឋានមកពីសេវាសហគមន៍
មុខងារសាធារណៈ ប៉ូលីស រដ្ឋបាល ហិរញ្ញវត្ថុ និងការអភិវឌ្ឍន៍សហគមន៍។
ក្រុមការងារបានជួបប្រជុំសរុបចំនួនប្រាំដងជាមួយអ្នកប្រឹក្សាយោបល់
និងបានរួមចំណែកដល់ផែនការពង្រាងដំបូង។ បន្ថែមពីលើឯកសារៀបចំផែនការនេះ ក្រុមការងារបានបង្កើត
និងបានចូលរួមយ៉ាងសកម្មនៅក្នុងយុទ្ធសាស្ត្រផ្សព្វផ្សាយសហគមន៍យ៉ាងខ្លាំងក្លា។
ដូចដែលបានចង្អុលបង្ហាញនៅក្នុងផែនការ មនុស្សគឺជាទ្រព្យសម្បត្តិដ៏សំខាន់បំផុតដែលត្រូវការការការពារ។

ដំណើរការរៀបចំផែនការពាក់ព័ន្ធនឹងការសហការគ្នារវាងរដ្ឋាភិបាលក្នុងតំបន់ និងស្រុកពិសេស អង្គការអាជីវកម្ម
អ្នករស់នៅ និងភាគីពាក់ព័ន្ធផ្សេងៗទៀត ដើម្បីប្រមូលទិន្នន័យ វាយតម្លៃភាពងាយរងគ្រោះ
និងផ្តល់អាទិភាពដល់សកម្មភាពកាត់បន្ថយ។
ដំណើរការនេះបានធានាថាសហគមន៍ត្រូវបានរៀបចំកាន់តែប្រសើរឡើងដើម្បីឆ្លើយតប
និងស្តារឡើងវិញពីគ្រោះមហន្តរាយ ខណៈពេលដែលបង្កើនភាពធន់ទាំងស្រុង។

ការវាយតម្លៃហានិភ័យ ភាពងាយរងគ្រោះ
និងផលប៉ះពាល់ពាក់ព័ន្ធនឹងការវាយតម្លៃដ៏ទូលំទូលាយនៃព្រឹត្តិការណ៍គ្រោះថ្នាក់ដែលអាចបណ្តាលឱ្យមានការខូច
ខាតយ៉ាងធ្ងន់ធ្ងរ និងការបាត់បង់អាយុជីវិត។ ដំណើរការវាយតម្លៃពាក់ព័ន្ធនឹងដំហានសំខាន់ៗចំនួនបួន៖
ការកំណត់អត្តសញ្ញាណគ្រោះថ្នាក់ ការវិភាគព័ត៌មានអំពីព្រឹត្តិការណ៍គ្រោះថ្នាក់ បញ្ជីសារពើភណ្ឌទ្រព្យសម្បត្តិ
និងការប៉ាន់ប្រមាណនៃការបាត់បង់ធនធានមនុស្ស និងសេដ្ឋកិច្ចធ្ងន់ធ្ងរ។

សរុបមក ការវាយតម្លៃបានគូសបញ្ជាក់ពីសារៈសំខាន់នៃការយល់ដឹង និងការរៀបចំសម្រាប់គ្រោះថ្នាក់ផ្សេងៗ
ដើម្បីកាត់បន្ថយផលប៉ះពាល់នៃគ្រោះថ្នាក់ទាំងនោះលើប្រជាជន រចនាសម្ព័ន្ធ សេដ្ឋកិច្ច
និងធនធានដ៏មានតម្លៃរបស់សហគមន៍។ វិធីសាស្ត្រដ៏ទូលំទូលាយនេះធានាថា Signal Hill
និងត្រូវបានបំពាក់ឱ្យកាន់តែប្រសើរឡើង ដើម្បីដោះស្រាយគ្រោះអាសន្នដែលមានសក្តានុពល
និងការពារអ្នករស់នៅ និងអាជីវកម្មរបស់ខ្លួនពីព្រឹត្តិការណ៍គ្រោះថ្នាក់នាពេលអនាគត។ លើសពីនេះទៀត
ការវាយតម្លៃពិភាក្សាអំពីចំនួនប្រជាជនដែលងាយរងគ្រោះក្នុងសង្គម និងសហគមន៍ដែលបានទទួលសេវានៅ
Signal Hill។
ការសិក្សាលើប្រធានបទនេះជាទូទៅកំណត់ប្រភេទចំនួនប្រាំមួយជាសូចនាករនៃភាពងាយរងគ្រោះសង្គម៖
ស្ថានភាពសេដ្ឋកិច្ចសង្គម អាយុ ភេទ ពូជសាសន៍ និងជនជាតិភាគតិច ជំនាញភាសាអង់គ្លេស និងបញ្ហាវេជ្ជសាស្ត្រ
និងពិការភាព។ ទាំងនេះគឺជាកត្តាដែលត្រូវបានជ្រើសរើសដោយក្រុមផែនការសម្រាប់ពិចារណានៅក្នុងផែនការ។

ពេញមួយដំណើរការធ្វើផែនការទាំងមូល ក្រុមការងាររៀបចំផែនការបានរក្សាសាធារណៈជន
និងអ្នកពាក់ព័ន្ធបានជូនដំណឹងអំពីវឌ្ឍនភាព និងឱកាសរបស់ក្រុមការងារក្នុងការផ្តល់ធាតុចូល។
សកម្មភាពផ្សព្វផ្សាយទាំងនេះបានចាប់ផ្តើមជាមួយនឹងក្រុមប្រឹក្សាក្រុងក្នុងឆ្នាំ 2022
បន្ទាប់មកដោយការផ្សព្វផ្សាយព័ត៌មាន ការបង្ហោះក្នុងប្រព័ន្ធផ្សព្វផ្សាយសង្គម
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និងការបង្ហោះក្នុងប្រព័ន្ធផ្សព្វផ្សាយសង្គមត្រូវបានបកប្រែជាភាសាអេស្ប៉ាញ និងកម្ពុជា។

ផែនការនេះនឹងឆ្លងកាត់ការត្រួតពិនិត្យជាផ្លូវការដោយ Cal OES និង FEMA កំណត់ដោយការចេញ
ការយល់ព្រមដែលមិនទាន់បានអនុម័តរបស់ FEMA។
នៅពេលដែលផែនការនេះត្រូវបានអនុម័តដោយក្រុមប្រឹក្សាក្រុង FEMA
នឹងចេញលិខិតអនុម័តដែលនឹងផ្តល់សិទ្ធិទទួលបានរបស់ទីក្រុងសម្រាប់ជំនួយដែលទាក់ទងនឹងការកាត់បន្ថយស
ម្រាប់រយៈពេលប្រាំឆ្នាំ។ ក្រុមការងារផែនការនឹងចាប់ផ្តើមដំណើរការអនុវត្តផែនការភ្លាមៗ
ដែលនឹងបន្តជាមួយនឹងប្រពៃណីនៃការចែករំលែក និងបញ្ចូលធាតុចូលពីសាធារណៈជន និងភាគីពាក់ព័ន្ធ។

ច្បាប់ចម្លងពេញលេញនៃផែនការអាចត្រូវបានផ្តល់ជូនតាមការស្នើសុំ។ សូមធ្វើការសាកសួរទៅកាន់៖

Chapter 1: Planning Process

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. 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.

FEMA's 2023 Local Mitigation Planning Handbook includes the following definitions:

Hazard Mitigation is any sustained action taken to reduce or eliminate long-term risk to life and property from hazards.

Mitigation Planning is a community-driven process to help state, local, tribal and territorial governments plan for hazard risk. By planning for risk and setting a strategy for action, governments can reduce the negative impacts of future disasters.

Community Resilience is a community's ability to prepare for anticipated hazards, adapt to changing conditions and withstand and recover rapidly from disruptions. Activities such as disaster preparedness (which includes prevention, protection, mitigation, response and recovery) and reducing community stressors (the underlying social, economic and environmental conditions that can weaken a community) are key steps to resilience.

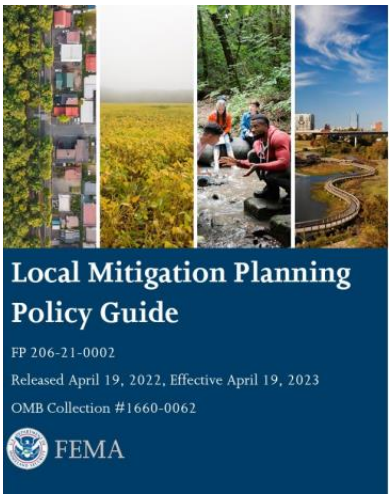
Community Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. The integrated network of assets, services and capabilities that make up community lifelines are used day-to-day to support recurring needs. Lifelines enable the continuous operation of critical government and business functions and are essential to human health and safety or economic security, as described in the National Response Framework, 4th Edition (October 28, 2019).

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, April 19, 2023.
- FEMA Local Mitigation Planning Handbook, May 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 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 (SB) 379, requires that the General Plan Safety Element address the hazards created or exacerbated by climate change. The 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.

Passed in 2006, Assembly Bill No. 2140 (AB 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 hazard mitigation plans (LHMPs) 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 (CDAA).

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 of Signal Hill must re-adopt the 2025 HMP itself and adopt the HMP into the General Plan Safety Element when 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 General Plan Safety Element.

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

- ✓ Has a current, FEMA-approved or approvable pending adoption (APA) HMP.
- ✓ Formally adopted the LHMP via resolution.
- ✓ Formally adopted the most current, approved HMP into the General Plan Safety Element via resolution.
- ✓ Included language within the General Plan Safety Element that references the HMP.
- ✓ Included a web link, appendix, or language within the Safety Element that directs the public to the most current, approved HMP in its entirety.
- ✓ E-mailed the link to the updated General Plan 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 Signal Hill 2025 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.

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 Planning Approach – Steps 1-4**, **Graphic 1.1** below.

Planning Approach

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

The four-step planning approach outlined on FEMA's Hazard Mitigation website is the process used by the Planning Team during the plan update.

Step 1: Organize the Planning Process and Resources
At the start, a state, local, tribal nation, or territorial 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 governments and tribal nations must include opportunities for the public to comment on the plan.

Step 2: Assess Risks and Capabilities
Next, the state, local, tribal nation, or territorial government needs to identify the characteristics and potential consequences of hazards. It is important to understand what geographic areas the hazards might impact and how people, property, or other assets might be vulnerable. 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 received proof of adoption from the governing body, the plan will be approved by FEMA. Next, 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, local, tribal nation 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 Participation** below.

National Flood Insurance Program

Established in 1968, the NFIP provides federally backed flood insurance to homeowners, renters, and businesses in communities that adopt and enforce floodplain management ordinances to reduce future flood damage.

NFIP Participation

The City of Signal Hill participates in NFIP and the FEMA FIRM maps for the City of Signal Hill were last updated September 26, 2008. The Building Official is designated as the floodplain administrator. Use this link to view the City's Floodplain Ordinance https://codelibrary.amlegal.com/codes/signalhill/latest/signalhill_ca/0-0-0-80898. A hard copy is also available in the **Attachments**.

According to FEMA, the City of Signal Hill is designated a No Special Flood Hazard Area (NSFHA). A Non-Special Flood Hazard Area (NSFHA) is an area that is in a moderate- to low-risk flood zone (Zones B, C, X Pre- and Post-FIRM). An NSFHA is not in any immediate danger from flooding caused by overflowing rivers or hard rains. According to the General Plan Safety Element, Signal Hill is not subject to flood hazards. Only a small area along the city's southwestern boundary is designated as Zone X on the Federal Emergency Management Agency's Flood Insurance Rate Map, indicating no major flood risk. The remainder of the City is not zoned. Accordingly, it is concluded that there are no special flood hazard areas in the City as shown on **Map 1.1**.

Map 1.1: Flood Hazards
(Source: General Plan Safety Element)

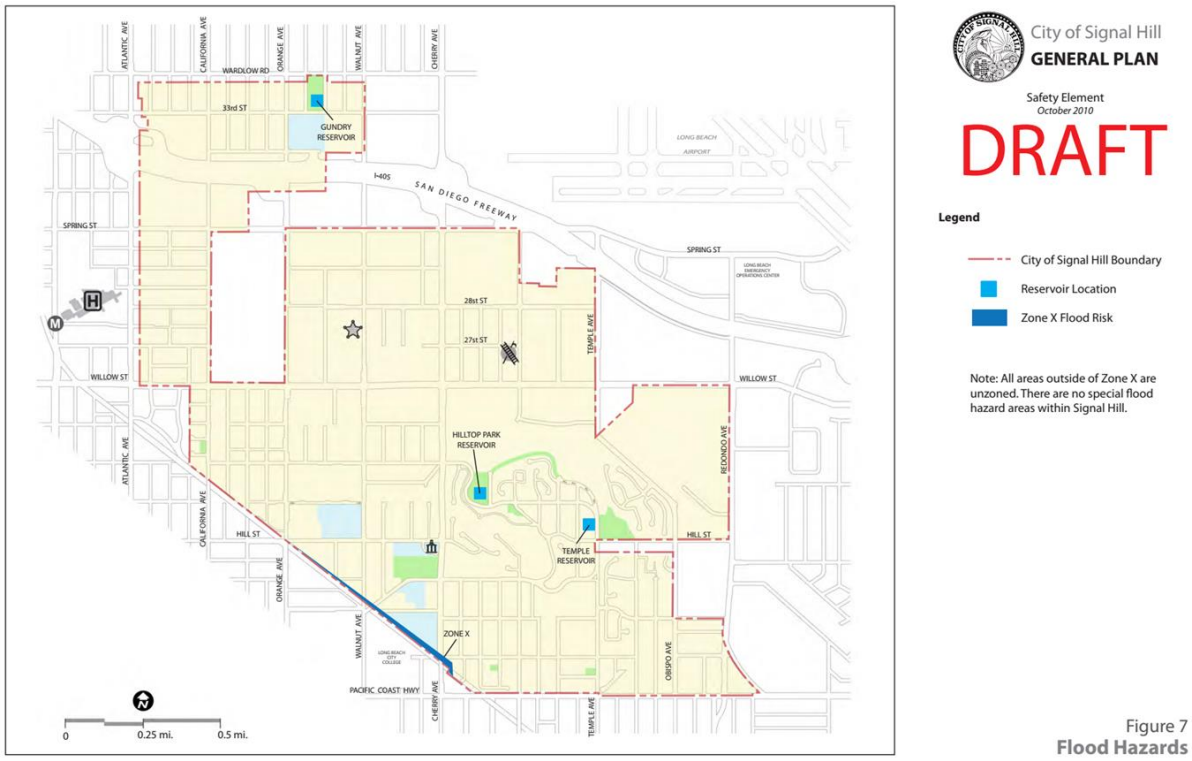


Figure 7
Flood Hazards

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/Severe Repetitive Loss Properties** below.

Repetitive Loss Properties and Severe Repetitive Loss Properties

Repetitive Loss Properties (RLPs) and Severe Repetitive Loss Properties (SRLPs) are most susceptible to flood damage; therefore, they have been the focus of flood hazard mitigation programs. Unlike a countywide program, the Floodplain Management Plan (FMP) for repetitive loss properties involves highly diversified property profiles, drainage issues, and property owner's interest. It also requires public involvement processes unique to each RLP area. The objective of an FMP is to provide specific potential mitigation measures and activities to best address the problems and needs of communities with repetitive loss properties. According to FEMA resources, none of the properties within the City of Signal Hill are designated as Repetitive Loss Property (RLP).

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 **Planning Area, Tables 1.1-1.4** below.

Planning Process

Planning Area

Initial considerations included agreeing that the boundary of the City of Signal Hill constitutes 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.

Organizing Resources

In the guidance documents, FEMA suggests that critical resources to the planning process are the city's partners, data resources, plans and studies, and technical assistance. The planning process is powered by city staff, the public, and stakeholders.

Data resources, plans, and studies are discussed later in this Chapter under **Using Existing Data**. Also, the Planning Team utilized FEMA's HAZUS loss projection software for 3 scenario earthquakes. See the **Risk Assessment – Earthquake Profile** for HAZUS mapping and report.

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

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 **Planning Team**, **Tables 1.1-1.5** below.

Planning Team

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, special attention during the hazard research and mapping analysis was given to climate vulnerability and impacts on underserved communities and socially vulnerable populations.

Stakeholders (as defined later in this chapter) were informed via email of the planning process and availability of the First Draft Plan. Later, an email was sent to stakeholders announcing the posting of the Hazard Mitigation Overview Video and Survey. For stakeholders with unknown email addresses, the notifications were sent through the mail.

The city's Hazard Mitigation Planning Team was 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
- Promoting the project through various community outreach venues

Signal Hill chose to build a Planning Team from city department and division staff with expertise about the community's assets as defined by FEMA to include people, structures (including community lifelines), economy, and other assets. Other assets include natural, historic, and cultural resources as well as activities bringing value to the community. The table below aligns the represented departments and divisions with the assets:

Table 1.1: Planning Team Technical Expertise of Assets

City of Signal Hill Departments	Assets				
	People	Structures	Community Lifelines	Economy	Other Assets
Finance					
Community Services	X	X			X
Community Development	X	X	X	X	X
Administration	X	X	X	X	X
Police	X		X		X
Public Works	X	X	X	X	

The Planning Team worked with Emergency Planning Consultants to create the updated plan. Planning Team members were sent email invitations in September 2022, announcing the purpose of the Team and overall schedule. The department representatives on the Planning Team served as active stakeholders and contributors to the plan's 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 public meetings.

Planning Team members participated in a total of 5 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. Introduced the requirements for community outreach and began discussions on existing venues including City Council, Commission meetings, Senior Center events, and scheduled street fairs. Also discussed desire for a Survey Monkey is gather information on knowledge of hazards and levels of preparedness.

- 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 Safety Element relating to hazard mitigation. The Planning Team selected the policies and actions they wanted included in the 2025 Mitigation Actions Matrix.

- Planning Team Meeting #4 was facilitated by the consultant who shared an overview of FEMA's "new rules". The focus of the discussion was on the new mandates for a more robust community outreach. Sample surveys and social media postings were shared and discussed. The Team agreed to post a hazard mitigation overview video and survey including information about socially vulnerable populations and local hazards.

- Planning Team Meeting (Supplemental) was facilitated by the consultant who focused on FEMA regulations relating to impacts of hazards and climate change on populations was facilitated by the consultant.

- Planning Team Meeting #5 was facilitated by the consultant who shared an advance copy of the Initial Draft Plan. 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 assured that information gathered would be reflected in the First Draft Plan which would be made available to the public and stakeholders during the community outreach process.

Table 1.2: Planning Team Level of Participation

Name	Research and Writing of Plan	Planning Team Meeting #1 (9/29/2022)	Planning Team Meeting #2 (11/30/2022)	Planning Team Meeting #3 (1/11/2023)	Planning Team Meeting #4 (3/17/17/2023)	Meeting on Climate and Population (4/3/2023)	Planning Team Meeting #5 (6/13/2023)	Planning Team Comment on First Draft Plan	Distribute Second Draft Plan to Public and Stakeholders	Input from Public and Stakeholders into Second Draft Plan	Third Draft Plan to Cal OES/FEMA for review	Post Final Draft Plan in advance of City Council Public Meeting	Present Final Draft Plan to City Council for Plan Adoption	Submit Proof of Adoption to FEMA	Issue Final Plan
City of Signal Hill															
Yvette Aguilar		X	X					X							
Thomas Bekele		X	X					X							
Carl Charles		X	X					X							
Grissel Chavez							X	X							
Sharon Del Rosario		X													
Colleen Doan						X	X	X							
Joe Hoefgen		X	X					X							
Desiree Jimenez		X	X					X							
Brian Leyn		X	X												
Rebecca Lopez								X							
Carlos Luis		X	X			X	X	X							
Donald Moreau					X										
Karla Santillan			X			X	X	X							
Emergency Planning Consultants															
Carolyn Harshman	X	X	X	X	X	X	X			X	X		X	X	
Jill Caputi	X														

Table 1.3: Project Timeline

	July-August 2022	September	October	November	December	January 2023	February	March	April	May	June	July-August	September- December	January 2024	February-March	April
Research																
Research for Risk Assessment and HAZUS																
Plan Writing																
Initial Draft, First Draft, Second Draft, Final Draft, Final Plan	X	X	X	X	X	X	X	X	X	X	X	X	X			
Planning Team Meetings																
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 Mitigation Actions Matrix								X								
Planning Team Meeting (supplemental)									X							
Planning Team Meeting #5 Future Mitigation Action Items											X					
Planning Team Review Initial Draft Plan													X			
Community Outreach																
Public and Stakeholder Input to First Draft Plan														X		
Plan Adoption and Approval																
Submit Second Draft Plan to Cal OES/FEMA. Complete Mandated Revisions.																X
Present Final Draft Plan to City Council																
Forward Proof of Adoption to FEMA																
Receive FEMA Letter of Approval																
Incorporate FEMA Approval into Final Plan																

Plan Writing

An Initial Draft Plan was prepared by the consultant with considerable input from the Planning Team during the Planning Team Meetings. The Initial Draft Plan was distributed in advance of the fifth 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 #5, the First Draft Plan was ready for notice and distribution to the public and stakeholders. The first community outreach took place in January 2024 with announcing the planning process and sharing the First Draft Plan. The Planning Team wanted to ensure gathering 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. No input was received on the First Draft Plan from the public or stakeholders. A second community outreach took place in July 2024 with the posting of a hazard mitigation overview video and survey. No views were tracked on the video and no responses were received on the survey.

After documenting the input gathered on the First Draft Plan and the outreach activities, the Second Draft Plan will be ready for submission to Cal OES and FEMA along with a request for a formal review. Throughout the formal review process, the Planning Team and consultant will complete amendments to the Plan as mandated by Cal OES and FEMA.

Once Cal OES forwards the document to FEMA, the Planning Team Chair will schedule a public meeting with the City Council for the plan's adoption. The public and stakeholders will be informed of the City Council meeting through the same medium utilized during the community outreach activities. The purpose of the meeting will be to provide a public forum where additional comments can be gathered from the Council and attendees. The public meeting will include a presentation of a staff report and PowerPoint outlining the planning process and benefits of hazard mitigation. Staff will request an adoption from the City Council. Assuming acceptance, proof of adoption will be forwarded to FEMA along with a request for a Letter of Approval.

A summary of the plan writing, approval, adoption and implementation is below in **Table 1.4**.

Table 1.4: 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 #5 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 • Second community outreach included survey and video. • All input from the public and stakeholders incorporated into the Second Draft Plan	• Second Draft Plan was sent to Cal OES for formal review • Consultant and Planning Team is addressing revisions mandated by Cal OES • Cal OES will forward the Plan to FEMA for review	• The Chair will post public notice of the City Council adoption meeting along with the access to the Final Draft Plan • Staff will present Final Draft Plan to City Council along with resolution for adoption • Staff will request an adoption from the City Council	• The consultant will submit proof of adoption to FEMA with a request for final approval • Will receive FEMA Letter of Approval • Will incorporate FEMA approval and City Council resolution into the Final Plan	• The Chair will conduct annual Planning Team implementation meetings • Will 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, Stakeholder Opportunities for Input by Category, Table 1.5-1.6** below.

Stakeholder Outreach

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

Stakeholder Opportunities for Input by Category

- **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 departments. The invitation included an overview of the role of the Team and the time requirements of 5 meetings as well as reviewing the Initial Draft Plan. Team members were engaged in a discussion on a community outreach strategy including posting a hazard mitigation video, survey, and First Draft Plan. Also, they were encouraged to attend public forums including the City Council adoption meeting.
- **Agencies with 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 departments. The Planning Commission, and City Council were informed of the planning process through the community outreach activities including viewing the video and participating in the survey as well as providing input to the First Draft Plan. 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 activities with invitations to view the video and participate in the survey as well as to provide input on the First Draft Plan. The same entities were also invited to provide input prior to the City Council adoption meeting.
- **Businesses, Academia and other Private Organizations**. Examples include a chamber 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 activities with invitations to view the video and participate in the survey as well as to provide input on the First Draft Plan. 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 bringing 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’s Community Services Department 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 List by Category

Table 1.5 is a list of the stakeholders identified by the Planning Team along with the associated stakeholder category. See **Attachments** for name of agency, recipient, and recipient job title.

Table 1.5: Stakeholder List by Category

Stakeholder Entities	Local and Regional Agencies Involved in Hazard Mitigation	Agencies with Authority to Regulate Development	Neighboring Communities (including adjacent local governments and special districts)	Businesses (B), Academia (A), Community Lifelines (CL)	Nonprofit (NP), Community-Based Organizations working with Vulnerable Populations (CBO)
Signal Hill Decision Makers					
Signal Hill Planning Team	X	X		CL	
City Council		X			
Civil Service Commission					
Parks and Recreation Commission					
Planning Commission		X			
Sustainable City Committee					
Diversity Coalition Committee					
Community Lifelines					
Los Angeles County Fire Department	X			CL	
Long Beach Utilities (Gas Services)	X		X	CL	
Los Angeles County Department of Public Health			X	CL	
Los Angeles County Department of Mental Health				CL	
Los Angeles County Sanitation District	X		X	CL	
Long Beach Memorial Medical Center			X	CL	
Frontier Communications				B, CL	
Dignity Health St. Mary's Medical Center	X		X	CL	
Los Angeles County Recorder-Clerk			X		
EDCO				B, CL	
Southern California Edison	X			B, CL	
Signal Hill Petroleum	X	X		B, CL	
Nonprofit and Community-Based Organizations					
Friends of Signal Hill Library					NP
Signal Hill Community Foundation					NP
Signal Hill Police Foundation					NP
Signal Hill Rotary Club					NP
Signal Hill Historical Society					NP
Cities					
City of Long Beach	X	X	X	CL	
City of Carson	X	X	X	CL	

Stakeholder Entities	Local and Regional Agencies Involved in Hazard Mitigation	Agencies with Authority to Regulate Development	Neighboring Communities (including adjacent local governments and special districts)	Businesses (B), Academia (A), Community Lifelines (CL)	Nonprofit (NP), Community-Based Organizations working with Vulnerable Populations (CBO)
City of Torrance	X	X	X	CL	
City of Gardena	X	X	X	CL	
City of Compton	X	X	X	CL	
City of Paramount	X	X	X	CL	
City of Lakewood	X	X	X	CL	
City of Bellflower	X	X	X	CL	
City of Los Alamitos	X	X	X	CL	
City of Seal Beach	X	X	X	CL	
Service Provider to Vulnerable Populations					
Las Brisas Housing Complex				CL	CBO
Zinnia Housing Complex				CL	CBO
Disabled Resources Center			X	CL	NP, CBO
Long Beach Rescue Mission			X	CL	NP, CBO
Long Beach Senior Center			X	CL	NP, CBO
Mental Health America			X	CL	CBO
The Salvation Army Family Service			X	CL	NP, CBO
Star View Behavior Health Care Center			X	CL	CBO
VA Healthcare System			X	CL	CBO
Safe Refuge			X	CL	NP, CBO
Education					
Long Beach Unified School District	X		X	A	
Cal State University, Long Beach	X		X	A	
Long Beach City College	X		X	A	
Faith-Based Organizations					
Calvary Chapel Signal Hill					
Aum Sanctuary LB					
Willow Temple					
Long Beach Christian Fellowship			X		
Victory Outreach Long Beach			X		NP, CBO
Christ Centered Ministries					
The Well Christian Fellowship					
Cambodian Harvest Church					
Dream City Church Long Beach					
Long Beach Islamic Center					
Stand to Reason					NP

Stakeholder Entities	Local and Regional Agencies Involved in Hazard Mitigation	Agencies with Authority to Regulate Development	Neighboring Communities (including adjacent local governments and special districts)	Businesses (B), Academia (A), Community Lifelines (CL)	Nonprofit (NP), Community-Based Organizations working with Vulnerable Populations (CBO)
Catholic Charities			X	CL	NP, CBO
Christian Outreach in Action			X	CL	NP, CBO
Lutheran Community Care Long Beach			X	CL	NP, CBO
Business Organizations					
Home Depot				B	
Costco				B	
Office Depot				B	
Target				B	

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 Outreach, Table 1.6** below.

Public Outreach

In January 2024, the First Draft Plan's availability for input on the City's website was announced. A hard copy of the First Draft Plan was also available at City Hall. In November 2024, the public was informed via social media, press release, and City Views of the second community outreach including an updated survey, video, and the Executive Summaries in English, Spanish, and Cambodian.

Community Outreach Strategy

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

Outreach Methods and Activities (See Attachments for samples)	**Stakeholder Categories**					**Public**	**Underserved Communities, Disadvantaged Communities, 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**		
Stakeholder Emails – sent during both community outreach events.	X	X	X	X	X		X
Public Forums – Postcard sized cards and flyers available. "Community Announcement" slides during Council Meetings slides read to attendees by Mayor. Planning process announcements at City Council meetings (1/23/24, 2/13/24,2/27/24). Civil Service Commission (2/7/24), Planning Commission (2/20/24), Parks & Recreation Commission (2/21/24). In Person Outreach Senior Center Bingo and Luncheon (2/13/24), Diversity Coalition Committee meeting - Liaison between organizations and City to engage in racial equity efforts (2/14/24).	X	X	X	X	X	X	X
Postcards and Flyers – shared via City Views, Social Media, and distributed at City Hall.	X	X	X	X	X	X	X

Outreach Methods and Activities (See Attachments for samples)	Stakeholder Categories					Public	Underserved Communities, Disadvantaged Communities, 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		
City's Website – Posted plan-related documents and community outreach materials.	X	X	X	X	X	X	X
Social Media – Facebook, X, and Instagram including announcement of the First Draft Plan, survey, and video.	X	X	X	X	X	X	X
City Views – magazine mailed to each residence and business	X	X	X	X	X	X	X
Senior Scoop Newsletter - Half page ad with link to digital plan and survey. Targeted to senior community and homebound residents. (2/2024)	X	X	X	X	X	X	X
Initial Draft Plan – Reviewed by Planning Team.	X						
First Draft Plan – Public notified via social media, City Views. Stakeholders notified via email/mail with link to dedicated website.	X	X	X	X	X	X	X
Executive Summary – Second outreach included Plan's Executive Summary in English, Spanish, and Cambodian.	X	X	X	X	X	X	X
Video and Survey – First and second outreach. Second included updated versions.	X	X	X	X	X	X	X
Civic Center, Library, and Police Station – served as	X	X	X	X	X	X	X

	Stakeholder Categories					Public	Underserved Communities, Disadvantaged Communities, Socially Vulnerable Populations
Outreach Methods and Activities (See Attachments for samples)	**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**		
distribution points for postcards, flyers, and survey.							

Public and Stakeholder Input

Public and Stakeholder Input (see **Attachments**) provides details on the stakeholder categories and individual entities along with any information gathered during the community outreach event. FEMA regulations require an accounting of the agency name, name of recipient, and recipient job title. Stakeholders were invited via email or mail while the public was invited via social media, press release, and City Views.

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 – Existing Processes and Programs**, **Table 1.7** below.

Capability Assessment – Existing Processes and Programs

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. 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.

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 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 commitments 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 Fire Department delivers to students at local schools; and participation in community programs, such as Firewise.

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

Table 1.7: Capability Assessment - Existing Processes and Programs (Source: City of Signal Hill 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 Signal Hill Departments					
X	X	X	X	Administration	The Administration Department includes the following programs: Executive Administration, Communications and Public Relations, Human Resources, and Economic Development. Executive Administration is responsible for recommending policy to the legislative body (City Council) and for implementing policy when set by the City Council. Executive Administration is also responsible for planning, coordinating, and directing the work of all City departments and programs. Communications and Public Relations develops and administers directs and overseas the City's marketing and communications programs. Human Resources is responsible for the administration of the City's personnel system and provides comprehensive human resource services to assist City departments with personnel matters. Functional areas include recruitment and selection, benefits administration, classification and compensation, employee and labor relations, training and safety training, employment/labor legal compliance, management consultation on discipline and other personnel matters, wellness initiatives, and worker's compensation administration. Human Resources also provides staffing for the Civil Service Commission. Economic Development is responsible for the disposition of former redevelopment agency properties and project development, provides ombudsman services to developers, and works on increasing sales tax generation and revenue diversification through business attraction and retention of current businesses.
X	X		X	Community Development	The Community Development Department has four programs: Planning, Neighborhood Enhancement, Building Safety, and Oil

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
					Field Services. Planning includes coordination of development applications and project review for consistency with the General Plan and Municipal Code regulations and provides staffing for the Planning Commission. Neighborhood Enhancement includes code enforcement, provides staffing for the Sustainable City Committee and neighborhood improvement programs. Building Safety includes tracking of interdepartmental and intradepartmental reviews for development projects, plan check of construction plans, issuance of permits, and property inspections. Oil Field Services includes oversight of compliance with provisions of the City's Oil and Gas Code, and inspection of oil field facilities.
			X	Community Services	Community Services provides a variety of parks, recreational, social, and library services. Parks include design, development, and rehabilitation of park property and community buildings. Recreation includes after school recreation programs, year-round programs for youth, teen activities, and youth sports. Community Services includes senior services, community-wide special events, transportation, Animal Control administration, Community Development Block Grant (CDBG) administration, and park facility scheduling. The Department also manages Library operations and provides staffing for the Parks and Recreation Commission.
	X	X	X	Finance	The Finance Department is responsible for the fiscal affairs and overall financial management of the City to provide timely, accurate, and relevant budgetary and financial information to the City Council, the City Administration, residents, and customers. This includes establishing and maintaining strong internal controls that carry out City policies and ensure compliance with established accounting standards. Operational responsibilities include the handling of cash receipts, cash disbursements, recording of all financial transactions, payroll processing, preparation, development, maintenance, and monitoring of the City budget, maintaining the general ledger, financial reporting, risk management, debt service, investment of surplus cash, and safeguarding the City's financial assets. The Finance Department is also responsible for assisting with billing and customer service to water customers and business licenses. Also included in the Finance and Administrative Services are information technology functions and non-departmental activities that provide

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
					generalized support services for the City including liability protection and retirement administration.
X	X		X	Police	The Signal Hill Police Department is a full-service law enforcement agency responsible for the prevention of crime, promotion of traffic safety, enforcement of all state and local laws, protection of life and property, preservation of peace, and apprehension of criminals. The Department responds to and investigates all reports of criminal activity and emergency situations, enforces state and local traffic ordinances, and performs public assistance as called upon to ensure public safety. The Police Department wholeheartedly embraces the philosophy of community oriented policing, and activity participates in Community Outreach Programs such as the Police Community Volunteer Program, Juvenile Diversion, Annual Open House, National Night Out, Citizen Police Academy, and Neighborhood Watch. For management and budgetary purposes, the Police Department i9s divided into seven service programs: Community Outreach, Patrol Services, Investigative Services, Police Support Services, Police Communications/Jail, Police Records, and Emergency/Disaster Services.
X	X	X	X	Public Works	The Public Works Department is responsible for providing reliable, well-maintained public facilities and essential services that are dependent upon the daily lives of residents and the business community.
	X		X	Hazard Mitigation Planning Team	The Hazard Mitigation Planning Team is made up of representatives from departments assigned responsibilities in the Hazard Mitigation Plan, including the 5-year plan updates as required by FEMA. The Planning Team is responsible for implementing, monitoring, and evaluating the plan during its annual meetings.
City of Signal Hill Policies					
X	X		X	Emergency Operations Plan	Emergency Operations Plan is a reference and guidebook to operations during a major emergency impacting Signal Hill. The Plan includes a discussion on a wide range of hazards, organization and staffing of the Emergency Operations Center, and connectivity with field responders and external agencies. The Emergency Operations Plan is an excellent source of hazard information for the Hazard Mitigation Plan.
X			X	Hazard Mitigation Plan	The City's Hazard Mitigation Plan identifies the risks from hazards present in the community and includes strategies to reduce these

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
					risks. Updates to the Plan are coordinated with the hazard information and mitigation activities identified in the County of Los Angeles AHMP as well as the HMP for the State of California in order to ensure a more consistent and unified approach to hazard mitigation.
X			X	General Plan	General Plan outlines long-term direction for development and policy in Signal Hill. There are opportunities to coordinate local hazard mitigation actions with policies governed by the General Plan. Also, the General Plan is an excellent resource to assist with implementing many of the mitigation action items identified in the Hazard Mitigation Plan.
X	X	X	X	Capital Improvement Program	The City is now in the process of preparing its first Capital Improvement Program which will direct construction activities for City-owned facilities and infrastructure for the next future years. Mitigation actions may involve construction of new or upgraded facilities and infrastructure.
X			X	Standard Urban Stormwater Mitigation Plan	Standard Urban Stormwater Mitigation Plan provides long-range planning of water supplies and water use to ensure a stable water supply and compliance with water conservation efforts. Mitigation actions that involve reducing water use may be incorporated into the next update to the Standard Urban Stormwater Mitigation Plan.
X	X		X	Zoning Ordinance	Zoning Ordinance implements the City's General Plan by establishing specific regulations for development. It includes standards for where development can be located, how buildings must be sized, shaped, and positioned, and what types of activities can occur in an area. Hazard mitigation actions that pertain to new or substantially redeveloped buildings can be adopted into the Zoning Ordinance.
X	X	X	X	Building Code	The Building Code specifies how new structures can be built. It includes the California Building Code, in addition to any amendments made by the City, mitigation actions may involve amending the Building Code to improve a building's safety or structural stability.
City of Signal Hill External Agency Providers					
X	X		X	Los Angeles County Fire Department	The Los Angeles County Fire Department provides all fire and emergency medical / paramedic services within the City of Signal Hill.
X			X	Southern California Edison	Provides electrical power to the Los Angeles region.

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
X			X	Southern California Gas Company	Provides natural gas to the Los Angeles region.

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. Future plans are laid out in the General Plan and Capital Improvement Program. Some of the funding of future construction relies on successful bond measures where plans and justifications are shared with the public. Given the fact this is the first mitigation plan for Signal Hill, the topic of mitigation has been limited to Environmental Impact Reports tied to major development projects. Although hazard mitigation is new, the City is very experienced in adhering to federal and state mandates. Also, departmental protocols are in place that ensure future development projects satisfy "substantial conformance" requirements with the General Plan and Zoning Ordinance. See **Mitigation Actions Matrix** column "Expanding and Improving 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 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 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 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 documents were used to support the planning process:

City of Signal Hill Website
https://www.cityofsignalhill.org/
Applicable Incorporation: Department Information for Capability Assessment.

City of Signal Hill General Plan and Elements
https://www.cityofsignalhill.org/85/General-Plan
Applicable Incorporation: Land Use map, Community Profile section – geography, environmental, population, housing, transportation and demographic data, Safety Element – hazard information and maps.

City of Signal Hill Hazard Mitigation Plan (2018)
https://www.cityofsignalhill.org/DocumentCenter/View/4137/Signal-Hill-Hazard-Mitigation-Plan?bidId=
Applicable Incorporation: Information about hazards contributed to the 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 Chapter 3: Risk Assessment – Hazard Profiles.

County of Los Angeles All-Hazards Mitigation Plan (2020)
Applicable Incorporation: Information about hazards in the County contributed to Chapter 3: Risk Assessment – Hazard Profiles.

State of California Hazard Mitigation Plan (2023)
Applicable Incorporation: Hazard identification information used in Chapter 2: Risk Assessment – Identifying Hazards.

HAZUS Maps and Reports
Created by Emergency Planning Consultants
Applicable Incorporation: Numerous HAZUS maps and reports have been included in Chapter 3: Risk Assessment – Hazard Profiles.

National Flood Insurance Program
Applicable Incorporation: Community status used in Chapter 3: Risk Assessment – Hazard Profiles - Urban Flooding.

Local Flood Insurance Rate Maps

Applicable Incorporation: Information about FIRM included in Chapter 3: Risk Assessment – Hazard Profiles - Urban Flooding.

California Department of Forestry and Fire Protection (CAL FIRE)
Applicable Incorporation: Wildland fire hazard map in Chapter 3: Risk Assessment – Hazard Profiles - Wildfire.

California Department of Conservation
Applicable Incorporation: Seismic hazards mapping used in Chapter 3: Risk Assessment – Hazard Profiles - Earthquake.

U.S. Geological Survey (USGS)
Applicable Incorporation: Earthquake records and statistics used in Chapter 3: Risk Assessment – Hazard Profiles - Earthquake.

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 Chapter 3: Risk Assessment.

Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Groups (2015)
Applicable Incorporation: Social vulnerability information used in Chapter 4: Vulnerability and Impacts Assessment.

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 Chapter 3: Risk Assessment.

Chapter 2: Community Profile

Location and the Environment

The City of Signal Hill is located approximately two miles north of the Pacific Ocean in southern Los Angeles County. Signal Hill consists of 2.2 square miles completely surrounded by the City of Long Beach. Regional access to the City is provided by freeways, especially Interstate 405 (I-405); arterial roadways; bus routes; a light rail line; two major seaports; and Long Beach Airport, which is located immediately northeast of Signal Hill.

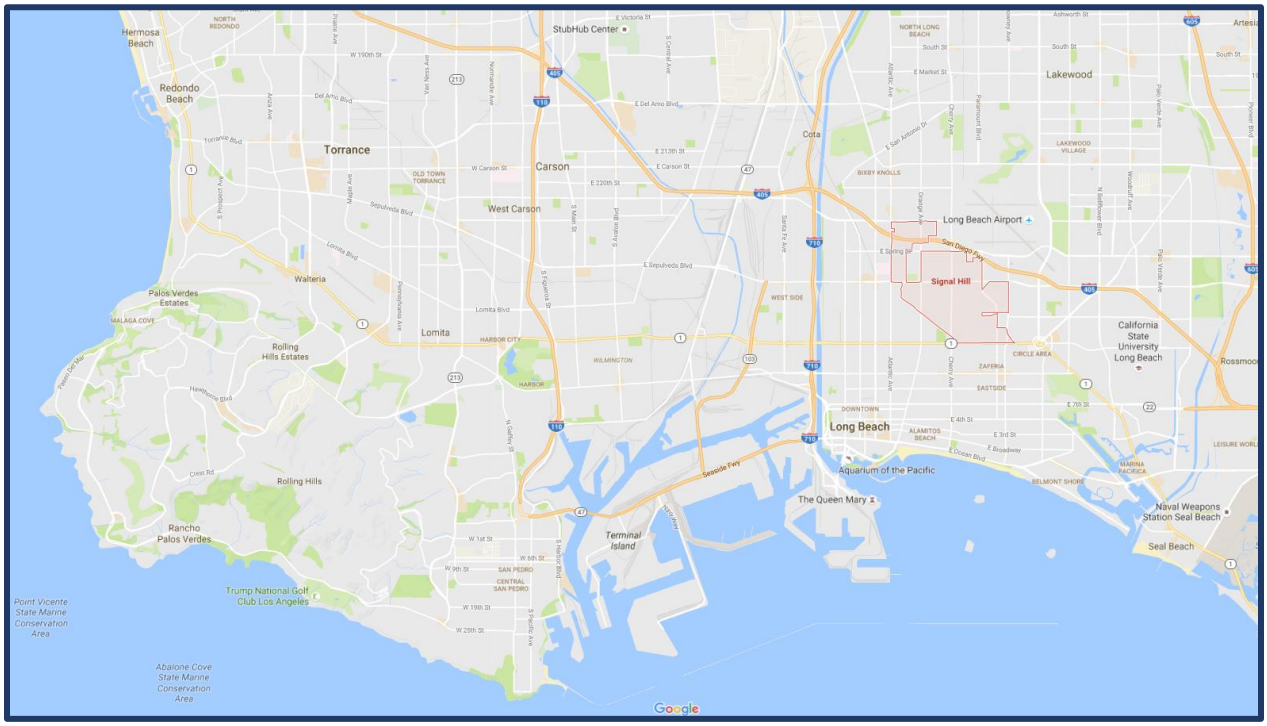
According to the City's General Plan, the panoramic view from the crest of Signal Hill is truly one of the most beautiful in all of Southern California. Most spectacular is the view of the Pacific Ocean framed by the Palos Verdes Peninsula and the Sheep Hills at Newport Beach. This ocean view features rolling breakers at Huntington Beach, the Queen Mary and the Long Beach skyline arguably equally spectacular at night. To the northwest, Signal Hill vistas include the skyscrapers in downtown Los Angeles, the Hollywood sign and the Getty Museum of Art perched upon the Santa Monica Mountains. To the east the view is remarkably grand including the Long Beach Airport and the Pyramid at the California State University at Long Beach.

Most famous for the discovery of oil in 1921, and commonly known as an "oil town," the City is now a diverse community with an "oil history" and a bright future. By the turn of the 20th Century, stately mansions dotted the hilltop, as the value of the panoramic view became evident. However, by 1917 the prospect of striking oil on the hilltop surpassed the value of the view and the Union Oil Company drilled the first oil well in the area. The well failed to produce any oil and it was abandoned. Further exploration was suspended until the Royal Dutch Shell Oil Company resumed exploration and hit pay dirt on June 23, 1921. That first "gusher," at Alamitos Well #1, marked a turning point in Signal Hill's history and put the city on the map.

Ultimately one of the richest oil fields in the world, it produced over 1 billion barrels of oil by 1984. The field is still active and produced over 1.6 million barrels of oil in 1994 alone. Oil production continued to be Signal Hill's mainstay until declining oil prices reduced production in the 1970's.

Today, Signal Hill is a well-balanced, financially sound and economically diverse community of over 11,673 people.

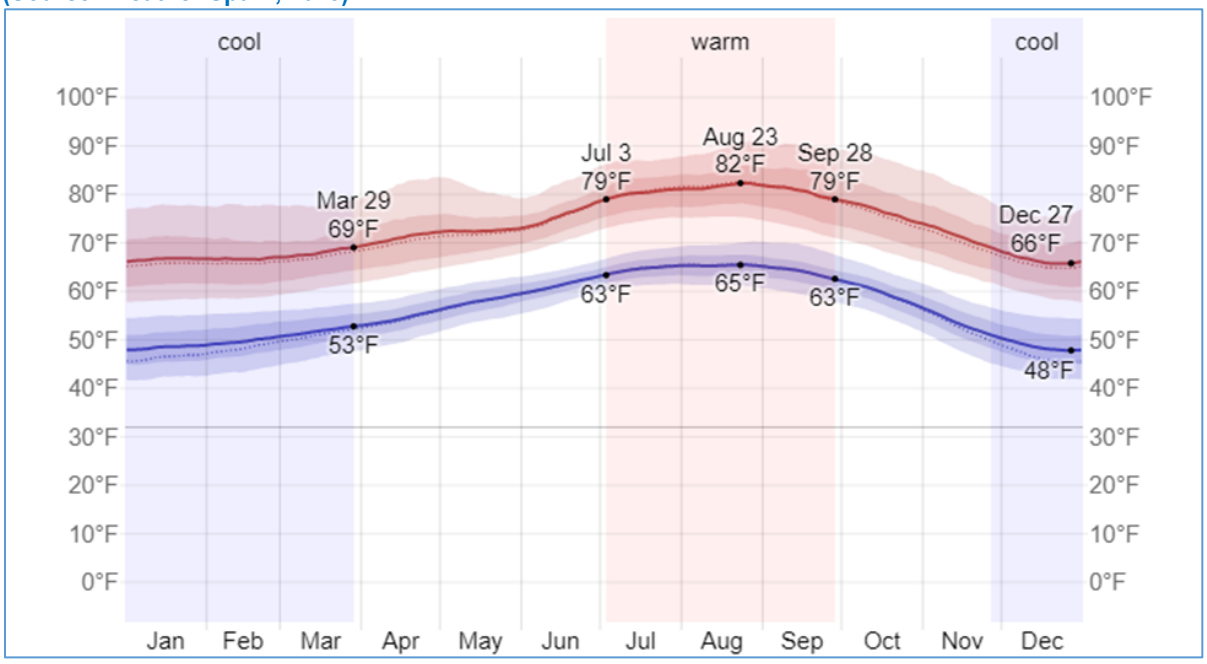
Map 2.1: Signal Hill Planning Area
(Source: General Plan)



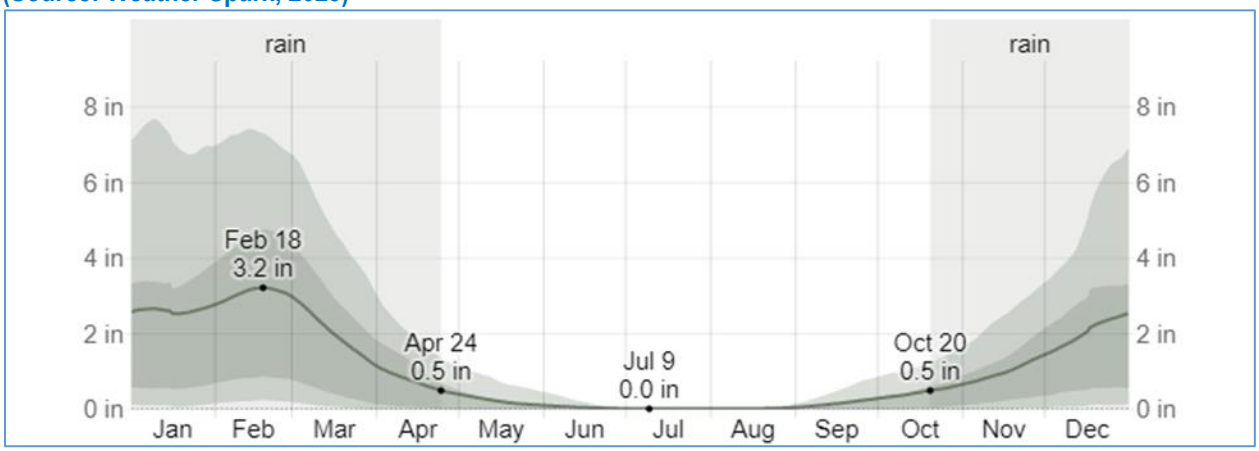
Climate

According to the General Plan, 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 Signal Hill (Source: Weather Spark, 2023)



Graphic 2.2: Average Monthly Rainfall for the City of Signal Hill (Source: Weather Spark, 2023)



Population and Demographics

According to the City's website, the City was incorporated in 1924 with a population of 13,962. As of 2019, the population has grown to 21,855. From 2010 to 2019, the City experienced a growth rate of 2.5 percent, with a projected growth rate of 2.3 percent from 2019-2024.

According to the U.S. Census Bureau, the demographic makeup of the City is as follows:

Table 2.1 City of Signal Hill Demographics
Source: U.S. Census Bureau, Est. 2020

Racial/Ethnic Group	Population	Percentage (%)
White	6,247	54.7%
Black	1,316	11.5%
American Indian or Alaska Native	128	1.1%
Asian	2,758	24.1%
Native Hawaiian and Other Pacific Islander	114	1.0%
Other	1,477	12.9%
Two or more races	590	5.2%
Non-Hispanic	7,247	63.4%
Hispanic	10,612	48.6%

Housing and Community Development

Table 2.2: City of Signal Hill Housing
(Source: U.S. Census Bureau, Est. 2020)

2020	Number	Percent %
Housing Type:		
1-unit, detached	2,320	51.6%
2-4 Units (2 or more units)	2,163	48.1%
Mobile homes/Other	13	0.3%
Housing Statistics:		
Total Occupied Housing Units	4,496	100%
Owner-Occupied Housing	2,221	49.4%
Renter-Occupied	2,275	50.6%
Average Household Size:	2.53 persons	

Employment and Industry

According to the Census data, the predominant employment industries for Signal Hill residents are Educational, Health and Social Services (14.6%); Professional, scientific, and management services (7.8%); and Manufacturing (4.3%).

According to the 2024 Annual Comprehensive Financial Report, the City's largest employers include Home Depot, Costco Wholesale, Office Depot, and Target.

Table 2.3: City of Signal Hill Industry
(Source: American Community Survey - 2020)

Industry	2020	
	Number	Percent %
Agriculture, forestry, fishing and hunting, and mining	12	0.1%
Construction	253	2.1%
Manufacturing	511	4.3%
Wholesale Trade	331	2.8%
Retail Trade	481	4.1%
Transportation and Warehousing, and Utilities	374	3.2%
Information	166	1.4%
Finance and insurance, and real estate and rental and leasing	428	3.6%
Professional, scientific, and management, and administrative and waste management services	930	7.8%
Educational services, and health care and social assistance	1,733	14.6%
Arts, entertainment, and recreation, and accommodation and food services	324	2.7%
Other services, except public administration	247	2.1%
Public administration	274	2.3%

Table 2.4: City of Signal Hill Occupation
(Source: American Community Survey - 2020)

Occupation	2020	
	Number	Percent
Civilian employed population (16 years and over)	6,064	51.2%
Management, business, science, and arts occupations	3,155	26.6%
Service occupations	821	6.9%
Sales and office occupations	1,260	10.6%
Natural resources, construction, and maintenance occupations	287	2.4%
Production, transportation, and material moving	541	4.6%

Transportation and Commuting Patterns

According to the City of Signal Hill's General Plan – Circulation Element (2021), Signal Hill is completely surrounded by the city of Long Beach, and its transportation network is intertwined with that of its neighbor. Regional access to the City, as shown on **Map 2.2**, is provided by freeways, especially Interstate 405 (I-405); arterial roadways; bus routes; a light rail line; two major seaports; and Long Beach Airport, which is located immediately northeast of Signal Hill.

The existing Signal Hill transportation system consists of roads of varying sizes and capacities; public transportation systems, including bus, light rail, and paratransit service; airports, and seaports as shown on **Map 2.3**. The network created by these systems serves two distinct and equally important functions: 1) to provide access to adjacent land uses, and 2) to facilitate the movement of persons and goods to, from, within, and through the City.

Interstate

The San Diego Freeway (Interstate 405 or I-405) crosses the northern portion of Signal Hill. The highway is owned and maintained by Caltrans. In the Signal Hill area, I-405 currently consists of ten travel lanes, including eight mixed-flow and two carpool lanes.

Interstate 405 is one of the major access routes to Signal Hill but is also a major traffic generator that affects traffic flow within the City. The freeway interchanges with the Long Beach Freeway (I-710) approximately three miles northwest of Cherry Avenue, with the San Gabriel Freeway (I-605) approximately five miles southeast of Cherry Avenue, and with the Garden Grove Freeway (State Route 22 or SR-22) approximately 7.5 miles southeast of Cherry Avenue. Full freeway access is provided at Atlantic, Cherry, and Orange Avenues. Northbound I-405 access to the City for traffic oriented south on Cherry Avenue is provided at Temple Avenue. This circuitous access to Cherry Avenue increases traffic levels on Temple Avenue and Spring Street and is confusing to motorists.

The 2003 Short-Range Transportation Plan (SRTP), prepared by the Metropolitan Transportation Authority (Metro), recognizes the I-405 as a "congested corridor" in the Signal Hill area, and identifies the Cherry and Atlantic Avenue ramps as "hot spots" with recurring heavy traffic congestion. These designations make this freeway corridor a higher priority for future improvements; however, no major improvements are currently funded.

Bus Service

Signal Hill is well-served by bus systems. Services provided by Long Beach Transit and Metro operate within or in the vicinity of the City; additional bus lines are accessible through the nearby Long Beach Transit Mall.

Long Beach Transit is the primary public transportation provider to Signal Hill. LBT provides public transportation to more than 17 million annual boarding customers in southeastern Los Angeles County and northwestern Orange County. With a service area covering over 100 square miles across 14 cities, LBT annually runs more than 6.9 million service miles over 700,000 service hours, using 250 fixed-route buses. LBT also operates water taxi and demand-responsive paratransit services.

Map 2.2: Roadway Classifications
(Source: City of Signal Hill General Plan – Circulation Element 2021)

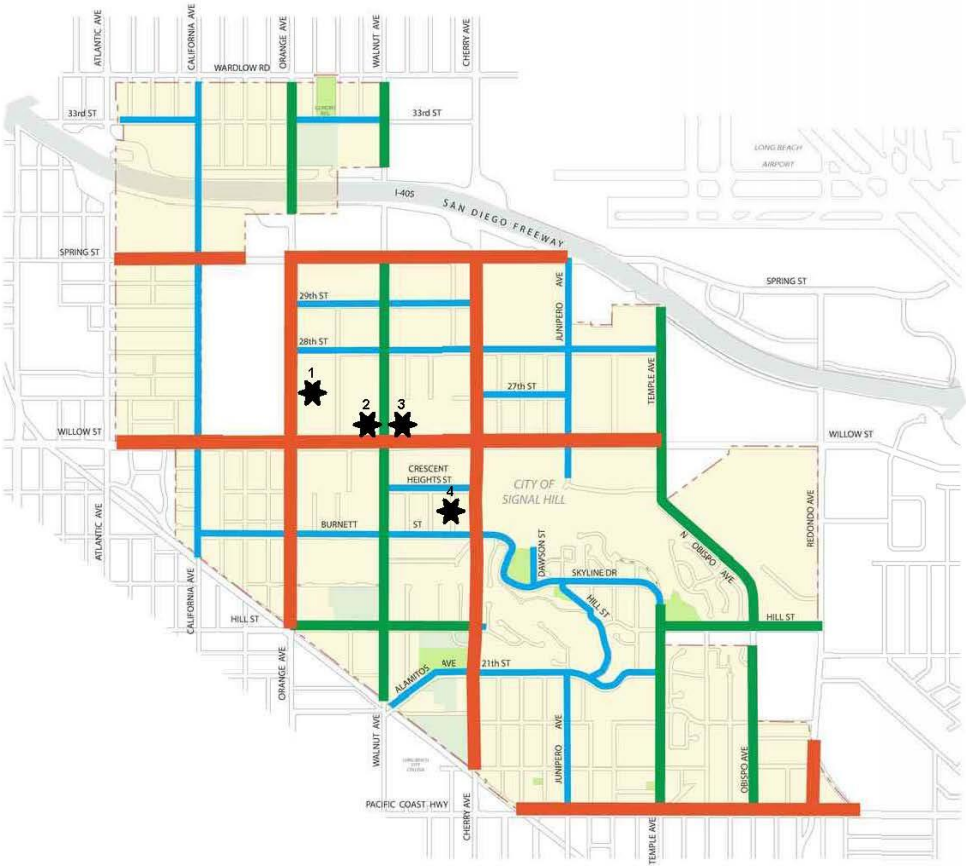


Figure 4
City of Signal Hill General Plan Circulation Element

Source: City of Signal Hill

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Signal Hill Housing Element
Transportation Impact Analysis
19355

Map 2.3: Transit System Map
(Source: City of Signal Hill General Plan – Circulation Element 2021)

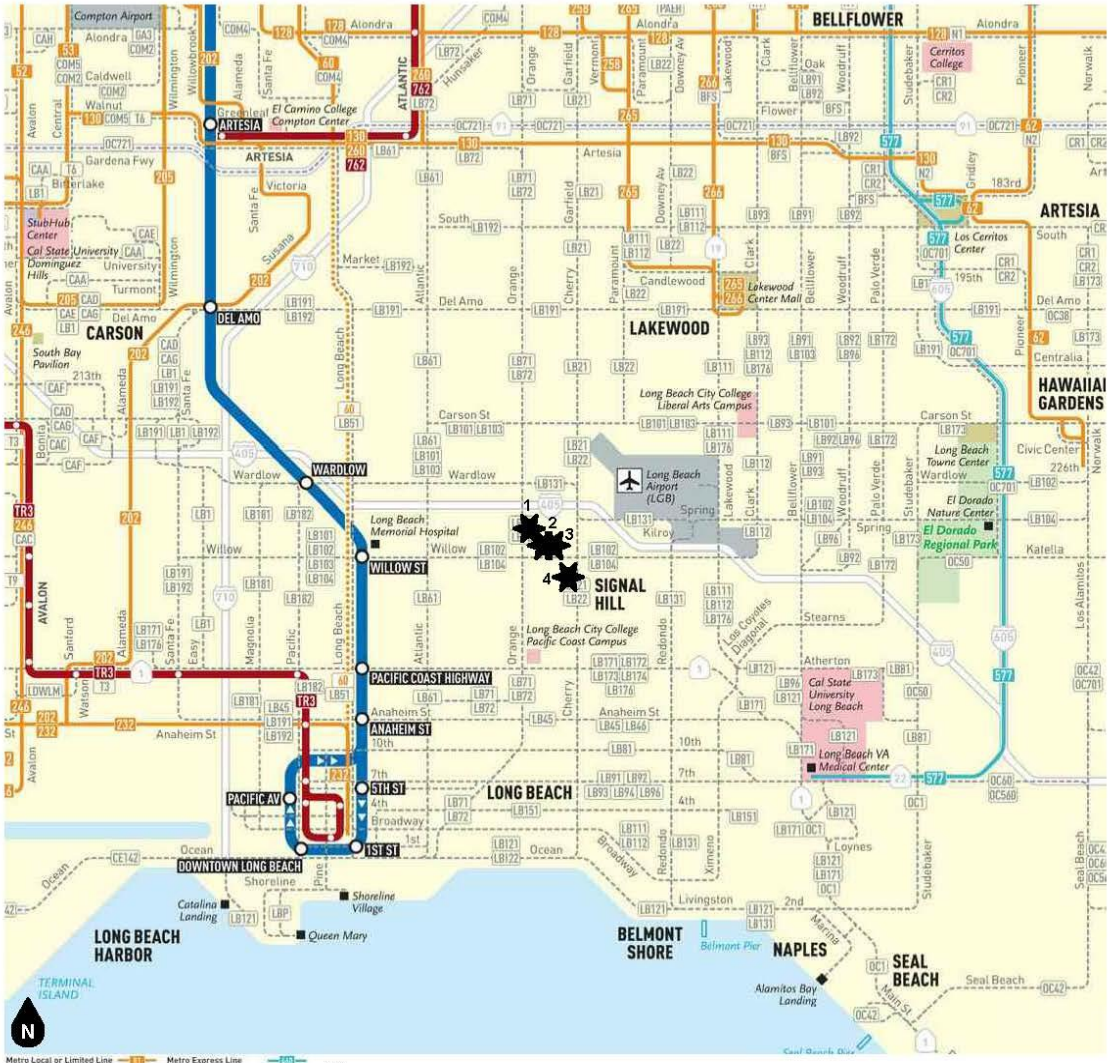


Figure 9
Transit System Map

Source: L.A. Metro

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 Vulnerability Assessment** below.

Climate Vulnerability Assessment

According to "California's Fourth Climate Change Assessment" developed by the State of California, continued climate change will have a severe impact on California. Increased temperatures, drought, wildfires, and sea level rise are several of the main concerns related to climate change in the Southwest. Other impacts anticipated from climate change include food insecurity, increases in vector-borne diseases, degradation of air quality, reduced ability to enjoy outdoors, and potential economic impacts due to uncertainty and changing conditions.

Climate change disproportionately affects those with existing disadvantages. Low-income communities and communities of color often live in areas with conditions that expose them to more severe hazards, such as higher temperatures and worse air quality. These communities also have fewer financial resources to adapt to these hazards. For instance, low-income populations may reduce air conditioning usage out of concerns about cost. Outdoor workers, individuals with mobility constraints, and sensitive populations such as the very young, elderly, and poor, as well as those with chronic health conditions, are particularly at risk to climate change hazards.

To understand how climate change might affect the City of Signal Hill, the Cal-Adapt tool was used to analyze data. "Cal-Adapt provides a way to explore peer-revied data that portrays how climate change might affect California at the state and local level" (cal-adapt.com). Below is a summary of the data reviewed.

Climate Change Hazards

Increased Temperature: Annual temperatures in the city are expected to rise steadily through the end of the century. The city's historical average maximum temperature is based on data from 1961-1990, is 78.3°F. Under the medium emissions scenario, the average annual maximum temperature is projected to increase to 83.5°F. Between 2070 and 2099. The annual average maximum temperature under the high-emission scenario is projected to increase to 86.8°F. Between 2070 and 2099.

More Extreme Heat Days: Extreme Heat Days occur when the maximum temperature is above 100.5°F. Historically Signal Hill has experienced an average of 2 extreme heat days per year. By mid-century, 2025-2064, the annual number of extreme heat days is expected to rise to 6 under medium emission scenarios and 7 under high emission scenarios. By the end of the centuries, 2070 and 2099, the number of extreme heat days is expected to rise to 8 under medium emission scenarios and 16 under high emission scenarios.

Static Annual Precipitation: Historically the city has experienced an annual average of 12.5 inches of precipitation. Annual precipitation is expected to remain relatively the same during the

mid-century. Under both the medium emission scenario and high emission scenario the annual precipitation will remain steady at 12.5 inches. By the end of the century, annual precipitation is expected to increase to 12.9 inches under the medium emission scenario and 12.8 inches under the high emission scenario.

Longer and More Extreme Droughts: The city can expect to see an 8.7% increase in average temperature and a 20.6% decrease in precipitation during drought conditions in the late 21st century. This will lead to longer, more extreme drought conditions later in the century.

Steady Wildfire Threat: Based on historical data from 1961–1990, Los Angeles County experiences a decadal average loss of 4,436.1 hectares to wildfire. The probability that a wildfire will occur in any one year over a10-year period, known as the decadal probability, is projected to remain constant through 2099 under both high-emissions and Low emissions scenarios. Under the low-emissions scenario, the decadal average loss to wildfire is expected to increase to 5,719.2 hectares by mid-century and 5662.9 hectares by 2099. Under the high-emissions scenario, the decadal average loss to wildfire is projected to rise to 5,579.7 hectares by 2065 and 5,275.4 hectares by the end of the century.

Sea Level Rise: The city does not border the Pacific Ocean, but with projected sea level rise the city has the potential to be indirectly affected by coastal flooding. In the late century using maximum flood scenario models, coastal flood water might encroach upon Signal Hill boundaries.

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 Signal Hill and surrounding area; and the future risk they pose. Specifically, the five levels of a risk assessment are as follows:

1. *Identify Hazards (Chapter 3)*
2. *Hazard Profiles (Chapter 3)*
3. *Identify Community Assets (Chapter 4)*
4. *Analyze Impacts (Chapter 4)*
5. *Summarize Vulnerability (Chapter 4)*

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 **Identify Hazards, Table 3.1-3.4** 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 **Table 3.1** below.

Identify Hazards

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, 2020 County of Los Angeles All-Hazards Mitigation Plan, and the City's 2016 General Plan Safety Element.

The Planning Team reviewed 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. The Planning Team also reviewed Federal Disaster Declarations for Los Angeles County. Los Angeles County experienced 37 federal disaster declarations from 2008 – 2023. **Table 3.1** outlines those disaster declarations.

Table 3.1: Federal Disaster Declarations 2008-2023 Los Angeles County (Source: FEMA website State and County Disaster Declarations, 2023)

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
2023	DR-4683-CA		Severe Winter Storms, Flooding, Landslides, and Mudslides
2022	N/A	Yes	Extreme Heat
2022	N/A	Yes	Tropical Storm Kay
2021	DR-4569-CA		Wildfires
2021	FM-5381-CA		Blue Ridge Fire
2021	N/A	Yes	Winter Storms
2021	N/A	Yes	Drought
2020	DR-4482-CA		Covid-19 Pandemic
2020	EM-3428-CA		Covid-19
2020	N/A	Yes	Extreme Heat Event
2020	FM-5374-CA		Bobcat Fire
2019	FM-5297-CA		Getty Fire
2019	FM-5296-CA		Wildfires
2019	FM-5293-CA		Saddleridge Fire
2018	EM-3409-CA		Wildfire
2018	DR-4407-CA	Yes	Wildfires
2018	DR-5280-CA	Yes	Woolsey Fire
2018	DR-4353-CA		Wildfires, Flooding, Mud Flow, Debris Flow
2017	DR-1884-CA		Severe Winter Storms, Flooding, and Debris and Mud Flows
2017	EM-3396-CA		California Wildfires
2017	FM-5201-CA	Yes	California la Tuna Fire
2017	FM-5225-CA	Yes	California Creek Fire
2017	FM-5226-CA	Yes	California Rye Fire
2017	FM-5227-CA		California Skirball Fire
2017	DR-4305-CA		Severe Winter Storms, Flooding, and Mud Slides

2016	FM-5135-CA	Yes	California Sand Fire
2016	FM-5129-CA		California Fish Fire
2016	FM-5132-CA		California Sage Fire
2016	FM-5124-CA		California Old Fire
2015	N/A	Yes	Rainstorms
2015	N/A	Yes	Wildfires
2014	N/A	Yes	Drought
2014	FM-5051-CA		California Colby Fire
2013	FM-5025-CA	Yes	California Powerhouse Fire
2011	N/A	Yes	Windstorms
2010	N/A	Yes	Winter Storms
2010	FM-2851-CA		California Crown Fire
2009	FM-2828-CA		California Pv Fire
2009	FM-2830-CA	Yes	California Station Fire
2008	FM-2763-CA		California Santa Anita Fire
2008	FM-2791-CA		California Sayre Fire
2008	FM-2789-CA		California Sesnon Fire
2008	FM-2792-CA		California Freeway Complex Fire
2008	FM-2788-CA		Mareck Fire
2008	FM-1810-CA	Yes	Wildfire in California

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 3.2** and **Table 3.3** below.

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 in **Table 3.2**.

Table 3.2: 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 3.3: Calculated Priority Risk Index Ranking for the City of Signal Hill (Source: City of Signal Hill 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)
Drought	4	1.80	3	0.90	1	0.15	3	0.30	**3.15**	**H**
Earthquake	3	1.35	4	1.20	4	0.60	1	0.10	**3.25**	**H**
Flood	2	0.90	1	0.30	2	0.30	4	0.40	**1.90**	**L**
Landslide	2	0.90	2	0.60	4	0.60	1	0.10	**2.20**	**L**
Windstorm	3	1.35	3	0.90	2	0.30	3	0.30	**2.85**	**H**

***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

Table 3.4: Hazard Source Review and Inclusion/Omission by Planning Team (Source: Planning Team [PT]; California State Hazard Mitigation Plan [SHMP]; Los Angeles County All-Hazards Mitigation Plan, [AHMP]; General Plan Safety Element [SE], National Risk Index [NRI])) (Note: The Planning Team chose to profile only those hazards with a high "Hazard Priority Ranking" (probability + magnitude/severity).

Hazard	Source				Profiled in HMP	Reason for Inclusion/Omission
Avalanche	NRI	SHMP			N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Coastal Flooding	NRI				N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Climate Change			AHMP		N	Rather than a dedicated hazard profile, the Planning Team chose to integrate climate change impacts into each of the profiled hazards.
Cold Wave	NRI	SHMP			N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Dam Failure		SHMP	AHMP	SE	N	The Planning Team determined that this hazard does not pose a significant threat to the community.

Drought	NRI	SHMP	AHMP		Y	The Planning Team assigned "high" as the hazard priority ranking and therefore is profiled.
Earthquake	NRI	SHMP	AHMP	SE	Y	The Planning Team assigned “high” as the hazard priority ranking and therefore is profiled.
Hail	NRI				N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Heat Wave	NRI	SHMP			N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Hurricane	NRI				N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Ice Storm	NRI				N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Landslide	NRI	SHMP	AHMP	SE	N	The Planning Team assigned “low” as the hazard priority ranking and therefore was not profiled.
Levee Failure		SHMP			N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Lighting	NRI				N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Riverine Flooding	NRI	SHMP	AHMP	SE	N	The Planning Team assigned "low" as the hazard priority ranking and therefore was not profiled.
Strong Wind	NRI	SHMP			Y	The Planning Team assigned “high” as the hazard priority ranking and therefore was profiled.
Subsidence	SHMP	SHMP			N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Tornado	NRI				N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Tsunami	NRI	SHMP	AHMP	SE	N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Volcanic Activity	NRI	SHMP			N	The Planning Team determined that this hazard does not pose a significant threat to the community.

Wildfire	NRI	SHMP	AHMP	SE	N	The Planning Team determined that this hazard does not pose a significant threat to the community.
Winter Weather	NRI				N	The Planning Team determined that this hazard does not pose a significant threat to the community.

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

Table 3.3 (Calculated Priority Risk Index) included all of the natural hazards that can affect the jurisdiction. **Table 3.2** (CPRI Key) emphasizes the importance of considering the "scope and scale" of a possible event. In other words, the planning team members were reminded to envision an event of such significance that a local declaration of emergency would likely be issued. The planning team chose to profile only those hazards with a high "Hazard Priority Ranking" (probability + magnitude/severity). In total, these hazards include drought, earthquake, and windstorm. Each of the profiled hazards are discussed on the next page in **Table 3.5**. The Table indicates a generalized perspective of the community's vulnerability of the profiled hazards according to extent (or degree), location, and probability, and previous significant event for Signal Hill.

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 **Table 3.5** below.

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

Hazard	Location (Where)	Extent (How Big an Event)	Probability (How Often) *	Previous Significant Event
Drought	Entire Project Area	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.	Highly Likely	State established Level 2 in 2021
Earthquake	Entire Project Area	The Southern California Earthquake Center (SCEC) in 2007 concluded that there is a 99.7 % probability that an earthquake of M6.7 or greater will hit California within 30 years.[1]	Likely	1994 – Northridge Earthquake

Hazard	Location (Where)	Extent (How Big an Event)	Probability (How Often) *	Previous Significant Event
Windstorm	Hillside areas	30-miles per hour or greater.	Likely	Annual
* 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				

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 **Changes in Climate, Population, and Land Use Development** below.

Changes

Changes in Climate

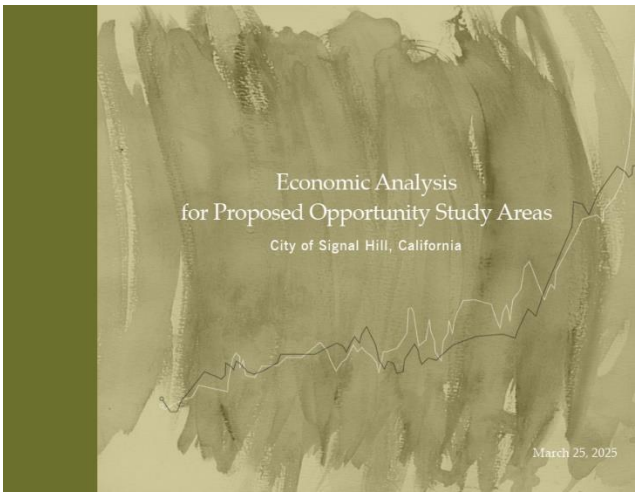
Climate change impacts people in Signal Hill in various ways, including through extreme heat events, changes in air quality, increased risk of wildfires, and potential impacts on water supply and infrastructure. These effects can lead to health issues, such as heat-related illnesses and respiratory problems, 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.

Changes in Population

Changes in population in Signal Hill can significantly impact residents by influencing the demand for services, housing affordability, cultural diversity, traffic congestion, economic opportunities, and community services. A growing population may strain existing infrastructure and services, leading to longer waiting times and crowded facilities. Additionally, population changes can affect the availability of affordable housing and create challenges related to cultural integration and inclusivity. However, population growth can also bring new job opportunities and enrich the cultural fabric of the community. Effective urban planning and community development strategies are crucial to address these impacts and ensure the well-being of residents in Signal Hill.

Land Use Development

Land use development in Signal Hill can impact residents by affecting housing availability and affordability, access to services such as healthcare and education, quality of life factors like access to green spaces and community amenities, economic opportunities through job creation and local business growth, and environmental considerations such as traffic congestion and pollution. Thoughtful planning and community engagement are crucial to ensure that development meets the needs of residents and enhances the overall quality of life in the city.



Since the writing of the 2018 HMP, the majority of development has focused on retrofitting residential structures. In light of the increased building standards for these projects, the vulnerability to profiled hazards decreased slightly. Plans for the next 5 years are much more ambitious including recycling and redevelopment of the central business district.

According to the March 2025 Economic Analysis for Proposed Opportunity Study Areas, the City of Signal Hill has embarked on a path to facilitate the recycling or redevelopment of the parts of the Atlantic Spring and Central neighborhoods. This will lead to realizing part of its 2001 General Plan and an objective in the 2023 to 2028 Strategic Plan—the development of a central business district in the Town Center area. The city has identified three Opportunity Study Areas (OSAs). The purpose of the project is to assess future land use opportunities that will allow the City to grow economically, create jobs, and diversify the City's tax basis for several years. This report is an economic analysis intended to identify the potential market demand to support redevelopment and the creation of the central business district.

Subsequent stages in the overall project will create a generalized plan for the OSAs, finalize the boundaries that will be included, and establish a zoning mechanism that will incentivize development and lead to the realization of the vision for a central business district. The report assesses market conditions and potential demand for:

+ Housing development
+ Retail businesses
+ Hotels
+ Office and industrial uses

The project will result in an increase in overall density of people and structures. However, construction will be required to adhere to contemporary building standards and zoning practices more focused on safety and prevention. Therefore, the development will result in a slight increase in overall vulnerability to the profiled hazards.

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.

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 **U.S. Drought Monitor, Infographic 3.1** below.

U.S. Drought Monitor

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.

Infographic 3.1: U.S. Drought Monitor – Los Angeles County, California
(Source: Website – U.S. Drought Monitor 6.4.2024)

Map released: Thurs. May 30, 2024

Data valid: May 28, 2024 at 8 a.m. EDT

Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2024-05-28	73.55	26.45	12.55	4.23	0.72	0.06	44
Last Week to Current	2024-05-21	72.62	27.38	12.55	4.18	0.75	0.06	45
3 Months Ago to Current	2024-02-27	53.16	46.84	21.59	7.79	1.49	0.14	78
Start of Calendar Year to Current	2023-12-26	45.71	54.29	32.35	16.74	6.44	1.16	111
Start of Water Year to Current	2023-09-26	43.65	56.35	38.23	22.46	10.15	2.82	130
One Year Ago to Current	2023-05-30	49.95	50.05	18.95	8.14	3.28	1.24	82

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 – Circulation Element (2009), the City's primary water supply comes from two groundwater wells located in north Long Beach. Additional water may be purchased from the Metropolitan Water District of Southern California.

The City has drilled a third groundwater well centrally located within Signal Hill and is in the process of developing plans and specifications for the necessary pumping and treatment facilities. The City has three storage reservoirs and pumping facilities, providing water for domestic purposes and firefighting. The Gundry reservoir and pumping facility was constructed in 1929 and has a storage capacity of 4.7 million gallons. This facility is located in the northern part of the city. Two hilltop reservoirs and pumping facilities were constructed in the late 1990s, having a combined storage capacity of 2.6 million gallons.

A significant drought has hit the state of California since 2012. The drought has depleted reservoir levels all across the state. In January of 2014, Governor Brown declared a state of emergency and directed state officials to take all necessary actions to prepare for water shortages. As the drought prolonged into 2015, to help cope with the drought, Governor Brown gave an executive order in April 2015 which mandated a statewide 25 percent reduction in water use. In January of 2016, the DWR and the U.S. Bureau of Reclamation have finalized the 2016 Drought Contingency Plan that outlines State Water Project and Central Valley Project operations for February 2016 to November 2016. The plan was developed in coordination with staff from State and federal agencies. Although the drought has more significantly impacted surfaces waters and other agencies that use water for agriculture, the City of Signal Hill is still affected by the drought, primarily due to reduced reliability of imported water.

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 Droughts Impacting Signal Hill, Previous Droughts Impacting Los Angeles County,** and **Table 3.6** below.

Previous Droughts Impacting Signal Hill

Fortunately, there is no history of severe drought within Signal Hill. Although there is no evidence of a drought having a significant impact on the City at the current time, California as a whole has experienced drought conditions most recently since 2021.

Previous Droughts Impacting Los Angeles County

The region's Mediterranean climate makes it especially susceptible to variations in rainfall. Though the potential risk to the City of Signal Hill 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 3.6 outlines the State of California drought related executive orders. There were no federal declarations related to droughts found for Los Angeles County.

Table 3.6: 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 Droughts, Climate Change Considerations** below.

Probability of Future Droughts

Droughts occur every day throughout California. When conducting the risk assessment, the planning team determined that the probability of a catastrophic drought affecting Signal Hill is highly likely with an annual probability of occurrence being between 1 per year.

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.

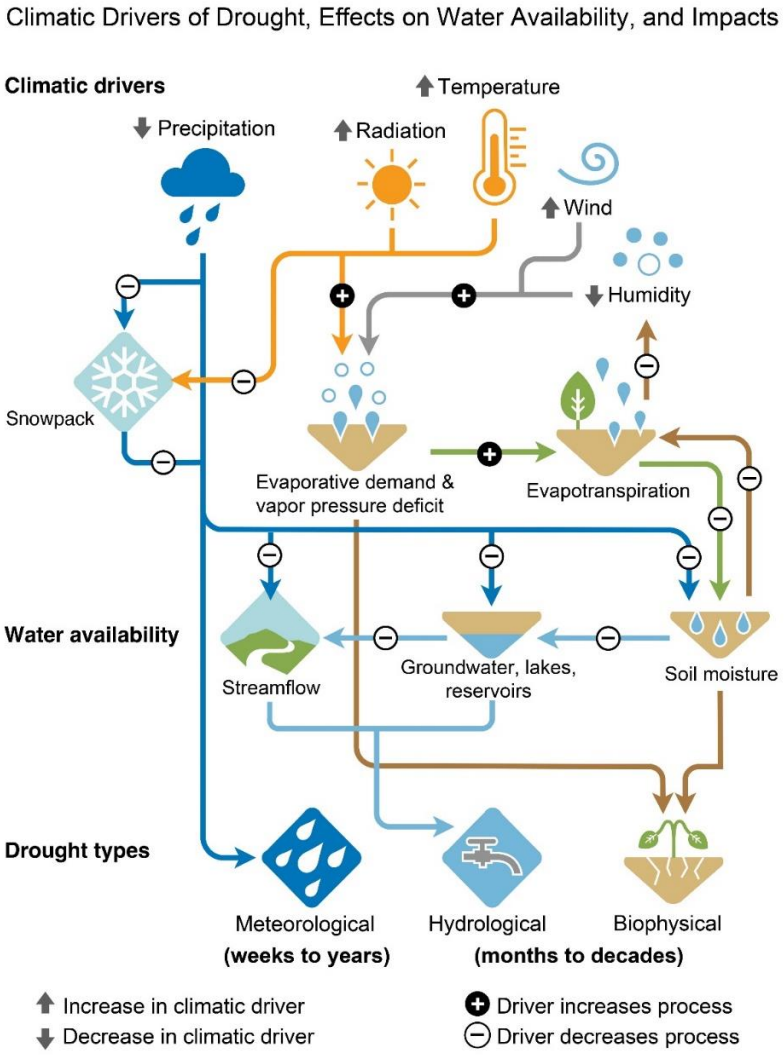
Despite this complexity, some robust regional trends are emerging. Colorado River streamflow over the period 2000–2014 was 19% lower than the 20th-century average, largely due to a reduction in snowfall, less reflected sunlight, and increased evaporation. The period 2000–2021

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. The figure 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)



Signal Hill 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.

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 soil and bedrock.

Liquefaction
Liquefaction is a phenomenon in which the strength and stiffness of 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. See **Liquefaction Areas** discussion below for more information.

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 3.7, HAZUS, Map 3.1-3.2** 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 3.7** compares the Mercalli Scale and Peak Ground Acceleration.

Table 3.7: 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, Map 3.1** below.

Local Conditions

According to the City of Signal Hill General Plan - Safety Element (2016), Signal Hill is located in a seismically active region, and major regional faults create the risk of substantial earth shaking and potential ground rupture in the area. Within Los Angeles County, there are over 50 active and potentially active fault segments, an undetermined number of buried faults, and at least 4 blind-thrust faults capable of producing damaging earthquakes. See **Map 3.1** below.

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

Earthquakes that could affect the City would most likely originate from the San Andreas, Newport-Inglewood, or Puente Hills Faults. These faults are close enough in proximity or expected to generate strong enough shaking that could affect the City.

San Andreas Fault Zone

The San Andreas Fault Zone is located approximately 40 miles northeast of the City of Signal Hill. This fault zone extends from the Gulf of California northward to the Cape Mendocino area where it continues northward along the ocean floor. The total length of the San Andreas Fault Zone is approximately 750 miles. The activity of the fault has been recorded during historic events,

including the 1906 (M8.0) event in San Francisco and the 1857 (M7.9) event between Cholame and San Bernardino, where at least 250 miles of surface rupture occurred. These seismic events are among the most significant earthquakes in California history. Geologic evidence suggests that the San Andreas Fault has a 50 percent chance of producing a magnitude 7.5 to 8.5 quake (comparable to the great San Francisco earthquake of 1906) within the next 30 years.

Map 3.1: Regional Faults and Historical Earthquakes
(Source: General Plan-Safety Element, 2016)

Figure 3
Regional Earthquake Faults & Major Historical Earthquakes

City of Signal Hill
GENERAL PLAN

Newport-Inglewood Fault Zone

Locally, the Newport-Inglewood Fault System cuts diagonally across Signal Hill. This is the most significant seismic feature in the area and is considered seismically active. The 1933 Long Beach earthquake resulted from activity on this fault. Within the Newport-Inglewood Fault System, five faults have been identified in and in the immediate vicinity of Signal Hill: the Cherry Hill Fault, Pickler Fault, Northeast Flank Fault, Reservoir Hill Fault, and Wardlow Fault. These faults are generally in a northwest-to-southeast alignment. The Wardlow Fault is a pre-quaternary fault that has not ruptured in at least 2 million years and is therefore considered inactive. All other faults are considered active.

The Newport-Inglewood Fault System is a nearly linear alignment of faults extending 45 miles along the southwestern side of the Los Angeles basin. It can be traced as a series of topographic hills, ridges, and mesas from the Santa Monica Mountains to Newport Beach, where it trends offshore. Structures along the zone of deformation act as groundwater barriers and, at greater depths, as petroleum traps. Continuing seismic activity has been evidenced most prominently in recent times by the 1920 Inglewood and 1933 Long Beach earthquakes.

Puente Hills Fault

The Puente Hills fault is located approximately 15 miles northeast of the City. According to USGS, the Puente Hills Fault was most recently responsible for the M5.1 La Habra earthquake on March 28, 2014, which caused an estimated $2.6 million in damage. The USGS estimates that a future, larger M7.5 earthquake along the Puente Hills fault could kill 3,000 to 18,000 people and cause up to $250 billion in damage. In contrast, a larger M8.0 quake along the San Andreas would cause an estimated 1,800 deaths.

Whittier Fault

The Whittier Fault is a 25 mile right-lateral strike-slip fault that runs along the Chino Hills range between the cities of Chino Hills and Whittier. It is estimated that this fault could generate up to a magnitude 7.2 earthquake.

Estimation of Potential Human and Economic Losses Based on the Exposure and Vulnerability of People, Buildings, and Infrastructure

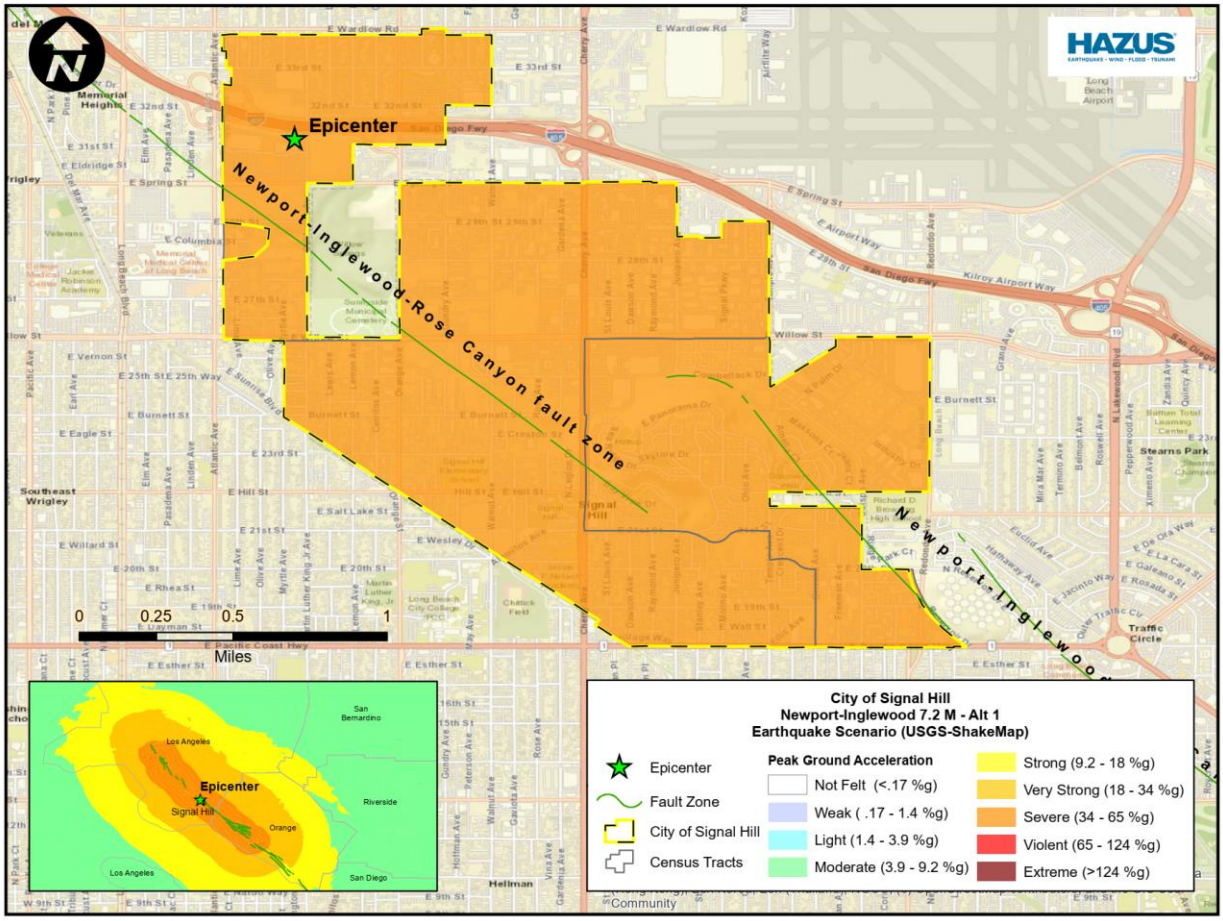
A vulnerability assessment in its simplest form is a simultaneous look at the geographical location of hazards and an inventory of the underlying land uses (populations, structures, etc.). Facilities that provide critical and essential services following a major emergency are of particular concern because these locations house staff and equipment necessary to provide important public safety, emergency response, and/or disaster recovery functions. The discussion below on HAZUS (Hazards United States) includes information on how loss projections were determined.

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 3.2-3.4** below.

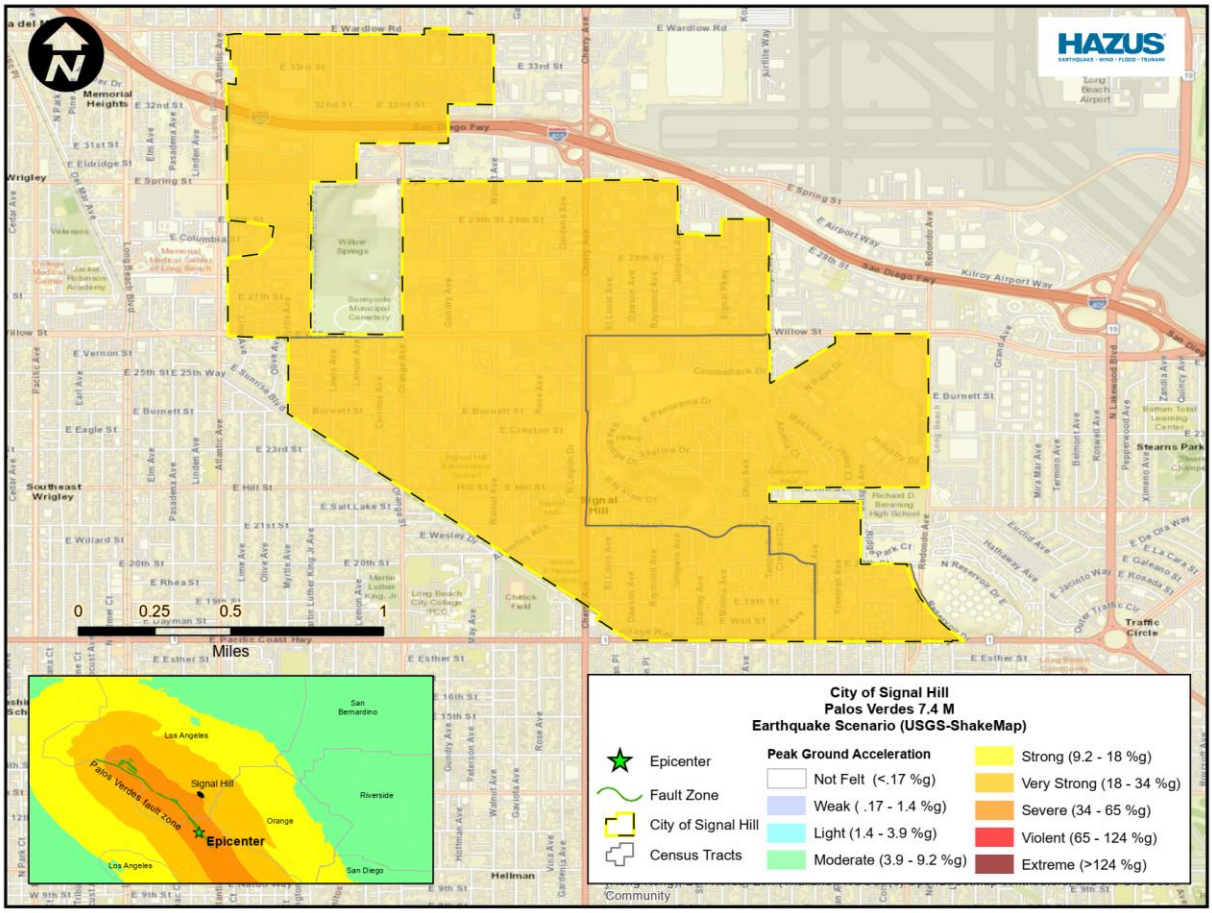
HAZUS

The hazard maps in the mitigation plan were generated by Emergency Planning Consultants using FEMA's Hazards United States – Multi Hazard (HAZUS-MH) software program. Below are the maps generated by HAZUS. The associated reports are available separately. Once the location and size of a hypothetical earthquake are identified, HAZUS-MH estimates the intensity of the ground shaking, the number of buildings damaged, the number of casualties, the amount of damage to transportation systems and utilities, the number of people displaced from their homes, and the estimated cost of repair and clean up. It's important to note that the "project are" is based on Census tracts not jurisdictional boundaries.

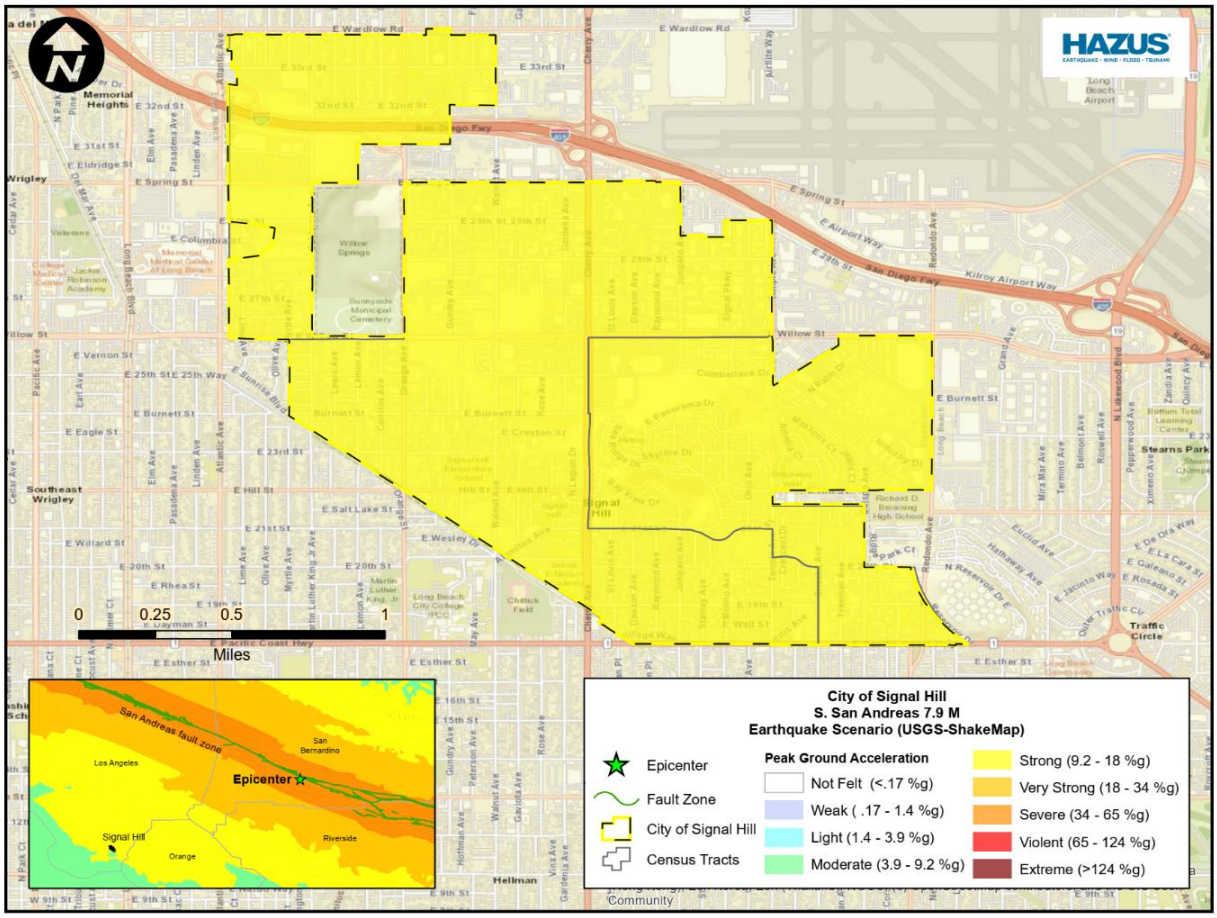
Map 3.2: HAZUS – Newport-Inglewood M7.2
(Source: Emergency Planning Consultants)



Map 3.3: HAZUS – Palos Verdes M7.4
(Source: Emergency Planning Consultants)



Map 3.4: HAZUS – Southern San Andreas M7.9
(Source: Emergency Planning Consultants)

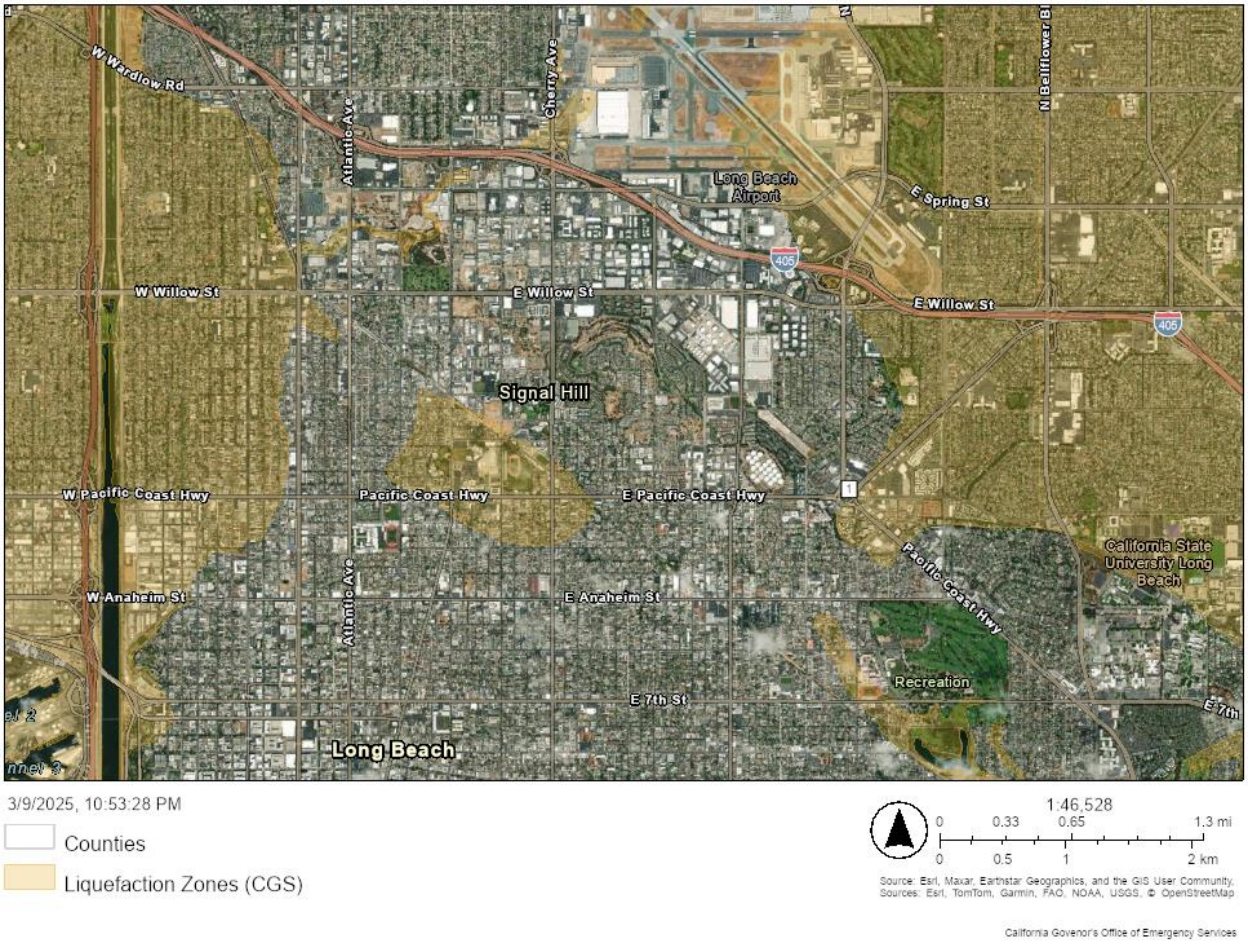


Liquefaction Area

According to the Safety Element, liquefaction presents the most prominent secondary earthquake ground failure issue in the city. Liquefaction-related lateral spreads can occur adjacent to stream channels and deep washes that provide a free face toward which the liquefied mass of soil fails. Lateral spreads can cause extensive damage to pipelines, utilities, bridges, roads and other structures.

Map 3.5 depicts the liquefaction areas in Signal Hil. Liquefaction hazards in Signal Hill are generally low due to low groundwater levels. However, there are limited areas of liquefaction potential located in the southwestern portion of the City.

Map 3.5: Liquefaction Areas
(Source: MyPlan CalOES, 2025)
Note: 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 Earthquakes Impacting Signal Hill, Previous Earthquakes Impacting Los Angeles County,** and **Table 3.7** below.

Previous Earthquakes Impacting Signal Hill

The following earthquake events significantly impacted the region surrounding the City of Signal Hill.

In January 1994, the magnitude 6.7 Northridge Earthquake (thrust fault) which produced severe ground motion, caused 57 deaths, 9,253 injuries and left over 20,000 displaced. Scientists have stated that such devastating shaking should be considered the norm near any large thrust earthquake. Recent reports from scientists of the U.S. Geological Survey and the Southern California Earthquake Center say that the Los Angeles Area could expect one earthquake every year of magnitude 5.0 or more for the foreseeable future.

Since the writing of the 2012 Mitigation Plan, there have been no significant earthquake events in the City of Signal Hill.

Previous Earthquakes Impacting 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 3.8: Previous Earthquakes Impacting 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, Climate 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 Signal Hill is likely with an annual probability of occurrence being between 1 in 10 and 1 in 100 years.

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."

Windstorm

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

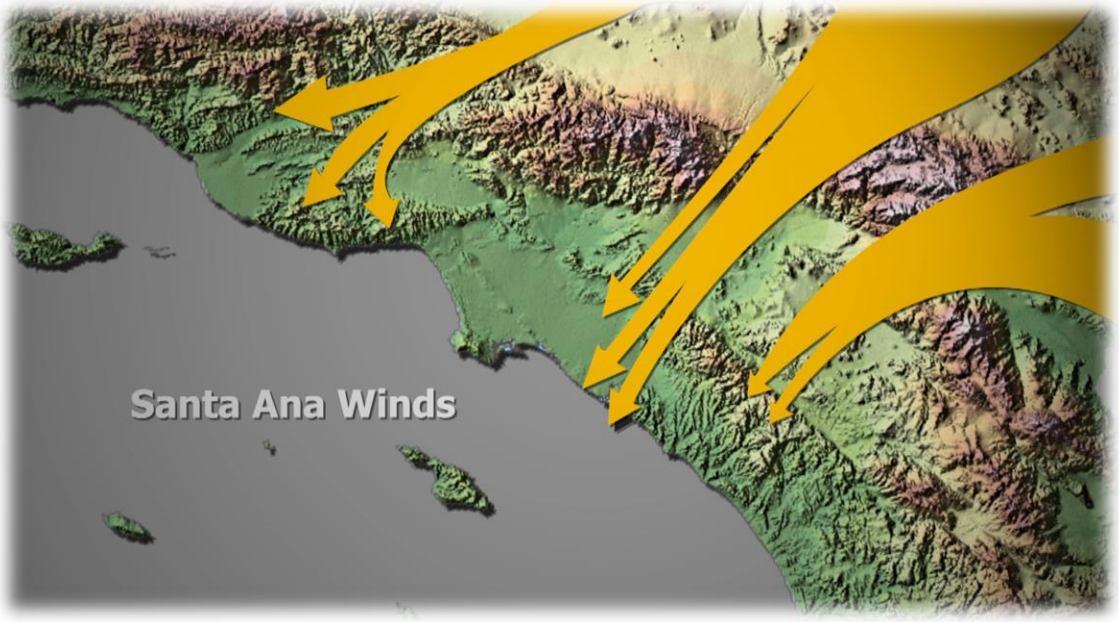
Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Description** below.

Description

Santa Ana winds are generally defined as warm, dry winds that blow from the east or northeast (offshore). These winds occur below the passes and canyons of the coastal ranges of Southern California and in the Los Angeles and Orange County basins. Santa Ana winds often blow with exceptional speed in the Santa Ana Canyon (the canyon from which it derives its name). Forecasters at the National Weather Service offices in Oxnard and San Diego usually place speed minimums on these winds and reserve the use of "Santa Ana" for winds greater than 25 knots." These winds accelerate to speeds of 35 knots as they move through canyons and passes, with gusts to 50 or even 60 knots.

Infographic 3.2: Santa Ana Winds
Source: A screenshot from the USGS film "Living with Fire"



The complex topography of Southern California combined with various atmospheric conditions creates numerous scenarios that may cause widespread or isolated Santa Ana events. Commonly, Santa Ana winds develop when a region of high pressure builds over the Great Basin (the high plateau east of the Sierra Mountains and west of the Rocky Mountains including most of Nevada and Utah). Clockwise circulation around the center of this high-pressure area forces air downslope from the high plateau. The air warms as it descends toward the California coast at the rate of five degrees F per 1,000 feet due to compressional heating. Thus, compressional heating provides the primary source of warming. The air is dry since it originated in the desert, and it dries out even more as it is heated.

These regional winds typically occur from October to March, and, according to most accounts are named either for the Santa Ana River Valley where they originate, or for the Santa Ana Canyon, southeast of Los Angeles, where they pick up speed.

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 **Table 3.9** below.

Table 3.9: Beaufort Scale
Source: National Weather Service

Force	Speed (mph)	Description
0	0 to 1	Calm: Smoke rises vertically
1	1 to 3	Light air: The direction of the wind is shown by smoke drift, but not wind vanes.
2	4 to 7	Light breeze: Wind is felt on the face, leaves rustle, and wind vanes are moved.
3	8 to 12	Gentle breeze: Leaves and small twigs are in motion, and light flags are extended.
4	13 to 18	Moderate breeze: Dust and loose paper become airborne, and small branches are moved.
5	19 to 24	Fresh breeze: Small trees begin to sway
6	25 to 31	Strong breeze: Large branches are in motion, and using an umbrella becomes difficult.
7	32 to 38	High wind: Whole trees are in motion and walking against the wind can be hard.
8	39 to 46	Strong wind: Walking is difficult and twigs break off trees.
9	47 to 54	Severe wind: Slight structural damage.
10	55 to 63	Storm: Trees are uprooted and considerable damage to structures.
11	63 to 72	Violent storm: Widespread damage.
12	73 and above	Hurricane: Devastating damage.

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 Planning Team, Signal Hill is at increased risk of windstorm damage – especially from falling trees.

Recent drought conditions have significantly increased the vulnerability of trees due to lack of necessary water. Additionally, eucalyptus trees within Signal Hill are specifically and currently prone to pest infestation. The infected, dying trees are increasingly vulnerable to severe Santa Ana wind conditions.

Historically, high wind conditions have caused injury, death, property damage, and fanned wildfires. Windstorms with significant intensity have been responsible for the sinking of watercraft and the downing of aircraft resulting in the loss of life. The most common wind condition is the Santa Ana Wind. This condition has generated winds that have exceeded 100 mph. Wind velocities of up to 111 mph have been generated from the same Santa Ana wind, resulting in the loss of life due to flying debris.

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 Windstorms Impacting Signal Hill, Previous Windstorms Impacting Los Angeles County** below.

Previous Windstorm Impacting Signal Hill

Severe windstorms pose a significant risk to life and property in Signal Hill by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes. High winds can and do occasionally cause tornado-like damage to local homes and businesses in and near the community. High winds have a destructive impact, especially on trees, power lines, and utility services.

Previous Windstorm Impacting Los Angeles County

Table 3.10: Significant Windstorm Impacting 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 Windstorm Events , Climate Change Considerations** below.

Probability of Future Windstorm Events

When conducting the Risk Assessment, the Planning Team determined that the probability of a catastrophic windstorm event affecting Signal Hill is likely with an annual probability of occurrence being between 1 in 10 and 1 in 100 years.

Climate Change Considerations

According to the State Hazard Mitigation Plan, the frequency and severity of severe wind, weather, and storm events is anticipated to increase over the next 30 years due to the impacts of climate change.

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:

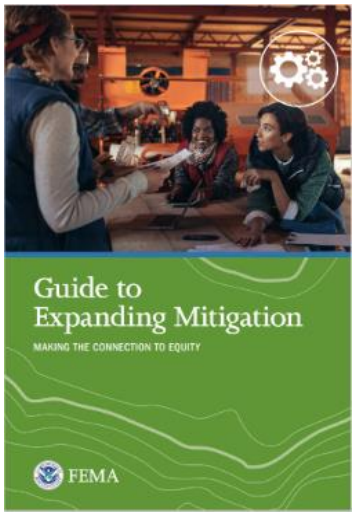
People
Structures
Economy
Natural, Historic, and Cultural Resources
Activities Bringing Value to the Community

People

People are the community's most important asset. In the context of this discussion, people are defined as individuals who live and/or work in Signal Hill.

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, Table 4.1 Graphics 4.1-4.2** 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)

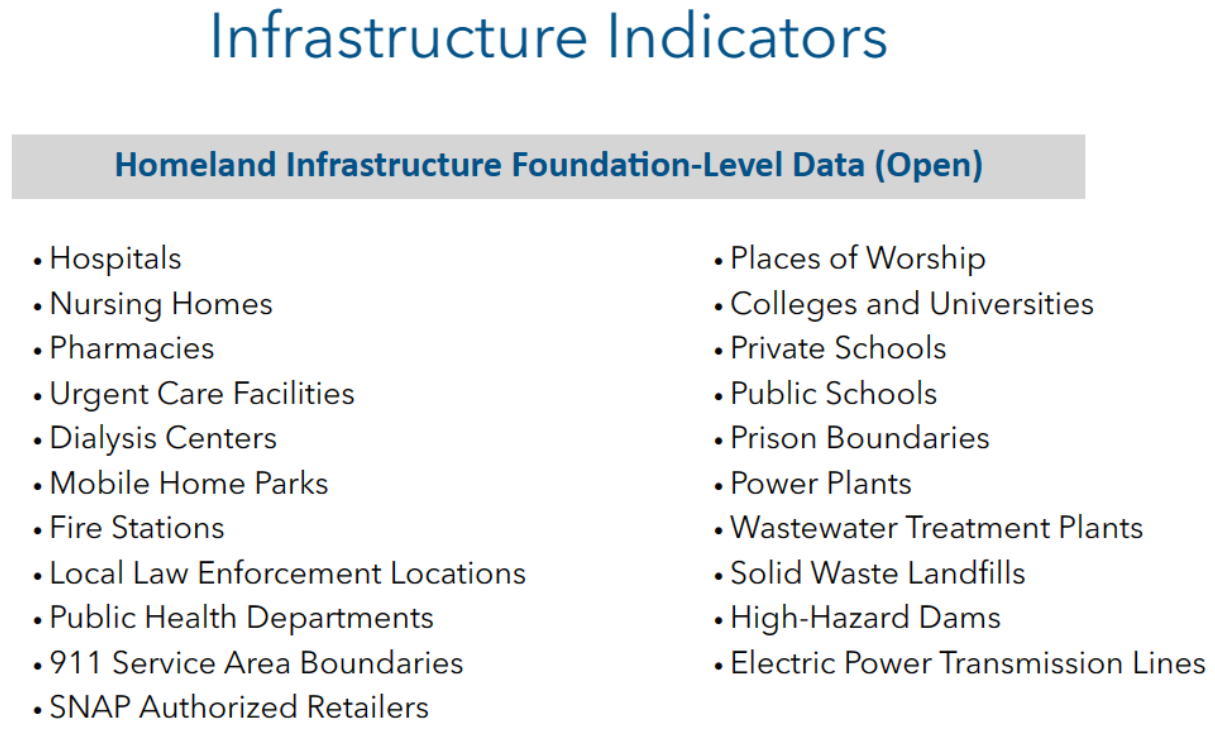
People & Community Indicators

County and Census Tract Community Resilience Challenges Index (CRCI) combining 22 indicators.

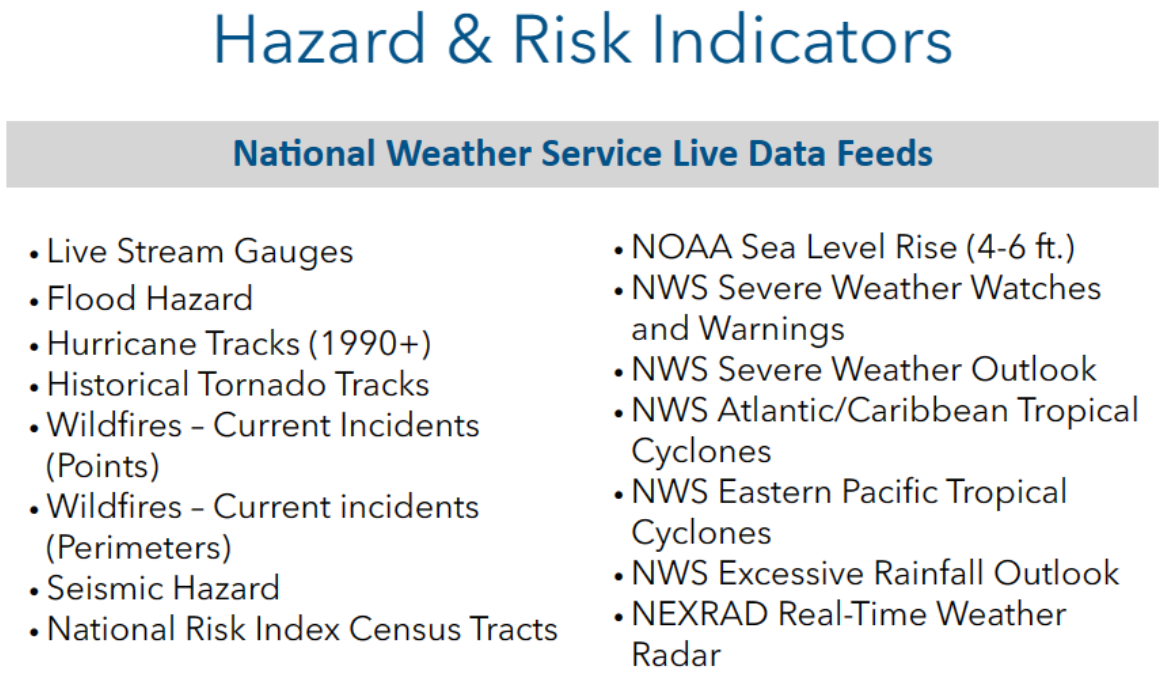
Population Characteristics	Household Characteristics	Housing
• Population without a High School Education • Population 65 and Older • Population with a Disability • Population by Race and Hispanic Origin	• Households without a Vehicle • Households with Limited English • Single-Parent Households • Households without a Smartphone • Households without Broadband Subscription	Mobile Homes as Percentage of Housing Owner-Occupied Housing Rental Housing Costs Residential Structures in SHFA with Flood Insurance

Healthcare	Economic	Connection to Community
• Number of Hospitals • Medical Professional Capacity • Population without Health Insurance • Medicare Recipients with Power-Dependent Devices	• Population Below Poverty Level • Median Household Income • Unemployed Labor Force • Unemployed Women Labor Force • Income Inequality • Workforce in Predominant Sector	• Presence of Civic and Social Organizations • Population without Religious Affiliation • Percentage of Inactive Voters • Population Change

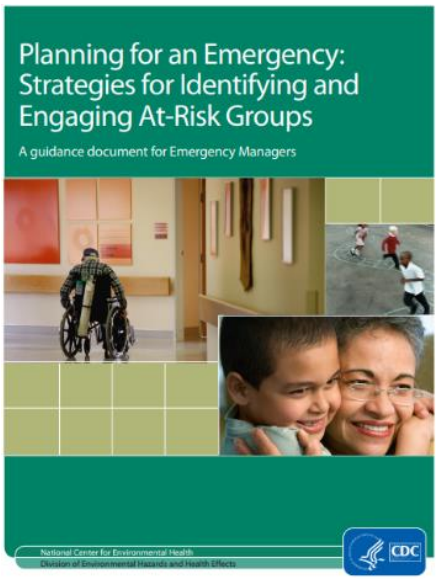
Graphic 4.2: RAPT Infrastructure Indicators
Source: FEMA Resilience Analysis and Planning Tool (RAPT)



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 Signal Hill. 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 six contributing factors of social vulnerability and a summary of Signal Hills social vulnerabilities. Due to a limitation on 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.

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"

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."

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.

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).

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 influence the individual's ability to comprehend the situation and take appropriate action.

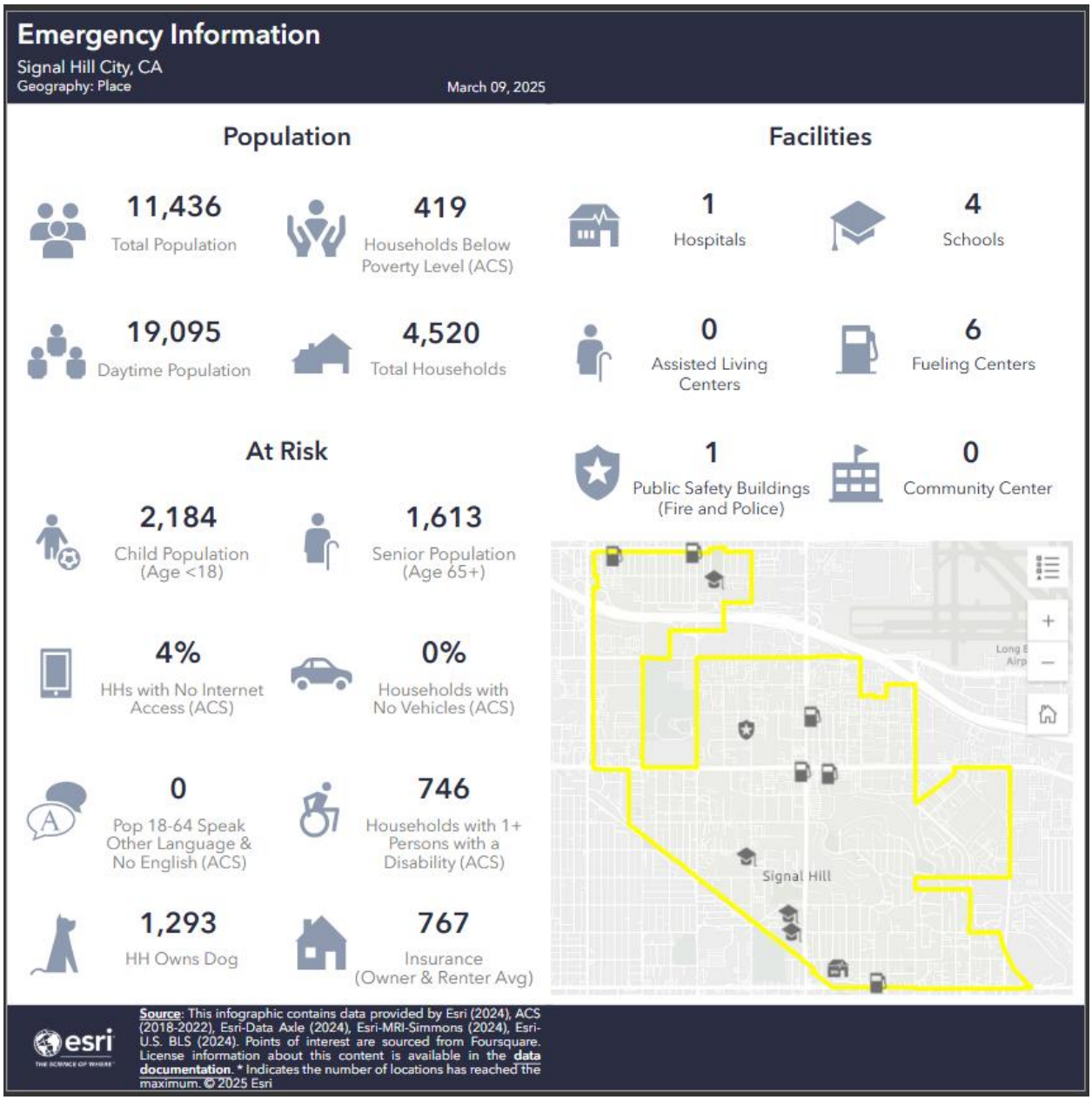
Summary of Social Vulnerabilities in Signal Hill

The infographic below summarizes the demographic profile of Signal Hill including the contributing factors of social vulnerability.

Signal Hill, California, has a population of 11,436 with a median age of 39. The city has 4,520 households, a median household income of $102,604, and a relatively high diversity index of 89. The daytime population rises to 19,095 due to businesses and workers. While the city has a strong economic base, 9% of households fall below the poverty level, and 746 households include individuals with disabilities. Additionally, 1,613 residents are seniors, and 2,184 are children under 18, making these groups more vulnerable during emergencies.

Key risks include limited transportation and connectivity, with 171 households lacking a vehicle and 4% of households having no internet access. Language barriers may also impact emergency response, as 26 seniors speak only Spanish. While the city has one hospital, four schools, and six fueling centers, it lacks assisted living centers and community centers, potentially leaving gaps in services for at-risk populations. These factors highlight the need for targeted support for seniors, low-income households, and individuals with disabilities to ensure their safety and well-being, especially in times of crisis.

Graphic 4.1: Demographic Emergency Information
Source: Esri Business Analyst, 2025



Graphic 4.2: At Rist Population Profile
Source: Esri Business Analyst, 2025

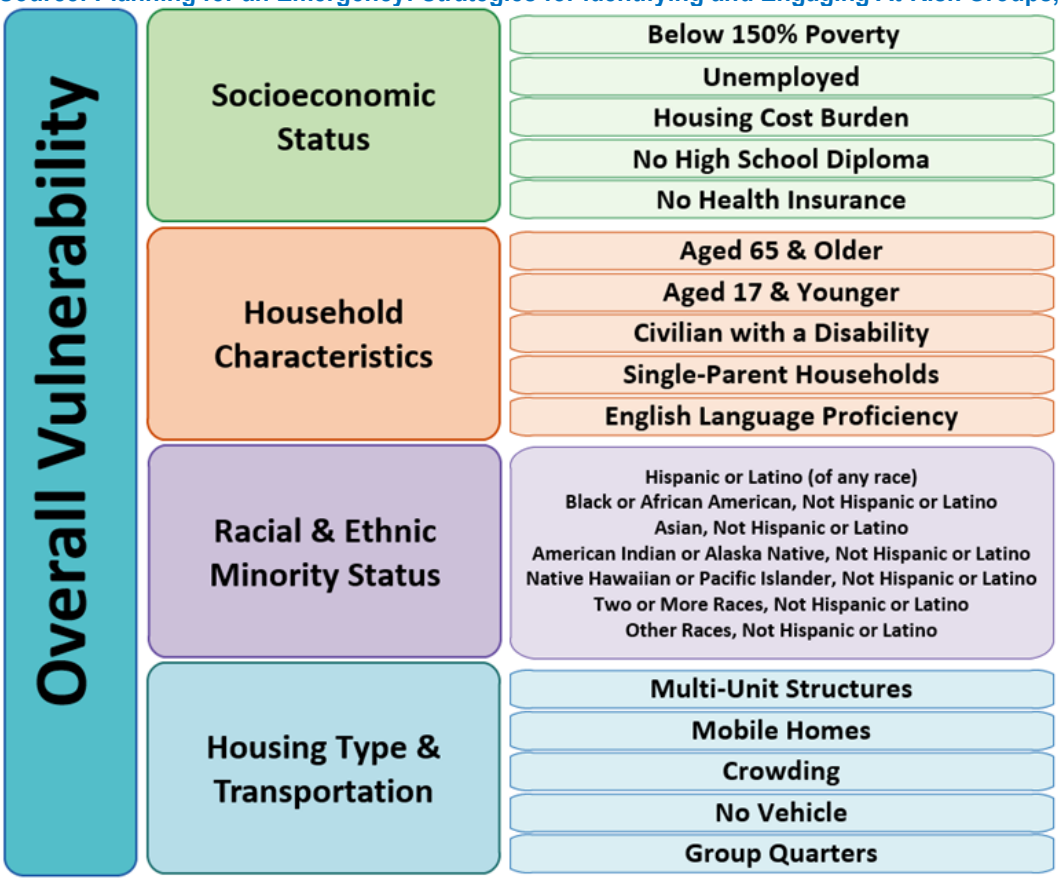
Language Spoken (ACS)	Age 5-17	18-64	Age 65+	Total
English Only	1,196	4,719	823	6,738
Spanish	204	1,990	175	2,369
Spanish & English Well	204	1,813	89	2,106
Spanish & English Not Well	0	149	60	209
Spanish & No English	0	28	26	54
Indo-European	15	112	16	143
Indo-European & English Well	0	112	6	118
Indo-European & English Not Well	15	0	6	21
Indo-European & No English	0	0	4	4
Asian-Pacific Island	54	1,115	329	1,498
Asian-Pacific Isl & English Well	54	1,070	232	1,356
Asian-Pacific Isl & English Not Well	0	45	97	142
Asian-Pacific Isl & No English	0	0	0	0
Other Language	42	122	0	164
Other Language & English Well	42	85	0	127
Other Language & English Not Well	0	37	0	37
Other Language & No English	0	0	0	0

Social Vulnerability Index

The Social Vulnerability Index (SVI) is a free, web-based tool developed at CDC by the Agency for Toxic Substance and Disease Registry's Geospatial Research, Analysis and Services Program (GRASP). The SVI was designed to help emergency managers identify and map communities that will most likely need support before, during, and after a disaster. This tool allows you to visualize population-level social vulnerabilities to help emergency planners and responders better prepare for and respond to disasters.

The SVI uses U.S. Census and American Community Survey data to identify at-risk groups by ranking all U.S. census tracts by level of social vulnerability. Census tracts are subdivisions of counties for which the Census collects statistical data. The SVI ranks, at national-level or state-level, each tract on 16 social factors. The 16 social factors are outlined in **Figure 4.2**.

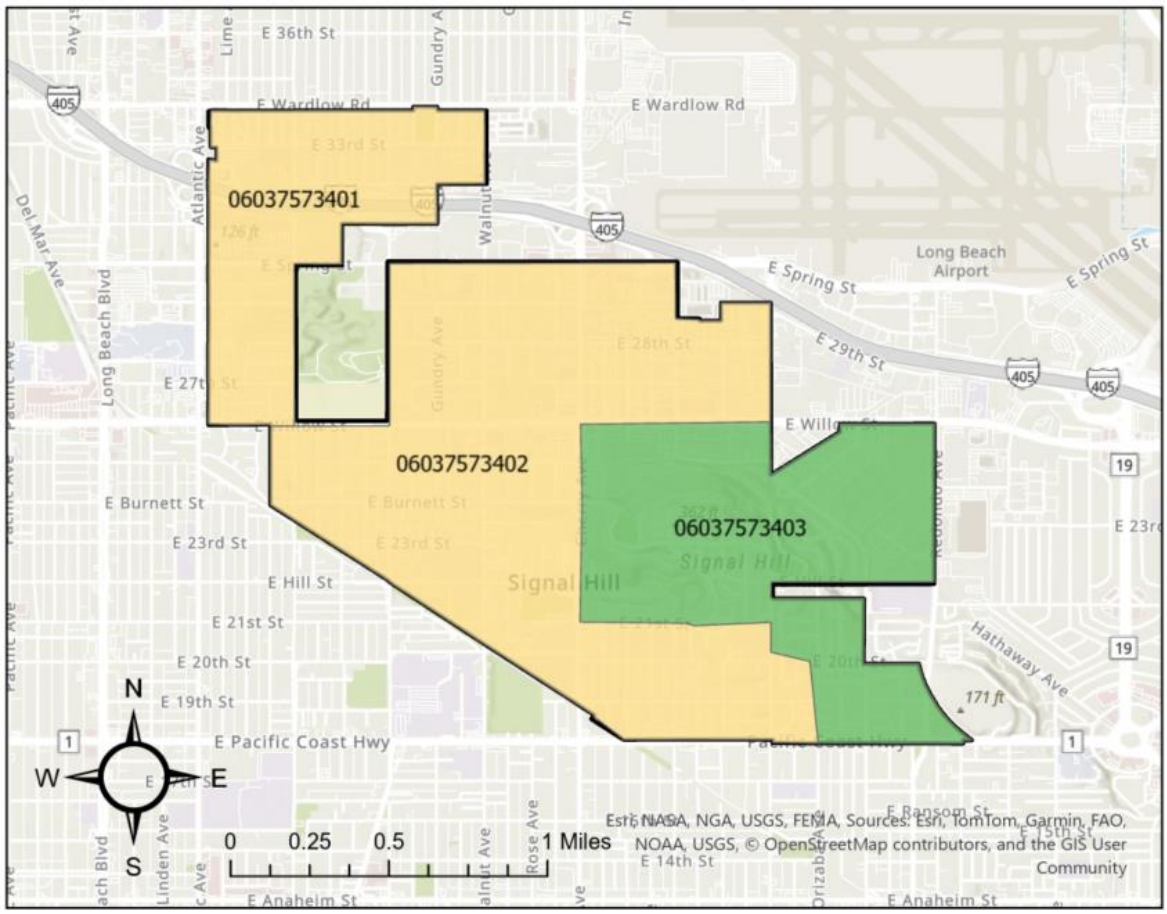
Figure 4.2: Social Vulnerability Index Themes and Social Factors
Source: Planning for an Emergency: Strategies for identifying and Engaging At-Risk Groups, CDC



Map 4.4 below depicts the overall vulnerability for the City of Signal Hill. The areas in yellow represent the census tracts with a higher social vulnerability index. An SVI in the 75th percentile or above is considered high. There are no census tracts within the city that have a high SVI.

Table 4.5 outlines the three census tracts that have a high SVI and the threat the census tract has to the different hazards identified by the planning team.

Map 4.4: Signal Hill Social Vulnerability Index Map
Source: CDC/ATSDR Social Vulnerability Index, 2024



Legend

- Low (25th Percentile)
- Low-Medium (50th Percentile)
- Medium-High (75th Percentile)
- High (Above 75th Percentile)
- Signal Hill Boundary

Table 4.1: Hazard Vulnerability to People
(Source: Emergency Planning Consultants)
(Note: "X" indicates affirmative, Census Tract with an asterisk indicates a tract with high SVI)

Census Tract in Signal Hill	Drought	Earthquake	Windstorm
06037573401	X	X	X
06037573402	X	X	X
06037573403	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

Drought

A drought in Signal Hill, California, could have widespread consequences for residents, especially vulnerable populations such as seniors, low-income households, and individuals with disabilities. With 1,613 seniors and 746 households including disabled individuals, prolonged water shortages could lead to health risks, particularly for those who rely on water-intensive medical equipment or have conditions exacerbated by dehydration and heat. Low-income households, which make up 9% of the city, may struggle with rising water costs, making it harder to afford basic necessities. Additionally, 4% of households lack internet access, potentially limiting their ability to receive drought-related emergency information and conservation resources.

A drought could also impact businesses and workers, as Signal Hill has a daytime population of 19,095, including 1,288 businesses. Water restrictions could disrupt industries that depend on water, leading to job losses or reduced economic activity. The city's limited emergency resources—such as a single hospital and no assisted living centers—could strain public health services if water-related illnesses or extreme heat events increase.

Earthquake

An earthquake in Signal Hill, California, could significantly impact its residents, particularly vulnerable populations such as seniors, low-income households, and individuals with disabilities. With 1,613 seniors, 746 households with disabled individuals, and 419 households below the poverty level, these groups may struggle with evacuation, accessing medical care, or recovering from property damage. Additionally, 171 households without a vehicle could face transportation challenges if emergency evacuations are necessary. Limited English proficiency among some seniors could also hinder communication during crisis response efforts. Additionally, with 19,095 people present during the daytime due to businesses, an earthquake during work hours could leave many individuals stranded or injured, increasing the demand for emergency services.

Windstorm

A windstorm in Signal Hill, California, could pose serious risks to residents, particularly vulnerable groups such as seniors, individuals with disabilities, and low-income households. With 1,613 seniors and 746 households including people with disabilities, power outages and transportation disruptions could leave many without essential medical equipment, heating, or communication. Households without a vehicle (171) may also struggle to evacuate or access emergency resources if roads become blocked by fallen trees or debris. Additionally, 4% of households lack internet access, which could hinder their ability to receive emergency alerts and updates.

Windstorms can also cause structural damage, downed power lines, and road hazards, affecting Signal Hill's 19,095 daytime population and 1,288 businesses. The city's limited emergency infrastructure—one hospital, a single public safety building, and no assisted living centers—could result in delayed emergency response times. Businesses and workers may also face disruptions due to power outages and property damage.

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** and **Table 4.6** 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 nine City-owned facilities as "critical". The Team also identified five other facilities that are not owned by the city but are deemed critical. **Table 4.2** below illustrates the hazards with potential to impact critical facilities owned by or providing critical services to the City of Signal Hill.

Table 4.2: Hazard Vulnerability to Structures
(Source: Planning Team, Emergency Planning Consultants)
(Note: "X" indicates affirmative)

City of Signal Hill Critical Facilities	Drought	Earthquake	Windstorm
City of Signal Hill			
City Hall 2175 Cherry Avenue # Staff: 35 # Buildings: 1 Value of Buildings: $3,725,000 Value of Contents: $275,000 Total Value: $4,000,000	X	X	X
Police Department (includes Emergency Operations Center) 2745 Walnut Avenue # Staff: 56 # Buildings: 2 Value of Buildings: $8,848,000 Value of Contents: $706,000 Total Value: $9,554,000	X	X	X
City Yard 2175 East 28th Street # Staff: 13 # Buildings: 3 Value of Buildings: $3,064,400 Value of Contents: $231,000 Total Value: $3,295,400	X	X	X
Community Center 1780 East Hill Street # Staff: 15 # Buildings: 1 Value of Buildings: $3,146,000 Value of Contents: $46,000 Total Value: $3,192,000	X	X	X

City of Signal Hill Critical Facilities	Drought	Earthquake	Windstorm
Hilltop Park 2351 Dawson Avenue # Staff: 0 # Buildings: 1 Value of Buildings: $104,900 Value of Contents: $0 Total Value: $104,900	X	X	X
Library 1800 East Hill Street # Staff: 15 # Buildings: 1 Value of Buildings: $18,503,650 Value of Contents: $1,613,790 Total Value: $20,117,440	X	X	X
Long Beach Unified School District			
Signal Hill Elementary 2285 Walnut Avenue	X	X	X
Alvarado Elementary School 990 East 21st Street	X	X	X
Jessie E. Nelson Academy 1260 East 33rd Street	X	X	X
Los Angeles County		X	
Los Angeles County Fire - Signal Hill Station 2300 East 27th Street	X	X	X

Based on available data provided by the city, there is a minimum of $40,263,740 worth of city owned property and 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 – $402,637
- 5% Impact – $2,013,187
- 10% Impact – $4,026,374

- 20% Impact – $8,052,748
- 50% Impact – $20,131,870

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

Drought

The most immediate impact of a drought is on the water supply. Signal Hill relies on both surface and groundwater sources, which can become depleted during prolonged droughts. This can lead to water rationing, affecting residential, commercial, and industrial users. Reduced water availability can strain the city's ability to provide adequate water for drinking, sanitation, and fire suppression, compromising public health and safety. All commercial and residential property in Signal Hill can be 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 leaves property vulnerable to fires. Dried vegetation around properties also increases the vulnerability to fires.

Prolonged drought conditions can 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 can also 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.

The City-owned critical facilities include 9 buildings with property and contents valued at $40,263,740 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 Singal Hill.

Earthquake

Structures include physical buildings, lifelines, and critical infrastructure in a community. All properties and occupants in Signal Hill 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 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 9 buildings with property and contents valued at $40,263,740 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 Singal Hill.

Windstorm

A windstorm in Signal Hill could have significant consequences for city-owned facilities, affecting public services, infrastructure, and emergency response. Strong winds can cause structural damage to government buildings, police and fire stations, and public works facilities, potentially delaying critical services. Facilities with older or weaker structures may suffer roof damage, broken windows, or water intrusion if the storm brings heavy rain.

The City-owned critical facilities include 9 buildings with property and contents valued at $40,263,740 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 Singal Hill.

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** and **Table 4.3** below.

Vulnerability to Economy

Signal Hill has several assets that have an important impact on the city's economy. Several of these economic assets overlap with the assets outlined in **Structure**s as they are community lifelines. These assets include major employers and any impact from hazards has the potential of causing debilitating consequences to the local economy. These assets include two Home Depots, Costco Wholesale, two Office Depots, and Target.

Table 4.3: Hazard Vulnerability to Economic Assets
(Source: 2024 Annual Comprehensive Financial Report, Emergency Planning Consultants)
(Note: "X" indicates affirmative, asterisk indicates asset is included as a Structure as well)

Economic Assets	Drought	Earthquake	Windstorm
Home Depot – 433 employees 2450 Cherry Avenue, Signal Hill 751 E Spring Street, Signal Hill	X	X	X
Costco – 366 employees 2200 E Willow Street, Signal Hill	X	X	X

Economic Assets	Drought	Earthquake	Windstorm
Office Depot – 256 employees 3366 E Willow Street, Signal Hill 2301 E Willow Street, Signal Hill	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

Home Depot

The Home Depot in Monterey Park is a large home improvement retail store that serves the community by offering a broad selection of products for DIY projects, construction, renovation, and home maintenance. Located conveniently off the Pomona Freeway (60), this Home Depot is frequented by homeowners, contractors, and businesses in the San Gabriel Valley and nearby areas. Locations offer fresh produce, meats, dairy, frozen foods, and pantry staples, along with a variety of organic and specialty products. The store also includes sections for bakery goods, deli items, and prepared foods, making it a convenient spot for both daily shopping and quick meals.

- **Drought:** A drought could impact Home Depot in Signal Hill by disrupting water-dependent operations, increasing business costs, and affecting customer traffic. Water restrictions might limit watering of plants, cleaning services, restrooms, and cooling systems, potentially making the store less comfortable for employees and shoppers. If the drought leads to power outages due to increased energy demand for cooling, Office Depot's ability to provide printing, tech support, and other essential services could be affected. Additionally, supply chain disruptions caused by drought-related agricultural and manufacturing slowdowns could impact inventory availability, especially for plants, bottled water, and water-intensive goods. Rising operational costs due to increased water and energy prices might also lead to higher prices for consumers. If a severe drought affects the local economy, businesses may reduce repairs and improvements, further impacting sales.

- **Earthquake:** Home Depot plays a crucial role in providing tools, appliances, and other home building materials to the community. Earthquake damage could result in the loss of inventory, structural damage to buildings, and potential safety hazards for both employees and customers. The stores might also face supply chain disruptions, affecting their ability to restock essential items quickly. Even if the stores remained operational, the economic impacts of the earthquake could lead to a decrease in consumer spending, impacting the revenue of these stores. Damage to the store and inventory might also delay recovery efforts as home repair items will not be readily available after an earthquake.

- **Windstorm:** Due to the square footage of outdoor displays including all types of landscaping and wood products including fencing materials, it would be necessary to block off these areas from the public. Dangers could also exist as customers enter and exit the buildings – especially if they have carts with protruding objects that could fly away. Also, the carts themselves become hazardous in a strong wind which poses a threat to employees and customers. If other weather conditions have created an environment for wildfires, a high wind could certainly trigger a Public Safety Power Shutoff. Depending on the capacity of the store to provide its own temporary power, its possible sales would need to be discontinued upon the restoration of power.

Office Depot

The Office Depot in Signal Hill, California offers a wide range of office supplies, technology products, and business services. It provides printing, copying, shredding, tech support, TSA PreCheck® enrollment, and shipping services through FedEx and USPS. The store operates Monday through Sunday with varying hours and offers curbside pickup and free next-business-day shipping on qualifying orders. Additionally, it provides ink and toner recycling, self-serve printing, and tech trade-in services.

- **Drought:** A drought could impact the Office Depot in Signal Hill by disrupting water-dependent operations, increasing business costs, and affecting customer traffic. Water restrictions might limit cleaning services, restrooms, and cooling systems, potentially making the store less comfortable for employees and shoppers. If the drought leads to power outages due to increased energy demand for cooling, Office Depot's ability to provide printing, tech support, and other essential services could be affected.

  Additionally, supply chain disruptions caused by drought-related agricultural and manufacturing slowdowns could impact inventory availability, especially for paper products and other water-intensive goods. Rising operational costs due to increased water and energy prices might also lead to higher prices for consumers. If a severe drought affects the local economy, businesses may reduce office supply purchases, further impacting sales.

- **Earthquake:** An earthquake could have significant impacts on the Office Depot in Signal Hill, affecting its infrastructure, operations, and customer access. Structural damage to the building, such as collapsed shelving, broken windows, or compromised electrical and plumbing systems, could force temporary closure for repairs. If roadways are damaged or blocked, deliveries of office supplies and technology products might be delayed, leading to inventory shortages.

  Additionally, power outages could disrupt essential services such as printing, tech support, and payment processing, reducing the store's ability to serve customers. Employee safety could also be a concern, as staff may be unable to commute or may need time off to recover from personal losses. If surrounding businesses are also affected, reduced economic activity could lead to lower customer demand.

- **Windstorm:** A windstorm could significantly impact the Office Depot in Signal Hill by causing structural damage, supply chain disruptions, and operational challenges. High winds could break windows, damage signage, or tear off roofing materials, potentially

forcing temporary closure for repairs. Power outages could disrupt essential services such as printing, tech support, and payment processing, making it difficult for the store to operate effectively.

Additionally, road closures or blocked transportation routes due to fallen trees and debris could delay supply deliveries, leading to inventory shortages. If severe weather discourages customers from shopping in person, sales may decline temporarily. Windstorms could also increase the risk of flying debris damaging vehicles in the parking lot, creating potential liability concerns.

Costco

Costco is a membership-based warehouse store that serves residents of Signal Hill and surrounding areas in the San Gabriel Valley. Like other Costco locations, it offers a wide variety of products, including groceries, electronics, clothing, furniture, and home goods, typically sold in bulk at discounted prices. The Signal Hill Costco also features a popular food court, pharmacy, optical services, and a gas station, allowing members to take advantage of one-stop shopping and savings on fuel.

- **Drought:** drought could impact Costco in several ways, including increased operational costs, supply chain disruptions, and changes in consumer behavior. Water restrictions may affect in-store facilities such as restrooms, food courts, and refrigeration systems, potentially making shopping less convenient for customers. If severe drought conditions lead to higher energy costs due to increased demand for cooling, Costco may face rising utility expenses, which could impact pricing and profitability.

  Additionally, droughts can disrupt agriculture, leading to higher prices or shortages of water-intensive products such as fresh produce, meat, and beverages. Since Costco relies on bulk sales, supply chain disruptions could significantly affect product availability and pricing. If water shortages lead to economic downturns in affected areas, consumers may reduce discretionary spending, impacting sales of non-essential items.

- **Earthquake:** Costco plays a crucial role in providing a wide variety of products, including groceries, electronics, clothing, furniture, and home goods to the community. Earthquake damage could result in the loss of inventory, structural damage to buildings, and potential safety hazards for both employees and customers. The stores might also face supply chain disruptions, affecting their ability to restock essential items quickly. Even if the stores remained operational, the economic impacts of the earthquake could lead to a decrease in consumer spending, impacting the revenue of these stores. Damage to the store and inventory might also delay recovery efforts as home repair items will not be readily available after an earthquake.

- **Windstorm:** A windstorm could significantly impact Costco by causing structural damage, supply chain disruptions, and operational challenges. High winds could damage store infrastructure, including roofing, signage, and loading docks, potentially leading to temporary closures for repairs. Power outages could disrupt critical operations such as refrigeration, lighting, and payment processing, affecting perishable goods and overall store functionality. Transportation disruptions caused by fallen trees, debris, or road closures could delay deliveries, leading to inventory shortages, especially for high-demand emergency supplies. If severe weather discourages customers from shopping in person,

sales could temporarily decline. Additionally, parking lot hazards from flying debris or damaged shopping carts could pose safety risks to customers and employees.

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, Table 4.4** below.

Vulnerability of Natural, Historic, and Cultural Resources*

Signal Hill is a city with a rich history, and its city parks, such as Signal Hill Park, Discovery Well Park, and the Suset View Park, continue to be cherished by the community. The Centennial Celebration of Signal Hill provided an opportunity to honor the city's past while celebrating its bright future. These historical and cultural elements help define the identity of Signal Hill as a dynamic, evolving city with deep roots in California's oil history.

Table 4.4: Hazard Vulnerability to Natural, Historic, and Cultural Resources
(Source: Planning Team, Emergency Planning Consultants)
(Note: "X" indicates affirmative)

Natural, Historic, and Cultural Resources	Drought	Earthquake	Windstorm
Signal Hill Park 2175 Cherry Ave, Signal Hill, CA 90755	X	X	X
Discovery Well Park 2200 Temple Ave, Signal Hill, CA 90755	X	X	X
Suset View Park Sunset View Park, 2300 Skyline Dr, Signal Hill, CA 90755	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

Drought

An extended drought can have significant impacts on the natural, historic, and cultural resources in Signal Hill affecting both the environment and the community's heritage.

Natural Resources

The physical landscape and natural habitats may suffer from direct damage due to drought. Parks and green spaces may be impacted by weak trees and disrupted ecosystems. Local wildlife and recreational opportunities could also be impacted. Additionally, water supply systems and utilities may be disrupted, posing risks to public health and safety.

Historic Resources
Historic buildings and structures are not expected to be impacted by drought.

Cultural Resources
The cultural fabric of the community can be affected as well, as events and gatherings that celebrate local heritage may be impacted by a long-term drought. Cultural centers and organizations may face operational disruptions and resource challenges, limiting their ability to promote community engagement and cultural education.

Overall, the impacts of a long-term drought on Signal Hill's natural, historic, and cultural resources underscore the need for effective disaster preparedness and recovery plans to protect and preserve these vital aspects of the community's identity and well-being.

Earthquake

An earthquake can have significant impacts on the natural, historic, and cultural resources in Signal Hill affecting both the environment and the community's heritage.

Natural Resources
The physical landscape and natural habitats may suffer from direct damage due to ground shaking and potential landslides, particularly in areas near the foothills. Parks and green spaces may be impacted by falling trees, damaged infrastructure, and disrupted ecosystems, affecting local wildlife and recreational opportunities. Additionally, water supply systems and utilities may be disrupted, posing risks to public health and safety.

Historic Resources
Historic buildings and structures, including those recognized for their architectural significance, are particularly vulnerable to earthquake damage. Cracks, structural failures, and falling debris can lead to loss or severe damage to these important assets, diminishing the community's historical identity.

Cultural Resources
The cultural fabric of the community can be affected as well, as events and gatherings that celebrate local heritage may be canceled or postponed following an earthquake. Cultural centers and organizations may face operational disruptions and resource challenges, limiting their ability to promote community engagement and cultural education. The psychological impact of an earthquake can also affect community cohesion, as residents may experience anxiety and displacement, making it harder to participate in cultural activities.

Overall, the impacts of an earthquake on Signal Hill's natural, historic, and cultural resources underscore the need for effective disaster preparedness and recovery plans to protect and preserve these vital aspects of the community's identity and well-being.

Windstorm

Major windstorms can have significant impacts on the natural, historic, and cultural resources in Signal Hill affecting both the environment and the community's heritage.

Natural Resources

The physical landscape and natural habitats may suffer from direct damage due to high winds, particularly in areas with trees and vulnerable structures. Parks and green spaces may be impacted by falling trees, damaged infrastructure, and disrupted ecosystems, affecting local wildlife and recreational opportunities. Additionally, utility services including water, wastewater, and electricity may be disrupted, posing risks to public health and safety.

Historic Resources
Historic buildings and structures, including those recognized for their architectural significance, are particularly vulnerable to wind-related damage. Cracks and falling debris can lead to loss or severe damage to these important assets, diminishing the community's historical identity.

Cultural Resources
The cultural fabric of the community can be affected as well, as events and gatherings that celebrate local heritage may be canceled or postponed during high wind events. Cultural centers and organizations may face operational disruptions and resource challenges, limiting their ability to promote community engagement and cultural education. When dry conditions combine with high wind, it is increasingly likely that a Public Safety Power Shutoff could be initiated which could curtail cultural gatherings and activities.

Overall, the impacts of an earthquake on Signal Hill's natural, historic, and cultural resources underscore the need for effective disaster preparedness and recovery plans to protect and preserve these vital aspects of the community's identity and well-being.

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, Table 4.5** below.

Vulnerability of Activities Bringing Value to the Community

The Concerts in the Park are vibrant celebrations that take place every Wednesday during spring and summer. The concerts attract hundreds of attendees and feature a variety of music and dance.

Table 4.5: Hazard Vulnerability of Activities Bringing Value to the Community (Source: Planning Team, Emergency Planning Consultants) (Note: "X" indicates affirmative)

Activities Bringing Value to the Community	Drought	Earthquake	Windstorm
Concerts in the Park Signal Hill Park - 2175 Cherry Avenue	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 on Activities Bringing Value to the Community** below.

Impact Profile on Activities Bringing Value to the Community

Drought

A long-term drought during the Concert in the Park season could have impacts on Signal Hill Park's landscaping but otherwise would not be significant. Organizers would need to assess the safety of the Park grounds and potentially cancel or modify activities. Negative impacts from a long-term drought could also affect attendance and have economic implications for vendors and organizers.

Earthquake

An earthquake during the Concert in the Park season could have significant impacts, including safety concerns for attendees and potential disruption of concert activities due to structural damage or logistical challenges. Organizers would need to assess the safety of the Signal Hill Park 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 concert and the community.

Windstorm

A high wind event during the Concert in the Park season could have significant impacts, including safety concerns for attendees and potential disruption of concert activities due to damaged trees, structural damage, or logistical challenges. Organizers would need to assess the safety of the Signal Hill Park grounds and potentially cancel or modify activities. A high wind event could also affect attendance and have economic implications for vendors and organizers. When combined with dry conditions, a high wind event may result in the initiation of a Public Safety Power Shutoff which could also negatively impact a concert.

Chapter 5: Mitigation Strategies

Overview of Mitigation Strategy

As the cost of damage from disasters continues to increase nationwide, the City of Signal Hill 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's 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.

Resources and information within the mitigation plan include:

1. Establishing a basis for coordination and collaboration among agencies and the public in Signal Hill,
2. Identifying and prioritizing future mitigation projects, and
3. Assisting in meeting the requirements of federal assistance programs.

The mitigation plan is integrated with other city plans including the Emergency Operations Plan, General Plan, Capital Improvement Program, as well as department-specific standard operating procedures.

Types of Mitigation Actions

The FEMA **Handbook** identifies four broad types of mitigation actions. Rather than listing by "type", the Planning Team chose to list the action items by hazard. See **Mitigation Actions Matrix**.

Mitigation Type	Description	Examples
Local Plans and Regulations	These actions include government authorities, policies or codes that	▪ Comprehensive plans ▪ Land use ordinances

Mitigation Type	Description	Examples
	influence the way land and buildings are developed and built.	▪ Subdivision regulations ▪ Development review ▪ Building codes and enforcement ▪ NFIP CRS ▪ Capital improvement programs ▪ Open space preservation ▪ Stormwater management regulations and master plans
Structure and Infrastructure Projects	These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.	▪ Acquisitions and elevations of structures in flood-prone areas ▪ Utility undergrounding ▪ Structural retrofits ▪ Floodwalls and retaining walls ▪ Detention and retention structures ▪ Culverts ▪ Safe rooms
Natural Systems Protection and Nature-based Solutions	This type of action can include green infrastructure and low impact development, nature-based solutions, Engineering with Nature and bioengineering to incorporate natural features or processes into the built environment.	▪ Sediment and erosion control ▪ Stream corridor restoration ▪ Forest management ▪ Conservation easements ▪ Wetland restoration and preservation ▪ Land conservation ▪ Greenways ▪ Rain gardens ▪ Living shorelines
Education and Awareness Programs	These types of actions keep residents informed about potential natural disasters. Many of these types of actions are eligible for funding through the FEMA HMA program.	▪ Radio or television spots ▪ Social media outreach ▪ Websites with maps and information ▪ Real estate disclosure ▪ Presentations to school groups or neighborhood organizations ▪ Mailings to residents in hazard-prone areas

Overall goals guide the direction of future activities aimed at reducing risk and preventing loss from natural hazards. During the first meeting of the Planning Team, the 2018 HMP goals were reviewed and a determination made that the goals were consistent with the 2025 **Risk Assessment** and that they continue to represent a long-term vision for hazard reduction and enhanced mitigation capabilities.

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.

Changes in Community Priorities

Equally important are the changes in priorities to the plan update itself since the writing of the 2018 HMP. Most of the changes in priorities are tied directly to the 2023 FEMA Local Mitigation Planning Policy Guide:

- Executive Summary: new section (English, Spanish, and Cambodian) summarizes the planning process and community outreach activities, and
- Chapter 1: Planning Process - several stakeholder categories were added along with a more robust community outreach strategy, and
- Chapter 2: Community Profile – new attention given to the location and levels of the disadvantaged 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 2025 HMP, and
- Chapter 4: Vulnerability and Impacts - new chapter including research and content regarding hazard vulnerabilities and impacts including an analysis of vulnerability of assets including people, structures, economy, community resources and activities, and
- Chapter 5: Mitigation Strategies – added appropriate General Plan Safety Element 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 6: Plan Maintenance – added details about integrating the mitigation plan into other documents.
- 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 **State Hazard Mitigation Plan Goals, Signal Hill Hazard Mitigation Plan Goals** below.

State Hazard Mitigation Plan Goals

The 2023 State Hazard Mitigation Plan identified the following goals that reflect State's current priorities:

Goal 1 - Significantly reduce risk to life, community lifelines, the environment, property, and infrastructure by planning and implementing whole-community risk reduction and resilience strategies.

Goal 2 - Build capacity and capabilities to increase disaster resilience among historically underserved populations, individuals with access and functional needs, and communities disproportionately impacted by disasters and climate change.

Goal 3 - Incorporate equity metrics, tools, and strategies into all mitigation planning, policy, funding, outreach, and implementation efforts.

Goal 4 - Apply the best available science and authoritative data to design, implement, and prioritize projects that enhance resilience to natural hazards and climate change impacts.

Goal 5 - Integrate mitigation principles into laws, regulations, policies, and guidance to support equitable outcomes to benefit the whole community.

Goal 6 - Significantly reduce barriers to timely, efficient, and effective hazard mitigation planning and action.

Signal Hill Hazard Mitigation Plan Goals

The overall goals for the HMP guided the direction of goal setting, design of the community outreach strategy, and development of mitigation activities aimed at reducing risk and preventing loss from natural hazards. During the first meeting of the HMP Planning Team, sample goals were reviewed and consideration given to a regional desire for hazard reduction and enhanced mitigation capabilities.

Each of the 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.

The five mitigation goals and descriptions are listed below.

Protect Life and Property

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

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.

Public Awareness

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.

Natural Systems

Balance watershed planning, natural resource management, and land use planning with natural hazard mitigation to protect life, property, and the environment.

Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions.

Partnerships and Implementation

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.

Emergency Services

Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure.

Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.

Coordinate and integrate 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 **Lead Department** below.

Lead Department

The Mitigation Actions Matrix assigns primary responsibility for each of the action items to either a department or specific position within the city. The primary responsibility for implementing the action items falls to the entity shown as the "Lead Department". The lead department has the regulatory responsibility to address hazards, or is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitor, and evaluate. The lead department is a city staff or contracted while supporting agencies may include local governments, county, or regional agencies.

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 identified as "ongoing" since the 2018 HMP or will continue on a regular basis through the 2025 HMP. These items are indicated as either Ongoing-Annual or Quarterly or 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 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 Mechanisms** below.

Planning Mechanisms

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, depending on the budgetary environment, is updated every 5 years. 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 budget 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 General Fund to identify successful grants as funding sources.

Building and Infrastructure

This addresses the issue of whether or not a particular action item results in the reduction of the effects of hazards on new and existing buildings and infrastructure.

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

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.

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 **Comments** below.

Comments

The purpose of the "Comments" is to capture the notes and status of the various action items. Notations include:
"Revised" – some component(s) of the action item has been revised from the 2018 HMP.

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 Ranking** below.

Priority Ranking

The 2018 HMP Mitigation Action Items did not include “priorities”. During the 2025 planning process, the Planning Team utilized the Priority Ranking system designations of “High”, “Medium”, or “Low” priority were assigned to each of the action items.

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)** below.

Mitigation Actions Matrix

Table 5.1: Mitigation Actions Matrix
Source: Signal Hill Planning Team
Note: Lead Departments A-Administration, CD-Community Development, CS-Community Services, PD-Police, PW-Public Works, F-Finance, BS-Building Safety

Mitigation Action Item	**Lead Department**	**Timeline**	**Expanding & Improving Capabilities:** P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	**Goal**: Protect Life and Property	**Goal**: Encourage Public Awareness	**Goal**: Protect Natural Systems	**Goal**: Enhance Partnerships and Implementation	**Goal:** Protect Emergency Services	**Funding Source:** GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	**Planning Mechanism:** GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Notes and Status -** Completed, Revised, Deleted, New, and Deferred
Multi-Hazard Mitigation Action Items															
MH-1 Integrate the goals and action items from the City of Signal Hill Hazard Mitigation Plan into existing regulatory documents and programs, where appropriate.	A, CD, PW	Ongoing - Quarterly	P, A	X	X	X	X	X	GF	GF	Y	M	M	H	Note: Safety Element and Zoning Ordinance not scheduled for updates.
MH-2 Identify and pursue funding opportunities to develop and implement local mitigation activities.	A, CD, PW	Ongoing - Monthly	F	X	X	X	X		GF	GF	Y	M	M-H	H	Deferred - no funding acquired since 2018

Mitigation Action Item	Lead Department	Timeline	**Expanding & Improving Capabilities:** P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	**Goal**: Protect Life and Property	**Goal**: Encourage Public Awareness	**Goal**: Protect Natural Systems	**Goal**: Enhance Partnerships and Implementation	**Goal:** Protect Emergency Services	**Funding Source:** GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	**Planning Mechanism:** GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Notes and Status -** Completed, Revised, Deleted, New, and Deferred
MH-3 Enhance and implement education programs aimed at mitigating natural hazards, and reducing the risk to citizens, public agencies, private property owners, businesses, and schools. Existing programs include CERT, My Hazards, and American Red Cross 21 Weeks to Prepare.	A, PD, CS, PW	Ongoing - As Needed*	E	X	X	X	X	X	GF	HMGP, BRIC	Y	H	L	H	Revised * Ongoing – As Needed note: outreach programs would be conducted around major preparedness campaign and City events
MH-4 Adopt California Building Code.	CD	2023	P	X	X	X	X	X	GF	GF	Y	H	L	H	Revised. Note: Adoption every 3 years.

Mitigation Action Item	**Lead Department**	**Timeline**	**Expanding & Improving Capabilities:** P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	**Goal**: Protect Life and Property	**Goal**: Encourage Public Awareness	**Goal**: Protect Natural Systems	**Goal**: Enhance Partnerships and Implementation	**Goal:** Protect Emergency Services	**Funding Source:** GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	**Planning Mechanism:** GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Notes and Status -** Completed, Revised, Deleted, New, and Deferred
MH-5 Develop seismic inventory of at-risk City-owned buildings and infrastructure.	PW, CD	2 years	P	X	X			X	HMGP, BRIC	HMGP, BRIC	Y	L	H	H	Revised. Note: To date, Community Services / Youth Center has been reviewed.
MH-6 Install and improve back-up power in city owned critical facilities as cited in the GP Safety Element.	PW	1-2 years	P	X	X	X	X	X	GF	GF		H	M-H	H	Revised. Note: Installed fixed generators at PD and PW.
MH-7 Promote public education and outreach to increase awareness of hazards and opportunities for mitigation. Continue to stock brochures at the Library from American	PD	Ongoing-As Needed*	E	X	X	X	X	X	GF	GF		H	L	M	Revised. * Ongoing – As Needed note: outreach programs would be conducted around major preparedness campaign and City events

Mitigation Action Item	Lead Department	Timeline	Expanding & Improving Capabilities: P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	Goal: Protect Life and Property	Goal: Encourage Public Awareness	Goal: Protect Natural Systems	Goal: Enhance Partnerships and Implementation	Goal: Protect Emergency Services	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Notes and Status - Completed, Revised, Deleted, New, and Deferred
Red Cross, FEMA, and Cal OES about home mitigation.															
MH-8 Maintain primary and alternate Emergency Operations Centers.	PD	Ongoing - Quarterly	P, A	X	X			X	GF	GF		H	L	H	Revised. Note: Primary EOC is located in the new Police HQ. Alternate EOC is located at PW Yard.
MH-9 Continue to provide informational literature on animal disaster plans and supply kits.	CS	Ongoing - As Needed*	E	X	X				GF	GF		H	L	M	Revised. * Ongoing – As Needed note: outreach programs would be conducted around major preparedness campaign and City events

Mitigation Action Item	Lead Department	Timeline	Expanding & Improving Capabilities: P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	Goal: Protect Life and Property	Goal: Encourage Public Awareness	Goal: Protect Natural Systems	Goal: Enhance Partnerships and Implementation	Goal: Protect Emergency Services	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Notes and Status - Completed, Revised, Deleted, New, and Deferred
															Note: Brochures distributed at City Hall and Library.
MH-10 Involve Hazard Mitigation Planning Team in review of future updates of the City General Plan or Zoning Ordinance to ensure consideration of threats posed by hazards.	CD	Ongoing-As Needed*	P	X	X	X	X	X	GF	GF	Y	M	L	M	Revised. * Ongoing – As Needed note: outreach programs would be conducted around major preparedness campaign and City events
MH-11 Update job description of Emergency Operations Coordinator to include leading the City's Hazard Mitigation Advisory Committee in developing	PD, A	1 year	A		X	X	X	X	GF	GF		H	L	H	Revised

Mitigation Action Item	Lead Department	Timeline	Expanding & Improving Capabilities: P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	Goal: Protect Life and Property	Goal: Encourage Public Awareness	Goal: Protect Natural Systems	Goal: Enhance Partnerships and Implementation	Goal: Protect Emergency Services	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Notes and Status - Completed, Revised, Deleted, New, and Deferred
a sustainable process for implementing, monitoring, and evaluating the mitigation activities.															
MH-12 Familiarize City Finance staff of requirements regarding public assistance (disaster cost recovery) following a declared disaster.	F, PD	1-2 years	A, E	X	X		X	X	GF	GF	Y	H	L	H	Revised
MH-13 Enhance weather monitoring to attain earlier severe storm warnings.	PW	Ongoing - Daily	P, A	X	X	X	X	X	GF	GF	Y	H	L	M	Revised
MH-14 Conduct routine maintenance of the City's	PW	Ongoing - Annually	P, A	X	X	X	X	X	GF	GF	Y	H	L	H	Revised

Mitigation Action Item	Lead Department	Timeline	Expanding & Improving Capabilities: P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	Goal: Protect Life and Property	Goal: Encourage Public Awareness	Goal: Protect Natural Systems	Goal: Enhance Partnerships and Implementation	Goal: Protect Emergency Services	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Notes and Status - Completed, Revised, Deleted, New, and Deferred
infrastructure to minimize the potential for system failure because of or during a disaster.															
MH-15 Develop comprehensive all-hazards debris management plan.	PW	2 years	P, A	X	X	X	X	X	GR	GR	Y	H	H	H	Revised.
MH-16 Educate the public about hazards prevalent to their area utilizing My Hazards.	PD, A	Ongoing-As Needed*	E	X	X	X	X	X	GF	GF	Y	H	L	H	Revised * Ongoing – As Needed note: outreach programs would be conducted around major preparedness campaign and City events
MH-17 Purchased and trained EOC staff on	PD	Ongoing - Annually	A, E	X	X	X	X	X	n/a	n/a	Y				Revised

Mitigation Action Item	**Lead Department**	**Timeline**	**Expanding & Improving Capabilities:** P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	**Goal**: Protect Life and Property	**Goal**: Encourage Public Awareness	**Goal**: Protect Natural Systems	**Goal**: Enhance Partnerships and Implementation	**Goal:** Protect Emergency Services	**Funding Source:** GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	**Planning Mechanism:** GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Notes and Status -** Completed, Revised, Deleted, New, and Deferred
Veoci – an emergency management software program.															
MH-18 Establish agreements with vendors for use of services, equipment, and/or facilities following a disaster.	F, PD	1 year	P, A	X	X	X	X	X	GF	GF	Y	H	L	M	New. Note: Already established Memorandum of Understanding with trash hauler EDCO for City to have access to trucks and other equipment following a disaster.
MH-19 Encourage purchase of hazard insurance for earthquake and flood.	A	1 year	E	X	X	X	X		GF	GF	Y	H	L	M	Revised
MH-20 Secure grant funding to conduct traffic	CD, PW	3 years	F	X		X		X	GR	GR	Y	H	H	H	Revised

Mitigation Action Item	Lead Department	Timeline	Expanding & Improving Capabilities: P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	Goal: Protect Life and Property	Goal: Encourage Public Awareness	Goal: Protect Natural Systems	Goal: Enhance Partnerships and Implementation	Goal: Protect Emergency Services	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Notes and Status - Completed, Revised, Deleted, New, and Deferred
study and engineering report on impact of hazardous material related heavy equipment movement on city street infrastructure.															
MH-21 Ensure Emergency Operations Plan is up to date.	PD	6 months	P	X	X	X	X	X	GF	GF	N	H	L	M	New
MH-22 Strengthen emergency services by enhancing public awareness.	PD	Ongoing-As Needed*	E	X	X	X	X	X	GF	GF	N	H	L	M	New * Ongoing – As Needed note: outreach programs would be conducted around major preparedness campaign and City events

Mitigation Action Item	Lead Department	Timeline	**Expanding & Improving Capabilities:** P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	**Goal**: Protect Life and Property	**Goal**: Encourage Public Awareness	**Goal**: Protect Natural Systems	**Goal**: Enhance Partnerships and Implementation	**Goal:** Protect Emergency Services	**Funding Source:** GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	**Planning Mechanism:** GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Notes and Status -** Completed, Revised, Deleted, New, and Deferred
MH-23 Maintain a fully operational Emergency Operations Center.	PD	Ongoing - Quarterly	P, A	X	X	X	X	X	GF	GF	N	H	L	M	New
MH-24 Enlist participation from the community and City staff for emergency operations.	PD	1 year	E	X	X	X	X	X	GF	GF	N	H	L	M	New
MH-25 Provide emergency operations training and conduct exercises.	PD	Ongoing - Annually	P, E	X	X	X	X	X	GF	GF	N	H	L	M	New
MH-26 Develop and utilize emergency public communications systems.	PD	Ongoing - Daily	P, A	X	X	X	X	X	GF	GF	N	H	L	M	New
MH-27 Develop inventories of PPE, and	PD	Ongoing - Quarterly	P, A	X	X	X	X	X	GF	GF	N	H	L	M	New

Mitigation Action Item	Lead Department	Timeline	Expanding & Improving Capabilities: P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	Goal: Protect Life and Property	Goal: Encourage Public Awareness	Goal: Protect Natural Systems	Goal: Enhance Partnerships and Implementation	Goal: Protect Emergency Services	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Notes and Status - Completed, Revised, Deleted, New, and Deferred
emergency supplies for pandemic distribution.															
MH-28 Identify and pursue funding opportunities to develop and implement neighborhood and city mitigation activities.	A	1-5 years	F	X	X	X	X	X	GF	GF	Y	H	L	M	New
MH-29 Review and upgrade emergency operations equipment such as 911 equipment and the Police Dispatch system as needed to maintain modern levels of service.	PD, PW	1-5 years	A	X	X	X	X	X	HMGP, BRIC	HMGP, BRIC	Y	H	H	M	New

Mitigation Action Item	Lead Department	Timeline	**Expanding & Improving Capabilities:** P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	**Goal**: Protect Life and Property	**Goal**: Encourage Public Awareness	**Goal**: Protect Natural Systems	**Goal**: Enhance Partnerships and Implementation	**Goal:** Protect Emergency Services	**Funding Source:** GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	**Planning Mechanism:** GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Notes and Status -** Completed, Revised, Deleted, New, and Deferred
MH-30 Design and construct full renovation and remodel of Civic Center to include City Hall and a new Community Center with back-up Emergency Operations Center.	PW, A, CD CS, PD, F, BS	5 years	P, A	X	X	X	X	X	GF, CIP, HMGP, BRIC	GF, 5-Year Strategic Plan, CIP	Y	H	H	H	New
Earthquake Mitigation Action Items															
EQ-1 Reduce non-structural and structural earthquake hazards in City-owned buildings and infrastructure.	CD	Ongoing - Annually	P	X	X	X	X	X	GF	GF	Y	H	L	M	Revised
EQ-2 Encourage public to purchase earthquake hazard insurance and retrofit non-structural and	A	Ongoing-As Needed*	E	X	X	X	X	X	GF	GF	Y	H	L	H	Revised * Ongoing – As Needed note: outreach programs would be

Mitigation Action Item	Lead Department	Timeline	Expanding & Improving Capabilities: P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	Goal: Protect Life and Property	Goal: Encourage Public Awareness	Goal: Protect Natural Systems	Goal: Enhance Partnerships and Implementation	Goal: Protect Emergency Services	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Notes and Status - Completed, Revised, Deleted, New, and Deferred
structural earthquake hazards.															conducted around major preparedness campaign and City events
EQ-3 As updates become available, integrate new earthquake hazard mapping data for the City and improve technical analysis of earthquake hazards.	CD	Ongoing - Annually	P		X		X	X	GR	GR	Y	H	L	H	Revised
EQ-4 Secure grant funding for updated Technical Background Report associated with the General Plan Safety Element.	CD	5 years	F	X	X	X	X	X	GR	GR	Y	M	H	H	Revised

Mitigation Action Item	Lead Department	Timeline	**Expanding & Improving Capabilities:** P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	**Goal**: Protect Life and Property	**Goal**: Encourage Public Awareness	**Goal**: Protect Natural Systems	**Goal**: Enhance Partnerships and Implementation	**Goal:** Protect Emergency Services	**Funding Source:** GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	**Planning Mechanism:** GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2024 Notes and Status -** Completed, Revised, Deleted, New, and Deferred
Windstorm Mitigation Action Items															
WS-1 Support and encourage electrical utilities to use underground construction methods where possible to reduce power outages from windstorms.	PW	Ongoing-Annually	P	X	X	X	X	X	GF	GF	Y	H	L	M	Revised
WS-2 Monitor trees and branches in public areas at risk of breaking or falling in wind and sandstorms. Prune or thin trees or branches when posing an immediate threat to property, utility lines or	PW	Ongoing - Quarterly	A	X	X	X	X	X	GF	GF	Y	M	L	M	Revised

Mitigation Action Item	Lead Department	Timeline	Expanding & Improving Capabilities: P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	Goal: Protect Life and Property	Goal: Encourage Public Awareness	Goal: Protect Natural Systems	Goal: Enhance Partnerships and Implementation	Goal: Protect Emergency Services	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Notes and Status - Completed, Revised, Deleted, New, and Deferred
other significant structures or critical facilities in the community.															
Drought Mitigation Action Items															
DR-1 Distribute information to all property owners and renters on the importance of water conservation and different venues of purchasing water saving mechanisms for homes and businesses.	PW	Ongoing - Monthly	E	X	X	X	X	X	GF	GF	Y	H	L	M	Revised
DR-2 Investigate possibility of extending	PW	1-2 years	P	X			X	X	GF	CIP	Y				Revised. Note: New wells operational in 2016.

Mitigation Action Item	Lead Department	Timeline	Expanding & Improving Capabilities: P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	Goal: Protect Life and Property	Goal: Encourage Public Awareness	Goal: Protect Natural Systems	Goal: Enhance Partnerships and Implementation	Goal: Protect Emergency Services	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	Planning Mechanism: GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2024 Notes and Status - Completed, Revised, Deleted, New, and Deferred
(deepening) existing water wells.															
DR-3 Identify water resources management and conservation opportunities.	PW	2-3 years	P	X	X	X	X	X	GF	GF	Y	H	L	H	Revised
DR-4 Implement use of reclaimed water to supplement imported and local water sources.	PW	1-5 years	P	X	X	X	X	X	GF	GF	Y	H	M	H	Revised recycled to reclaimed. Note: Already completed first phase of reclaimed water system.
DR-5 Practice water conservation by building demonstration gardens and retrofit public parks.	PW	2 years	P	X	X	X	X	X	GF	GF	Y	H	L	H	Revised
DR-6 Update 20X2020 Water Conservation Plan.	PW	1 year	P, A	X	X	X	X	X	GF	GF	Y	H	M	H	Revised

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 Signal Hill 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 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 Rebecca Lopez 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 Signal Hill 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 coordinating agencies (as identified in the Mitigation Actions Matrix) in order to gather status updates on the mitigation action items. These meetings will provide an opportunity to discuss the progress of the action items and maintain the partnerships that are essential for the sustainability of the mitigation plan. See the **Annual Implementation Report** (discussed below) which will be a valuable tool for the Planning Team to measure the success of the Hazard Mitigation Plan. The focus of the annual meeting will be on the progress and changes to the Mitigation Action Items.

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.

Integration into Other Planning Mechanisms

The City of Signal Hill addresses statewide planning goals and legislative requirements through the General Fund, Capital Projects, 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 Signal Hill will implement recommended mitigation action items through existing programs and procedures.

The City of Signal Hill is responsible for adhering to the State of California's Building and Safety Codes. In addition, the city may work with other agencies at the state level to review, develop and ensure Building and Safety 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 in the plan's action items that are consistent with the strategic and budget documents. This will 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 Projects - see Mitigation Actions Matrix for links between individual action items and associated planning mechanisms). 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 Signal Hill's planning documents and procedures. The timing of integration will depend on the cycles of the various planning mechanisms. As an example, state regulations require the Emergency Operations Plan to be updated every 3 years while the General Plan may not be updated for another 20 years. The department representatives should be mindful of opportunities to update or implement action items assigned to their departments.

The 2018 HMP was integrated into the 2016 General Plan Safety Element with numerous references to hazard-related content.

Specifically, the Planning Team will utilize the updates of the following documents to implement the mitigation plan:

- ✓ HMP Risk Assessment, Community Profile, Planning Process (stakeholders) into Emergency Operations Plan, General Plan.
- ✓ HMP Mitigation Actions Matrix into General Fund, Capital Projects, Grants

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:

Mitigation Action Item	**Lead Department**	**Timeline**	**Expanding & Improving Capabilities:** P-Planning and Regulatory, A-Administrative and Technical, F-Finance, E-Education and Outreach	**Goal:** Protect Life and Property	**Goal:** Encourage Public Awareness	**Goal:** Protect Natural Systems	**Goal:** Enhance Partnerships and Implementation	**Goal:** Protect Emergency Services	**Funding Source:** GF-General Fund, CIP-Capital Improvement Project, HMGP, BRIC	**Planning Mechanism:** GP-General Plan, CIP, GF-General Fund, HMGP, BRIC	**Buildings & Infrastructure:** Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y) or No (N)	**Benefit:** L-Low, M-Medium, H-High	**Cost:** L-Low, M-Medium, H-High	**Priority:** L-Low, M-Medium, H-High	**2026 Annual Implementation Notes**
Multi-Hazard Mitigation Action Items														
MH-1 Integrate the goals and action items from the City of Signal Hill Hazard Mitigation Plan into existing regulatory documents and programs, where appropriate.	A, CD, PW	Ongoing - Quarterly	P, A	X	X	X	X	X	GF	GF	Y	M	M	H	

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.

Economic Analysis of Mitigation Projects

FEMA's approach to identifying the costs and benefits associated with hazard mitigation strategies, measures, or projects fall into two general categories: benefit/cost analysis and cost-effectiveness analysis.

Conducting benefit/cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster-related damage 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 coordinating agencies (as identified in the Mitigation Actions Matrix) will meet annually to gather status updates on the mitigation action items. During that meeting, the Local Mitigation Officer will lead a discussion with the coordinating agencies 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 meeting 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 by reviewing the goals and mitigation action items to determine their relevance to changing situations within the City of Signal Hill 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 Signal Hill 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 City Hall and on the City's website. The existence and location of these copies will be publicized in the City's newsletter "City Views" and on the website. This site will also contain an email address and phone number where people can direct their comments 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 a public 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 resources to publicize any public meetings and always free to maintain public involvement through the public access channel, web page, and newspapers.

In general, the next plan update needs to include a greater variety of outreach methods and range of materials. During the planning process for the 2025 plan, minimal input was received from the public or stakeholders. Perhaps a letter of support from the City Manager or greater utilization of existing public forums and other city leaders would yield responses from the public and stakeholders. A federal document was released after the 2025 planning process which would be very helpful to the Planning Team during the 2029 update to the plan. The document title is Planning Considerations: Putting People First.

Furthermore, the next update to the plan will include a significantly more robust community outreach strategy focusing on equity priority populations. This will involve specific outreach to underserved individuals, disadvantaged individuals, and socially vulnerable individuals. Furthermore, the stakeholder list needs to be expanded to include a broader scope of service providers to the equity priority populations. The stakeholder list already identifies organizations to be included in future distributions of information relating to the mitigation plan and its implementation.

Chapter 7: Plan Review, Adoption and Approval

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 Signal Hill's commitment to meeting mitigation goals and objectives. Governing body approval legitimizes the plan and authorizes responsible agencies to execute their responsibilities.

The Second Draft Plan was submitted to Cal OES and FEMA for a formal review. When Cal OES determines the plan to be compliant, the Final Draft Plan will be scheduled for an adoption meeting with the City Council. Staff will recommend adoption of the Final Draft Plan. Assuming adoption by the City Council, the signed resolution will be forwarded to FEMA along with a request for a FEMA Letter of Approval.

In preparation for the public meeting with the City Council, the Planning Team will post the Final Draft Plan on the City's website. Notification of the Plan's availability will also be announced via the mediums utilized during the community outreach activities. Also, the Team will prepare a staff report including an overview of the Planning Process, Risk Assessment, Mitigation Goals, and Mitigation Actions. The staff presentation will include a summary of the input received during the community outreach activities. The meeting participants will be encouraged to present their views and make suggestions on possible mitigation actions.

The City Council heard the item on August 26, 2025. The City Council voted to adopt the Final Draft of the Hazard Mitigation Plan. The Resolution of adoption by the City Council is included 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 September 29, 2025 and is included in the Attachments.

Attachments

FEMA Letter of Approval

U.S. Department of Homeland Security
FEMA Region 9
1111 Broadway, Suite 1200
Oakland, CA 94607

FEMA

September 29, 2025

Rebecca Lopez
Emergency Management Coordinator
Police Department
2745 Walnut Avenue
Signal Hill, CA 90755

Reference: Hazard Mitigation Plan Approval
City of Signal Hill, CA

Dear Rebecca Lopez:

The 2025 City of Signal Hill Hazard Mitigation Plan was officially adopted by the City of Signal Hill and submitted for final review and approval to the Federal Emergency Management Agency (FEMA). FEMA confirms this plan meets the requirements of the Code of Federal Regulations, Title 44, Part 201, Section 6 (44 C.F.R. 201.6).

FEMA approves this plan for five years with an effective date of September 18, 2025, which is the completion date of our final review. To maintain grant eligibility, the City of Signal Hill must review, update, and resubmit the plan to FEMA before **September 17, 2030**.

While local mitigation plans may include additional content to meet Element H: Additional State Requirements or other local objectives, FEMA's approval only applies to elements required by its *Local Mitigation Planning Policy Guide* (FP-206-21-0002).

This plan approval ensures eligibility for project grants under FEMA's Hazard Mitigation Assistance programs, including the Hazard Mitigation Grant Program (HMGP), HMGP Post-Fire, Flood Mitigation Assistance (FMA), and Safeguarding Tomorrow Revolving Loan Fund (STORM RLF). Funding requests are reviewed individually for eligibility and other program requirements.

Thank you for your continued commitment to reducing risk and enhancing community safety. If you have any questions about the planning or review process, please contact the FEMA Region 9 Hazard Mitigation Planning Team at fema-r9-mitigation-planning@fema.dhs.gov.

Sincerely,

KATHRYN J LIPIECKI
Digitally signed by KATHRYN J LIPIECKI
Date: 2025.09.27 09:32:44 -07'00'

Kathryn Lipiecki
Director, Mitigation Division
FEMA Region 9

www.fema.gov

Enclosure (1)
City of Signal Hill Plan Review Tool, dated September 18, 2025

cc: Alison Kearns, Planning and Implementation Branch Chief, FEMA Region 9
Robyn Fennig, State Hazard Mitigation Officer, California Governor's Office of Emergency Services
Victoria LaMar-Haas, Hazard Mitigation Planning Chief, California Governor's Office of Emergency Services

City Council Adoption Resolution

RESOLUTION NO. 2025-08-6896

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SIGNAL HILL, CALIFORNIA, APPROVING AND ADOPTING THE LOCAL HAZARD MITIGATION PLAN

WHEREAS, the City of Signal Hill is vulnerable to natural hazards which may result in loss of life and property, economic hardships, and threats to public health and safety; and

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

WHEREAS, the City of Signal Hill acknowledges the requirements of Section 322 of DMA 2000 to update the 2018 Hazard Mitigation Plan in order to be eligible for pre- and post-disaster federal hazard mitigation grant funds; and

WHEREAS, the City of Signal Hill 2025 Local Hazard Mitigation Plan was developed by a Planning Team with representatives from City departments and partner agencies, in an open planning process to the public and a broad range of stakeholders; and

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

WHEREAS, the 2025 Local Hazard Mitigation Plan recommends mitigation activities that will reduce losses to life and property affected by natural hazards that face the City; and

WHEREAS, pursuant to the California Environmental Quality Act (CEQA), City staff have determined that the adoption of the 2025 Local Hazard Mitigation Plan is covered by the general rule, pursuant to Section 15061(b)(3) of the State CEQA Guidelines (14 CCR§

15061(b)(3)), that CEQA applies only to projects which have the potential for causing a significant effect on the environment, and City Staff found that there is no possible significant effect directly related to the Project. Furthermore, CEQA Guidelines Sections 15262 and 15269 provide additional guidance, in the context, that the Project is a planning study that does not tacitly approve projects that would otherwise require independent environmental review under CEQA.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SIGNAL HILL, CALIFORNIA, DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. The 2025 Local Hazard Mitigation Plan for the City of Signal Hill is hereby approved and adopted

PASSED, APPROVED, AND ADOPTED at a regular meeting of the City Council of the City of Signal Hill, California, on this 26th day of August, 2025.

KEIR JONES
MAYOR

ATTEST:

DARITZA GONZALEZ
CITY CLERK

Resolution No. 2025-08-6896
August 26, 2025
Page 2 of 3

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES)ss
CITY OF SIGNAL HILL)

I, DARITZA GONZALEZ, City Clerk of the City of Signal Hill, California, hereby certify that Resolution No. 2025-08-6896 was adopted by the City Council of the City of Signal Hill at a regular meeting held on the 26th day of August 2025, and that the same was adopted by the following vote:

AYES: MAYOR KEIR JONES, VICE MAYOR TINA L. HANSEN, COUNCIL MEMBERS CHARLIE HONEYCUTT & LORI Y. WOODS

NOES: NONE

ABSENT: COUNCIL MEMBER ROBERT D. COPELAND

ABSTAIN: NONE

DARITZA GONZALEZ
CITY CLERK

Web Postings and Notifications

City Website – Posted November 2024

2024 Local Hazard Mitigation Plan Update

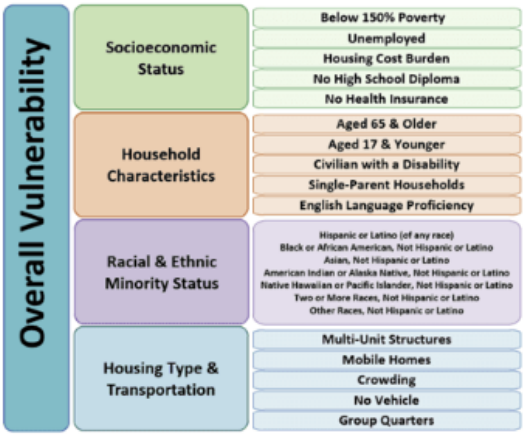
Hazard Mitigation Plan

The City of Signal Hill is pleased to share progress on the update to the City's 2018 Hazard Mitigation Plan. The 2018 plan identified hazards including earthquakes, drought, and windstorms so the first task of the plan update was to reassess the threats and impacts associated with those hazards. Mapping the location of these hazards was important as critical facilities are considered in developing mitigation action items to minimize or eliminate threats associated with the hazards. Prior to forming a Planning Team, the City Council was informed in November 2022 of the upcoming planning process. The Planning Team included representatives from City departments responsible for maintaining public facilities and regulating development. Following preparation of the First Draft Plan, the availability of the Plan was announced to the public and stakeholders. Beyond the announcement of the First Draft Plan, the community outreach activities also included flyers, a Hazard Mitigation Overview, and a survey on preparedness and mitigation. The Planning Team is now in the process of conducting a second community outreach to address new FEMA regulations for the preparation of hazard mitigation plans. The second outreach has been expanded to include translated materials in Spanish and Cambodian and updates to the video and survey.

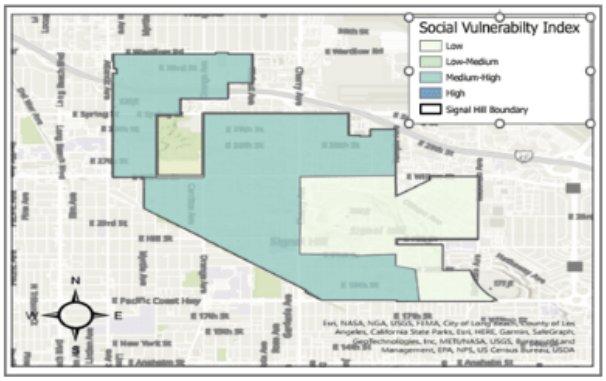
In 2023, FEMA updated its regulations relating to the preparation of local hazard mitigation plan. The new regulations added four areas of focus: 1) climate change impacts on hazards, 2) analysis and location of socially vulnerable populations, 3) hazard-specific impacts on socially vulnerable populations, and 4) a more robust community outreach strategy to inform and engage the public and stakeholders.

To respond to the new requirement regarding identification and outreach to socially vulnerable populations, the Planning Team will utilize an online tool from the U.S. Centers for Disease Control and Prevention (CDC) to identify location and ranking of the community's socially vulnerable population. The CDC has identified 16 social attributes that are used to determine percentages of social vulnerability. The CDC's Socially Vulnerable Index was designed to help emergency managers identify and map communities that will most likely need support before, during, and after a disaster. Below is a graphic of the 16 social attributes for social vulnerability and a map showing the distribution of social vulnerability in Signal Hill:

Social Attributes for Social Vulnerability



Signal Hill Social Vulnerability



The five goals of the 2024 Hazard Mitigation Plan update include:

1. Protect life and property
2. Enhance public awareness
3. Protect natural systems
4. Encourage partnerships and implementation
5. Strengthen emergency services

Based on findings from the Risk Assessment and direction from the Planning Committee, the following hazards pose the greatest threat to the City of Signal Hill:

- Earthquake: Signal Hill is especially susceptible to earthquakes due to its proximity to multiple fault lines
- Landslide: Areas of high elevation in Signal Hill are susceptible to landslides, particularly after a large seismic event or severe rainstorm
- Windstorm: The City is highly likely to high winds created by Santa Ana wind events
- Drought: Signal Hill, like much of California, has a history of experiencing drought, with the possibility of severe drought conditions in the future
- Flood: During a major rainstorm, some areas of Signal Hill may experience flooding

Click the links below to review the current version of the 2024 Hazard Mitigation Plan, watch an informative presentation, and participate in our short survey.

Local Hazard Mitigation Plan 2024 (PDF)

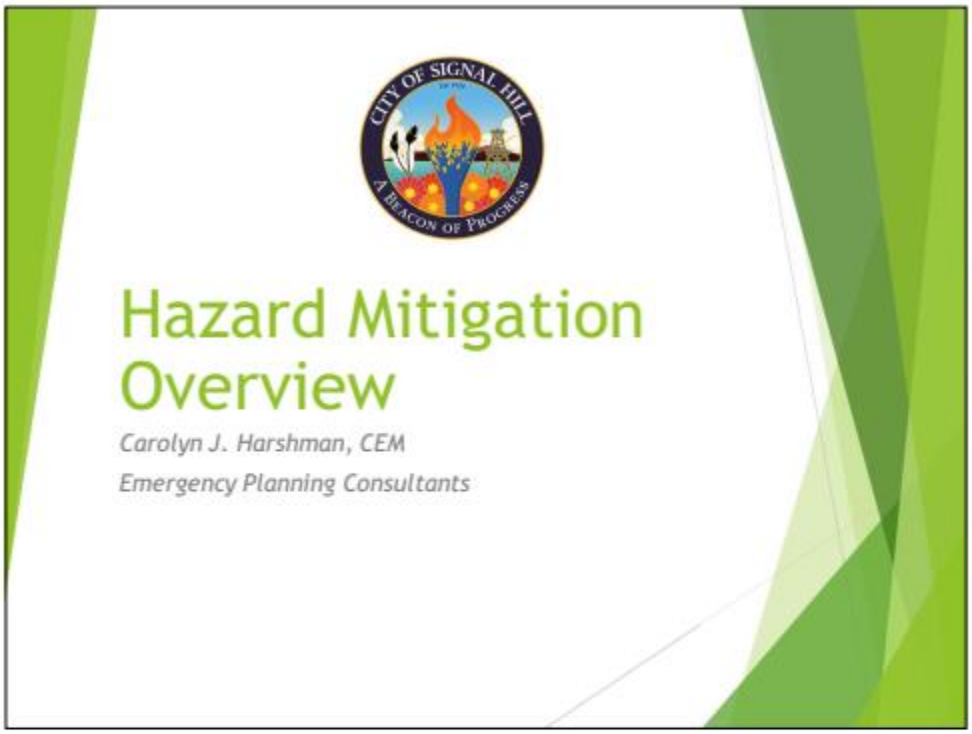
Video Hazard Mitigation Overview

Executive Summary Khmer

Executive Summary Spanish

Take the Public Survey Here

Video Hazard Mitigation Overview – November 2024



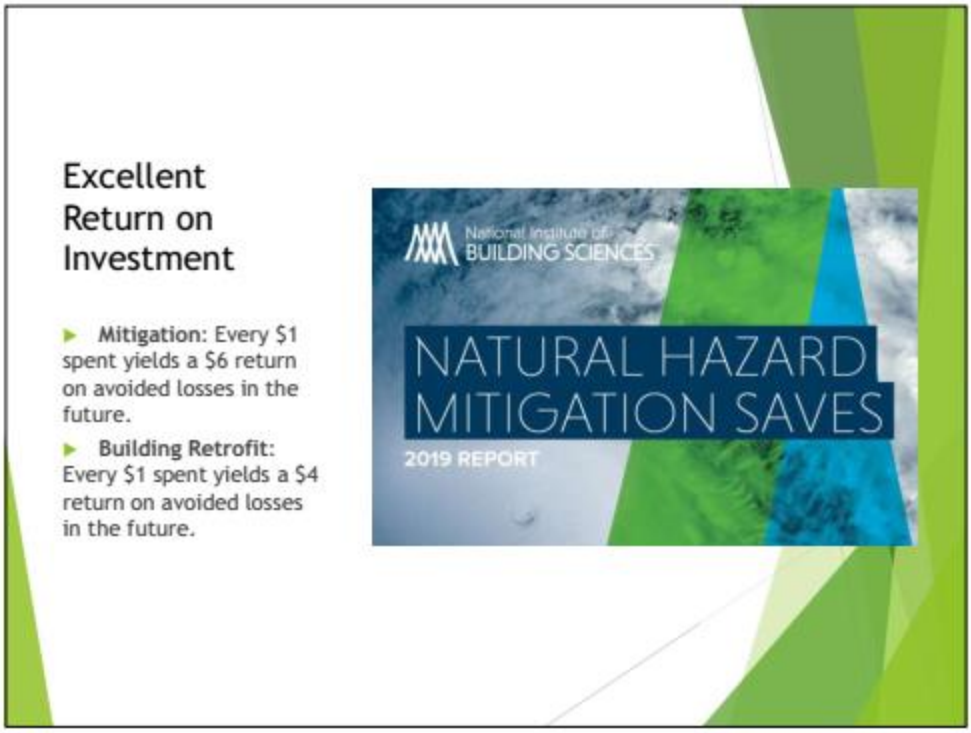
On behalf of the City of Signal Hill, it's my pleasure to welcome you to the overview of the planning process to prepare the City's 2024 Hazard Mitigation Plan.

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.



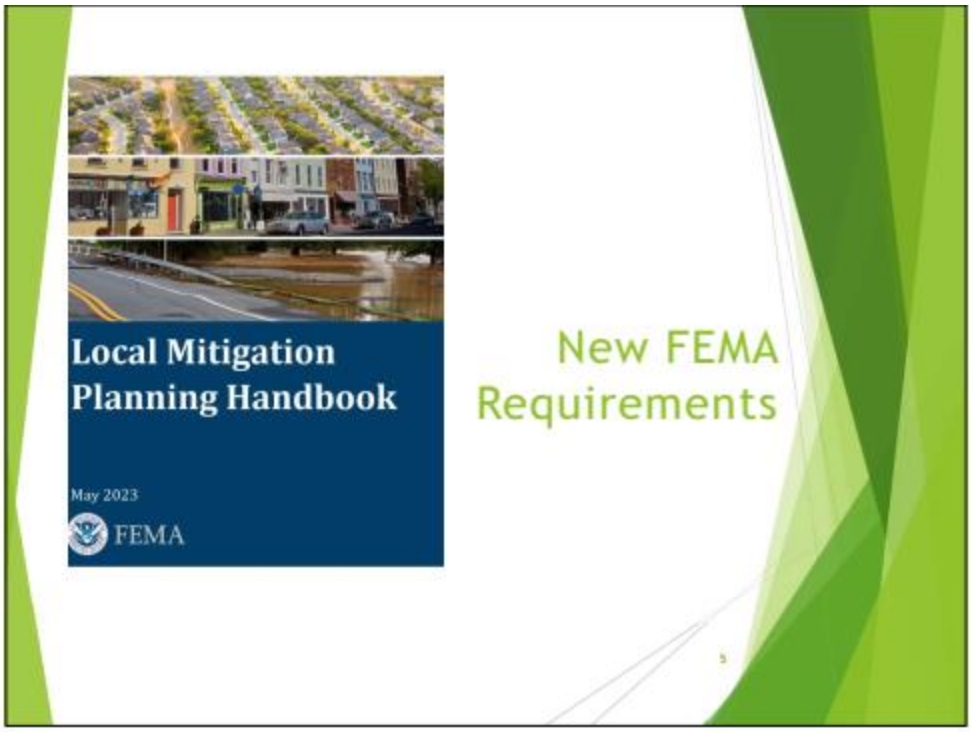
In 2019, the National Institute of Building Sciences issued an update to its landmark report "Natural Hazard Mitigation Saves". The study analyzed the benefit cost ratio of a range of mitigation activities including mitigation planning and building retrofits.

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.

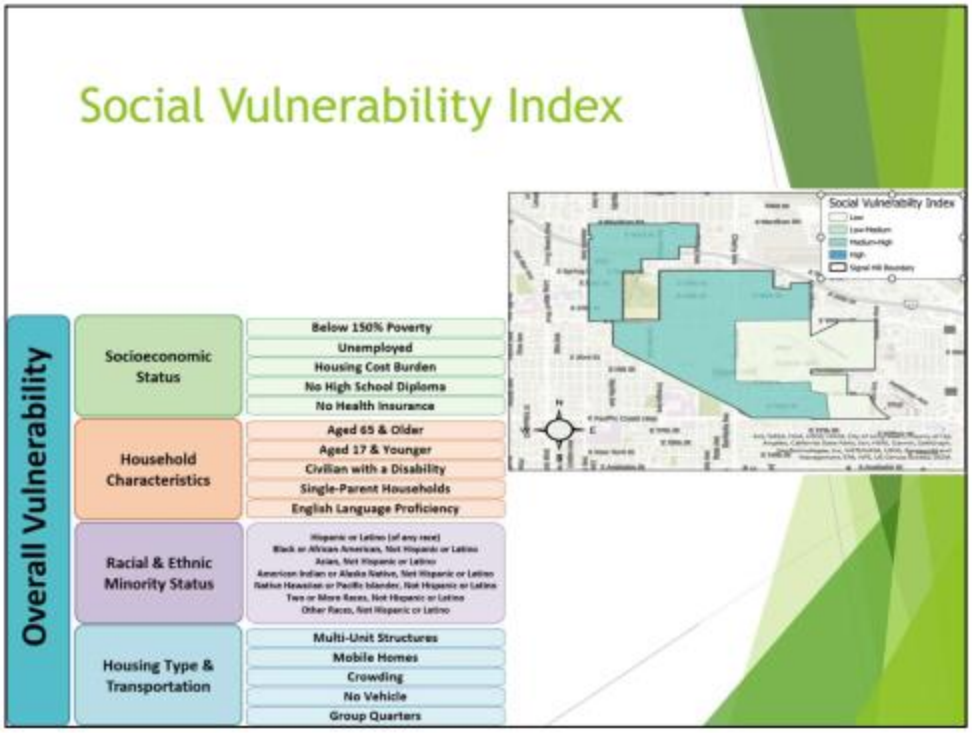


In 2023, FEMA issued new standards regarding preparation of hazard mitigation plans. In addition to the previous regulations from 2011, jurisdictions are now required to discuss climate change and the impacts on natural hazards. Also, now there are standards requiring focused outreach to disadvantaged 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 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.



Many studies have shown that segments of the population are more vulnerable to the impacts of disaster than the rest of the community.

The U.S. Centers for Disease Control and Prevention developed a Social Vulnerability Index which measures a community's overall vulnerability. There are a total of 16 categories under the headings of socioeconomic status, household characteristics, racial and ethnic minority status, and housing type and transportation.

The CDC's Socially Vulnerable Index was designed to help emergency managers identify and map communities that will most likely need support before, during, and after a disaster.

The SVI map for the City of Signal Hill shows no areas classified as "high" social vulnerability, however a significant majority of the community is classified as "medium-high".

FEMA's 2023 Local Mitigation Planning Handbook identifies a planning process with four steps:

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.

This is the 4-step planning process followed by the City's Planning Team.

The **Community Outreach Strategy** consists of two phases:

The first phase is "**Announcing the Planning Process**" which includes:

- Posting of the Hazard Mitigation Survey
- Presentations at Public Forums including the City Council, Commissions, and City Volunteer Groups
- Public Notices on the City's Website, Facebook, X, and Instagram concerning the Hazard Mitigation Plan
- Development and posting of today's Hazard Mitigation Overview Video and
- Development of the Initial Draft Plan by the Planning Team

The second phase is "**Gathering Input on the Draft Plan**" which includes inviting the public and stakeholders to provide input to the Plan.

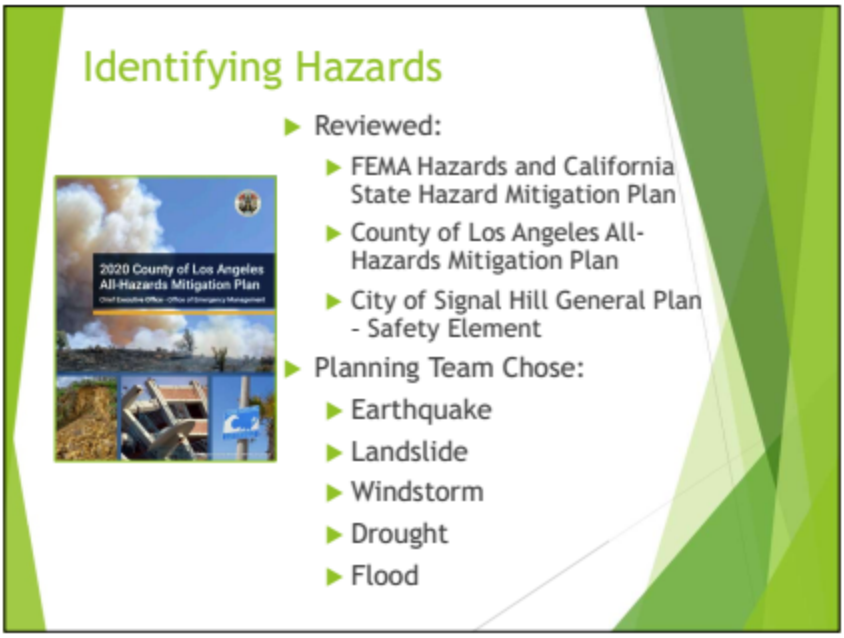
FEMA-mandated stakeholders include:

- Local and Regional Regulatory Agencies
- Neighboring Jurisdictions
- Businesses, Academia, and Community Lifelines
- Nonprofit and Community-Based Organizations – with a focus on underserved communities and socially vulnerable populations

Community Lifelines are the vital services in a community. When stabilized, they enable all other aspects of society to function.

The seven services include:

- Safety and Security
- Food, Water, and Shelter
- Health and Medical
- Energy (including Power and Fuel)
- Communications
- Transportation
- Hazardous Material



Identifying hazards with the potential for causing significant impacts involved review of a range of hazard-focused studies and plans.

The Hazard Identification Process included a review of:

FEMA's list of 18 hazards that are recommended for consideration, the California State Hazard Mitigation Plan, the

County of Los Angeles All-Hazards Mitigation Plan, and the City's General Plan Safety Element.

Following that review, the Planning Team chose earthquake, landslide, windstorm, drought, and flood as the hazards to investigate.

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 City's General Plan Elements and the Capital Improvement Plan.

Most importantly, the Mitigation Strategy includes a comprehensive range of actions and projects capturing 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.

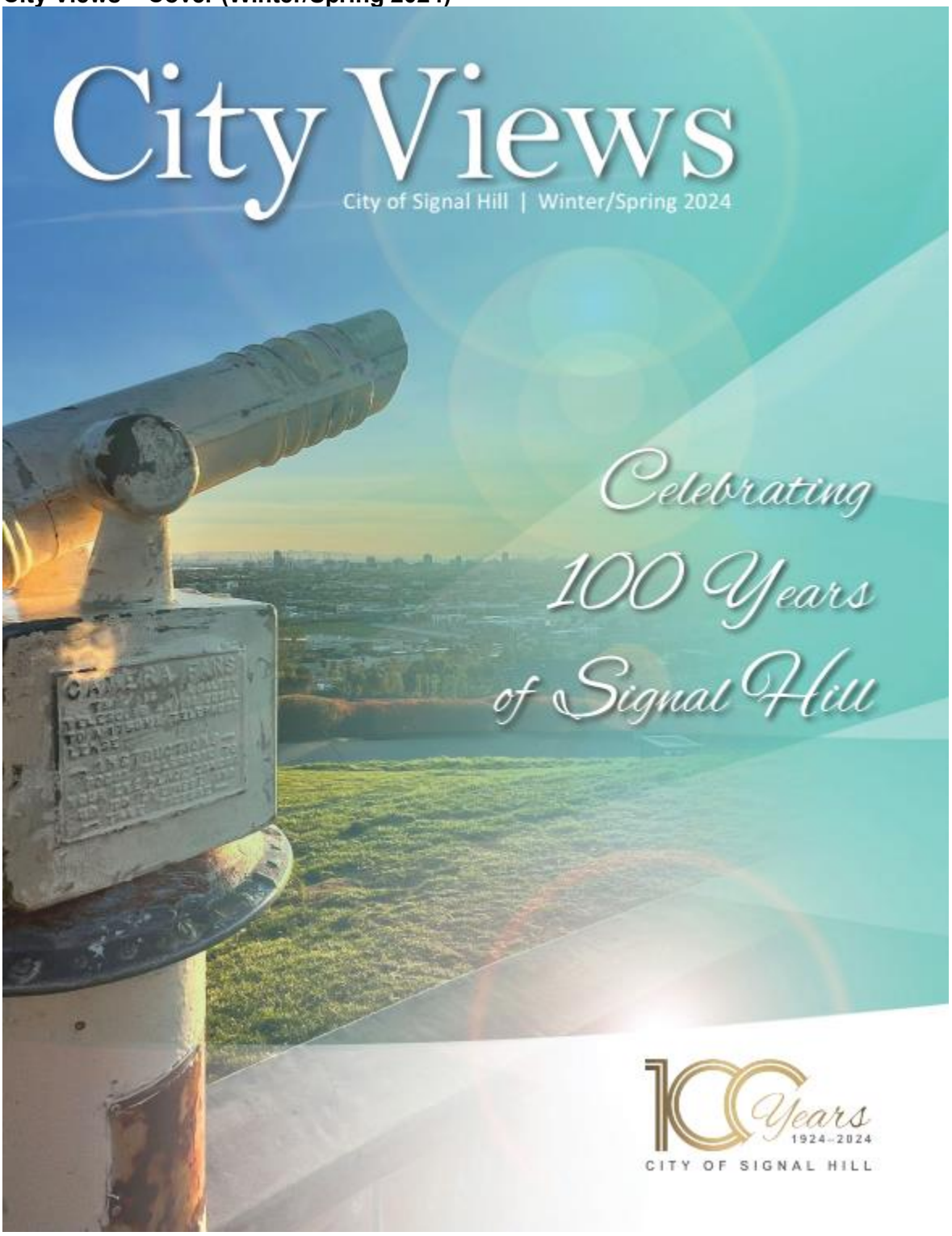
Here is an example of a mitigation action item: "*Develop seismic inventory of at-risk City-owned buildings and infrastructure.*"

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.

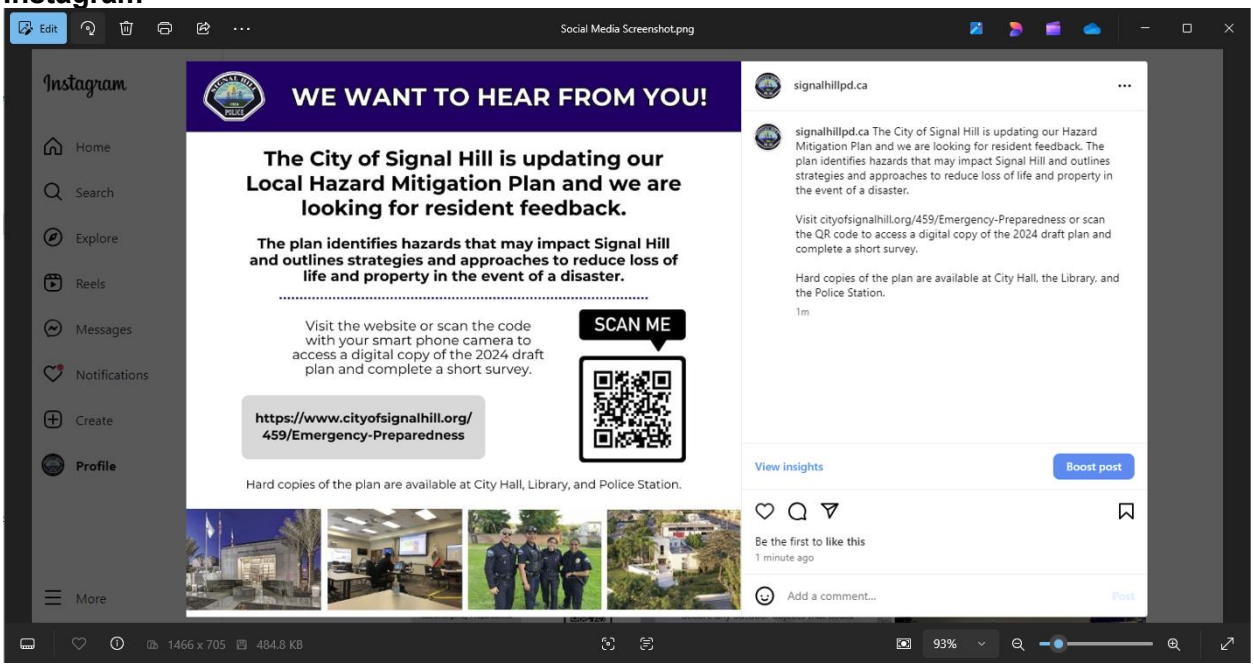
This concludes the Hazard Mitigation Overview. Please watch for the posting of the Draft Hazard Mitigation Plan. We look forward to hearing your questions, thoughts, and suggestions. On behalf of the City of Signal Hill, thank you for taking time to learn about the importance of increasing resilience through mitigation planning.

City Views – Cover (Winter/Spring 2024)

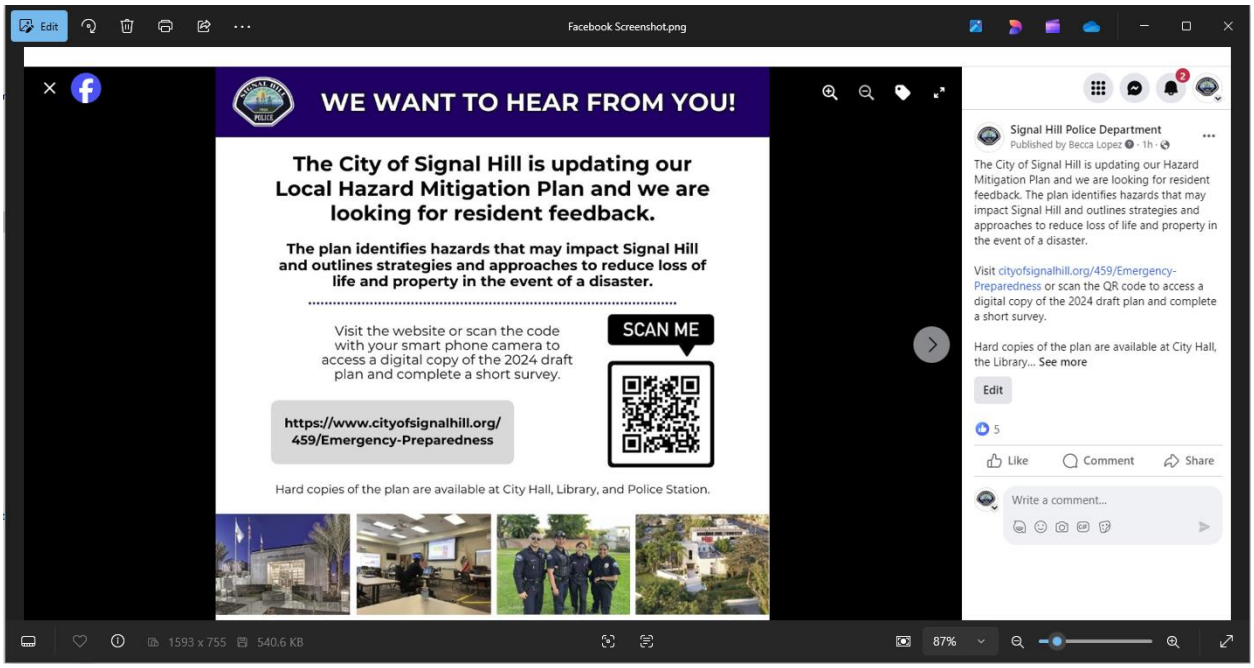


City Views – Ad for Mitigation Plan

Instagram



Facebook



WE WANT TO HEAR FROM YOU!
¡QUEREMOS CONOCER SU OPINIÓN!
យើងចង់ឮពីអ្នក!

The City of Signal Hill is updating our Local Hazard Mitigation Plan and we are looking for resident feedback.

La Ciudad de Signal Hill está actualizando nuestro Plan Local de Mitigación de Riesgos y queremos conocer la opinión de los residentes.

ទីក្រុង Signal Hill កំពុងធ្វើបច្ចុប្បន្នភាពផែនការកាត់បន្ថយគ្រោះថ្នាក់ក្នុងតំបន់របស់យើង ហើយយើងកំពុងស្វែងរកមតិកែលម្អពីអ្នករស់នៅ។

Scan the code with your smart phone camera to access the 2024 draft plan and complete a short survey.

Escanee el código con la cámara de su teléfono inteligente para acceder a una copia digital del borrador del plan de 2024 y completar una breve encuesta.

ផែនការកំណត់អត្តសញ្ញាណគ្រោះថ្នាក់ដែលអាចប៉ះពាល់ដល់ Signal Hill និងគួរសបញ្ជាក់អំពីយុទ្ធសាស្ត្រ និងវិធីសាស្ត្រកាត់បន្ថយការបាត់បង់អាយុជីវិត និងទ្រព្យសម្បត្តិក្នុងករណីមានគ្រោះមហន្តរាយ។

SCAN ME

Hard copies of the plan are available at City Hall, Library, and Police Station

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La Ciudad de Signal Hill está actualizando nuestro Plan Local de Mitigación de Riesgos y queremos conocer la opinión de los residentes.

El plan identifica los peligros que pueden afectar a Signal Hill y describe estrategias y enfoques para reducir la pérdida de vidas y propiedades en caso de un desastre.

Visite el sitio web o escanee el código con la cámara de su teléfono inteligente para acceder a una copia digital del borrador del plan de 2024 y completar una breve encuesta.

https://www.cityofsignalhill.org/459/Emergency-Preparedness

SCAN ME

Las copias impresas del plan están disponibles en el Ayuntamiento, la Biblioteca de la Ciudad y la Estación de policía.




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ផែនការកំណត់អត្តសញ្ញាណគ្រោះថ្នាក់ដែលអាចប៉ះពាល់ដល់ Signal Hill និងគូសបញ្ជាក់អំពីយុទ្ធសាស្ត្រ និងវិធីសាស្ត្រកាត់បន្ថយការបាត់បង់អាយុជីវិត និងទ្រព្យសម្បត្តិក្នុងករណីមានគ្រោះមហន្តរាយ។

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https://www.cityofsignalhill.org/459/Emergency-Preparedness

SCAN ME

ច្បាប់ចម្លងរឹងនៃផែនការមាននៅសាលាក្រុង បណ្ណាល័យ និងប៉ុស្តិ៍ប៉ូលីស




Flyer

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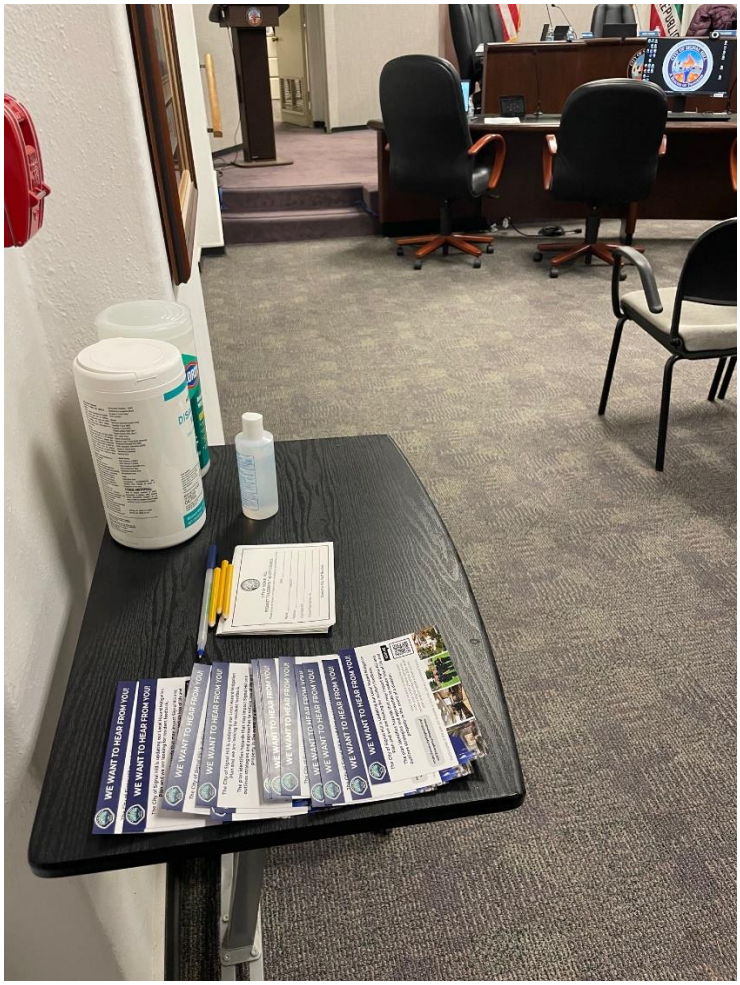
SCAN ME

Public Forums



Pop Ups

Stakeholder List

Entity	Name of Recipient	Job Title of Recipient
Jurisdictions		
Los Angeles County Fire Dept	La Fonda Riggins	Community Services Liaison
Long Beach School District	Jill Baker	Superintendent of Schools
Los Angeles County Fire Prevention Division	Claudia Soiza	Inspector
Los Angeles County Public Health Department	Kathryn Barger	Board Supervisor
Los Angeles County Public Works Department	Toan Duong	Supervisor
American Red Cross	Ryan Chan	Program Manager
Signal Hill Chamber of Commerce	Chris Arnaldo	President
City of Long Beach	Tom Modica	City Manager
American University of Health Sciences	Pastor Gregory Johnson	Pastor
Houses of Worship		
Long Beach Islamic Center	Sheikh Tarek Mohamed	Imam
Stand to Reason	Katie Hulse	Front Office Manager
The Well Christian Fellowship	Pat Dalbec	Emergency Response Team Director
Calvary Chapel Signal Hill	James Kaddis	Pastor
Dream City Church	Atwood Stanley	Chief Risk Officer
Community Organizations		
Signal Hill Community Foundation	Keir Jones	President
Signal Hill Police Foundation	Charlie Honeycutt	President
Signal Hill Historical Society	Larry Blunden	President
Friends of the Signal Hill Library	Cecilia Fidora	President
Signal Hill Social Club	Victoria Chang	Recreation Specialist
Signal Hill Rotary	Albert Chang	President
Conservation Corp of Long Beach	Dan Knapp	Executive Director & CEO
Signal Hill Chamber of Commerce	Chris Arnaldo	President
Long Beach Youth Leadership Institute	Erron Harris	Program Manager
Long Beach Community Improvement League	Farahnaz Khaleghi	Executive Director
Signal Hill Petroleum	Debra Layton	VP of Government Affairs

Public and Stakeholder Input

Date Invited to Provide Input or Input Gathered	Agency Represented, Name, Position Title	Input and Action
PUBLIC		
	General Public	
February 1, 2024		**Input:** Comments from online and paper survey: "Thank you for providing this information."; "I am glad the City has this resource available."; "More emergency preparedness information for residents would be helpful."; "Reinstate CERT trainings." **Resolution:** Comments have been logged and for requests related to programs and information, the City is working on plans for outreach and communications.
LOCAL AND REGIONAL AGENCIES INVOLVED IN HAZARD MITIGATION ACTIVITIES		
September 29, 2023	Agency: Signal Hill Planning Team Rebecca Lopez, Chair – Emergency Management Coordinator, Police Department Karla Santillan – Police Department Don Moreau – Police Department Brian Leyn – Police Department Carl Charles – Police Department Wayne Byerley – Police Department Grissel Chavez – City Manager's Office Yvette Aguilar – City Manager's Office Thomas Bekele – Public Works Sharon Del Rosario – Finance Colleen Doan – Community Development Joe Hoefgen – City Manager's Office Desiree Jimenez – Public Works Carlos Luis – Community Development	**Input:** Information was gathered from the Planning Team during review of the Initial Draft Plan. Planning Team Chair provided extensive information relating to the community outreach activities. **Resolution:** Information gathered during initial review or since was incorporated into the Hazard Mitigation Plan.
February 1, 2024	Agency: Los Angeles County Fire Department, Station 60 Station has a rotating staff of one captain and three firefighters. Station was provided both an electronic and hard copy of the draft plan for input.	No input received
February 1, 2024	Agency: Long Beach Utilities Name: Shaun Curtis, Manager, Security and Emergency Preparedness	No input received
February 1, 2024	Agency: Los Angeles County Sanitation District Name: Ajay Malik, Technical Services Department Head	No input received.

Date Invited to Provide Input or Input Gathered	Agency Represented, Name, Position Title	Input and Action
February 1, 2024	Agency: Dignity Health St. Mary's Medical Center Name: Kathy Dollarhide, Director of Disaster Resource Center	No input received.
February 1, 2024	Agency: Long Beach Unified School District Name: Cameron Smith, Director of School Safety	No input received.
February 1, 2024	Agency: Southern California Edison Name: Celina Luna, Government Relations Manager	No input received.
February 1, 2024	Agency: Signal Hill Petroleum Name: Debra Montalvo Layton, VP of Community Relations	No input received.
February 1, 2024	Agency: City of Long Beach Name: Tom Modica, City Manager	No input received.
February 1, 2024	Agency: City of Carson Name: David C. Roberts, Jr., City Manager	No input received.
February 1, 2024	Agency: City of Torrance Name: Aram Chaparyan, City Manager	No input received.
February 1, 2024	Agency: City of Gardena Name: Clint Osorio, City Manager	No input received.
February 1, 2024	Agency: City of Compton Name: Willie A. Hopkins, City Manager	No input received.
February 1, 2024	Agency: City of Paramount Name: John Moreno, City Manager	No input received.
February 1, 2024	Agency: City of Lakewood Name: Thaddeus McCormack, City Manager	No input received.
February 1, 2024	Agency: City of Bellflower Name: Ryan Smoot, City Manager	No input received.
February 1, 2024	Agency: City of Los Alamitos Name: Chet Simmons, City Manager	No input received.
February 1, 2024	Agency: City of Seal Beach Name: Deb Machen, Executive Assistant to the City Manager	No input received.
February 1, 2024	Agency: Cal State University, Long Beach Name: Allyson Joy, Emergency Preparedness Assistant	No input received.
February 1, 2024	Agency: Long Beach City College Name: David Jefferson, Director, Risk Management and Campus Safety	No input received.
AGENCIES WITH AUTHORITY TO REGULATE DEVELOPMENT		
	See above Local and Regional Agencies involved in Hazard Mitigation Activities	
February 1, 2024	Agency: Parks & Recreation Commission Members: Tim Anhorn, Linda Edwards, Kiran Gidwani, Pam Dutch Hughes, Caroline Kiss-Lee	No input received.

Date Invited to Provide Input or Input Gathered	Agency Represented, Name, Position Title	Input and Action
February 1, 2024	Agency: Planning Commission Members : Perica Bell, Gege Lopez, Victor Parker, Saeida Miller, Sonia Savoulian	No input received.
OTHER CITY COMMISSIONS AND GROUPS		
February 1, 2024	Agency: Civil Service Commission Members: Julie Doi, Ayda Ghebrezghi, Ronald Griggs, Paul Patterson, Diana Phillips	No input received.
February 1, 2024	Agency: Parks & Recreation Commission Members: Tim Anhorn, Linda Edwards, Kiran Gidwani, Pam Dutch Hughes, Caroline Kiss-Lee	No input received.
February 1, 2024	Agency: Diversity Coalition Committee	No input received.
February 1, 2024	Agency: Los Angeles County Department of Public Health Name: Stella Fogleman Position Title: Director, Emergency Preparedness and Response	No input received.
February 1, 2024	Agency: Los Angeles County Department of Mental Health Name: Cynthia Miller Position Title: Disaster Services Specialist	No input received.
February 1, 2024	Agency: Las Brisas Housing Complex Name: Kim Johnson / Ana Tello Position Title: Property Manager	No input received.
February 1, 2024	Agency: Long Beach Memorial Medical Center Name: Omar Fernandez Position Title: RN, Disaster Resource Center	No input received.
February 1, 2024	Agency: Los Angeles County Recorder-Clerk Name: Dean Logan Position Title: Registrar-Recorder/County Clerk	No input received.
February 1, 2024	Agency: Zinnia Housing Complex Name: Machara Hogue Position Title: Property Manager	No input received.
February 1, 2024	Agency: Friends of Signal Hill Library Name: Cecilia Fidora Position Title: President	No input received.
February 1, 2024	Agency: Signal Hill Community Foundation Name: Keir Jones Position Title: President	No input received.
February 1, 2024	Agency: Signal Hill Police Foundation Name: Charlie Honeycutt Position Title: President	No input received.

Date Invited to Provide Input or Input Gathered	Agency Represented, Name, Position Title	Input and Action
February 1, 2024	Agency: Signal Hill Rotary Club Name: Les Young Position Title: President	No input received.
February 1, 2024	Agency: EDCO Name: Mark Perumean Position Title: General Manager	No input received.
February 1, 2024	Agency: Signal Hill Historical Society Name: Joe Holliday Position Title: President	No input received.
NEIGHBORING COMMUNITIES		
February 1, 2024	Agency: City of Long Beach Name: Tom Modica, City Manager	No input received.
February 1, 2024	Agency: City of Carson Name: David C. Roberts, Jr, City Manager	No input received.
February 1, 2024	Agency: City of Torrance Name: Aram Chaparyan, City Manager	No input received.
February 1, 2024	Agency: City of Gardena Name: Clint Osorio, City Manager	No input received.
February 1, 2024	Agency: City of Compton Name: Willie A. Hopkins, City Manager	No input received.
February 1, 2024	Agency: City of Paramount Name: John Moreno, City Manager	No input received.
February 1, 2024	Agency: City of Lakewood Name: Thaddeus McCormack, City Manager	No input received.
February 1, 2024	Agency: City of Bellflower Name: Ryan Smoot, City Manager	No input received.
February 1, 2024	Agency: City of Los Alamitos Name: Chet Simmons, City Manager	No input received.
February 1, 2024	Agency: City of Seal Beach Name: Deb Machen, Executive Assistant to the City Manager	No input received.
BUSINESSES, ACADEMIC, AND OTHER PRIVATE ORGANIZATIONS		
February 1, 2024	Agency: Frontier Communications Name: Felicia Hudson Position Title: Government and External Affairs	No input received.
February 1, 2024	Agency: Southern California Edison Name: Celina Luna Position Title: Government Relations Manager	No input received.
February 1, 2024	Agency: Signal Hill Petroleum Name: Debra Montalvo Layton Position Title: VP of Community Relations	No input received.
February 1, 2024	Agency: EDCO Name: Mark Perumean Position Title: General Manager	No input received.

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February 1, 2024	Agency: Long Beach Unified School District Name: Cameron Smith Position Title: Director of School Safety	No input received.
February 1, 2024	Agency: Cal State University, Long Beach Name: Allyson Joy Position Title: Emergency Preparedness Assistant	No input received.
February 1, 2024	Agency: Long Beach City College Name: David Jefferson Position Title: Director, Risk Management and Campus Safety	No input received.
February 1, 2024	Agency: Food 4 Less Name: Natasha Peralta Position Title: Regional Manager	No input received.
February 1, 2024	Agency: Costco Name: Audrey Medico Position Title: Manager	No input received.
February 1, 2024	Agency: Target Name: Tina Bravo Position Title: Assistant Manager	No input received.
February 1, 2024	Agency: Home Depot Name: Miguel Camberos Position Title: Operation Manager	No input received.
February 1, 2024	Agency: Best Buy Name: Jon Ordonez Position Title: General Manager	No input received.
February 1, 2024	Agency: Starbucks Name: Jose C. Position Title: Store Manager	No input received.
February 1, 2024	Agency: Office Depot Name: Greg Gonser Position Title: General Manager	No input received.
NONPROFIT AND COMMUNITY-BASED ORGANIZATIONS SUPPORTING UNDERSERVED COMMUNITIES AND SOCIALLY VULNERABLE POPULATIONS		
February 1, 2024	Agency: Las Brisas Housing Complex Name: Kim Johnson / Ana Tello Position Title: Property Manager	No input received.
February 1, 2024	Agency: Zinnia Housing Complex Name: Machara Hogue Position Title: Property Manager	No input received.
February 1, 2024	Agency: Disabled Resources Center Name: Guadalupe Gracian Position Title: Emergency Preparedness Coordinator	No input received.

Date Invited to Provide Input or Input Gathered	Agency Represented, Name, Position Title	Input and Action
February 1, 2024	Agency: Long Beach Rescue Mission Name: Jeff Levine Position Title: President & CEO	No input received.
February 1, 2024	Agency: Long Beach Senior Center Name: Brent Dennis Position Title: Director, Parks, Recreation, & Marine	No input received.
February 1, 2024	Agency: Mental Health America Name: Christina Miller Position Title: President & CEO	No input received.
February 1, 2024	Agency: The Salvation Army Family Service Name: Jared Arnold Position Title: Captain	No input received.
February 1, 2024	Star View Behavior Health Care Center 3210 Long Beach Boulevard Long Beach, CA 90807	No input received.
February 1, 2024	VA Healthcare System 5901 E 7th St. Long Beach, CA 90822	No input received.
February 1, 2024	Safe Refuge 3111 E 7th Street Long Beach, CA 90804	No input received
February 1, 2024	Calvary Chapel Signal Hill 1200 E 29th Street Signal Hill, CA 90755	No input received
February 1, 2024	Aum Sanctuary LB 2071 E Spring Street Signal Hill, CA 90806	No input received
February 1, 2024	Willow Temple 2710 E Willow Street Signal Hill, CA 90755	No input received
February 1, 2024	Long Beach Christian Fellowship 3210 E Airport Way Long Beach, CA 90806	No input received
February 1, 2024	Victory Outreach Long Beach 3300 E Willow Street Signal Hill, CA 90755	No input received
February 1, 2024	Christ Centered Ministries 2131 Ridgeview Terrace Dr. Signal Hill, CA 90755	No input received
February 1, 2024	The Well Christian Fellowship 3250 E 19th Street Signal Hill, CA 90755	No input received

Date Invited to Provide Input or Input Gathered	Agency Represented, Name, Position Title	Input and Action
February 1, 2024	Cambodian Harvest Church 1948 E 20th Street Signal Hill, CA 90755	No input received
February 1, 2024	Dream City Church Long Beach 2094 Cherry Avenue Signal Hill, CA 90755	No input received
February 1, 2024	Long Beach Islamic Center 995 E 27th Street Signal Hill, CA 90755	No input received
February 1, 2024	Stand to Reason 1438 E 33rd Street Signal Hill, CA 90755	No input received
February 1, 2024	Catholic Charities 123 E 14th Street Long Beach, CA 90813	No input received
February 1, 2024	Christian Outreach in Action 515 E 3rd Street Long Beach, CA 90802	No input received
February 1, 2024	Luteran Community Care Long Beach 1611 Pine Avenue Long Beach, CA 90813	No input received

Stakeholders listed above were invited via email or mail and provided with an electronic link to the City of Signal Hill website posting both of the community outreach activities: 1) Posting of the of the Second Draft Plan, Video, and Survey; 2) Reposting of an updated Video and Survey along with an Executive Summary in English, Spanish, and Cambodian. The following is the letter distributed to the stakeholders:

Stakeholder Letter of Invitation

POLICE DEPARTMENT

Hello,

The City of Signal Hill is in the process of updating our Local Hazard Mitigation Plan and is seeking feedback from our surrounding stakeholder agencies.

A Hazard Mitigation Plan documents strategies and approaches designed to reduce loss of life and property in the event of a disaster.

The update is led by the Signal Hill Police Department in partnership with a number of City departments and stakeholder agencies.

The five goals of the 2024 Hazard Mitigation Plan update include:

1. Protect life and property
2. Enhance public awareness
3. Protect natural systems
4. Encourage partnerships and implementation
5. Strengthen emergency services

Based on findings from the Risk Assessment and direction from the Planning Committee, the following hazards pose the greatest threat to the City of Signal Hill:

- **Earthquake**: Signal Hill is especially susceptible to earthquakes due to its proximity to multiple fault lines
- **Landslide:** Areas of high elevation in Signal Hill are susceptible to landslides, particularly after a large seismic event or severe rainstorm

- **Windstorm:** The City is highly likely to high winds created by Santa Ana wind events
- **Drought:** Signal Hill, like much of California, has a history of experiencing drought, with the possibility of severe drought conditions in the future
- **Flood**: During a major rainstorm, some areas of Signal Hill may experience flooding

We would like to invite you to participate in our public survey.

You can find the current version of the plan enclosed for your reference.

Feel free to reach out with any questions you may have.

Thank you,

Rebecca Lopez
Emergency Management Coordinator
Signal Hill Police Department
562-989-7232

City of Signal Hill Floodplain Ordinance

Chapter 15.42

FLOODPLAIN MANAGEMENT

Sections:

15.42.010 Statutory authorization.

The Legislature of the State of California has in Government Code Sections 65302, 65560, and 65800 conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City Council of the City of Signal Hill does hereby adopt the following floodplain management regulations. (Ord. 2021-03- 1518 § 5 (part))

15.42.020 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

A. Protect human life and health;

B. Minimize expenditure of public money for costly flood control projects;

C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

D. Minimize prolonged business interruptions;

E. Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in areas of special flood hazard;

F. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future blighted areas caused by flood damage;

G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and

H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. (Ord. 2021-03-1518 § 5 (part))

15.42.030 Definitions.

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable

application.

A. "Area of special flood hazard" means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.

B. "Base flood" means a flood which has a one percent chance of being equaled or exceeded in any given year (also called the "100-year flood"). Base flood is the term used throughout this chapter.

C. "Building" see "Structure".

D. "Development" means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

E. "Flood or flooding" means:

1. A general and temporary condition of partial or complete inundation of normally dry land areas from: the overflow of inland or tidal waters; the unusual and rapid accumulation or runoff of surface waters from any source; or mudslides (i.e., mudflows) which are proximately caused by flooding as defined herein and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusual and unforeseeable event which results in flooding as defined in this definition.

F. "Floodplain or flood-prone area" means any land area susceptible to being inundated by water from any source - see "Flooding".

G. "Floodplain Administrator" means the individual appointed to administer and enforce the floodplain management regulations.

H. "Floodplain management" means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

I. "Floodplain management regulations" means this chapter and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading and erosion control) and other application of police power which control development in flood-prone areas. This term describes federal, state or local regulations in any combination thereof which provide standards for preventing and reducing flood loss and damage.

J. "Governing body" means the City of Signal Hill.

K. "Historic structure" means any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or

4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior or directly by the Secretary of the Interior in states with approved programs.

L. "Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

M. "Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

N. "New construction", for floodplain management purposes, means structures for which the "start of construction" commenced on or after the effective date of floodplain management regulations adopted by this community, and includes any subsequent improvements to such structures.

O. "One-hundred-year flood" or "100-year flood" see "Base flood."

P. "Recreational vehicle" means a vehicle which is:

1. Built on a single chassis;

2. Four hundred square feet or less when measured at the largest horizontal projection;

3. Designed to be self-propelled or permanently towable by a light-duty truck; and

4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Q. "Start of construction" includes substantial improvement and other proposed new development and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days from the date of the permit. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

R. "Structure" means a walled and roofed building that is principally above ground; this includes a gas or liquid storage tank or a manufactured home.

S. "Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

T. "Substantial improvement" means any reconstruction, rehabilitation, addition, or other proposed new development of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations or state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or

2. Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure". (Ord. 2021-03-1518 § 5 (part))

15.42.040 General provisions.

A. Lands to which this chapter applies. This chapter shall apply to all areas identified as flood-prone within the jurisdiction of the City of Signal Hill.

B. Basis for establishing flood-prone areas. The areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in the Flood Insurance Study, Los Angeles County, California, and incorporated areas with accompanying Flood Insurance Rate Maps (FIRMs) and Flood Hazard Boundary Maps (FHBMs), dated December 2, 1980 and all subsequent amendments and/or revisions declared to be a part of this chapter. This Flood Insurance Study and attendant mapping is the minimum area of applicability of this chapter and may be supplemented by studies for other areas which allow implementation of this chapter and which are recommended to the City Council by the Floodplain Administrator. The Floodplain Administrator shall obtain, review, and reasonably utilize any base flood data available from other federal or state agencies or other source to identify flood-prone areas within the jurisdiction of the City of Signal Hill. This data will be on file at:

2175 Cherry Avenue

Signal Hill, CA 90755

Community Development Department

C. Compliance. No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the term of this chapter and other applicable regulations. Violation of the requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Nothing herein shall prevent the City Council from taking such lawful action as is necessary to prevent or remedy any violation.

D. Abrogation and greater restrictions. This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

E. Interpretation. In the interpretation and application of this chapter, all provisions shall be:

1. Considered as minimum requirements;

2. Liberally construed in favor of the governing body; and

3. Deemed neither to limit nor repeal any other powers granted under state statutes.

F. Warning and disclaimer of liability. The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the City Council, or any officer or employee thereof, the State of California, or the Federal Insurance Administration, FEMA, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

G. Severability. This chapter and the various parts thereof are hereby declared to be severable. Should any section of this chapter be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the chapter as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid. (Ord. 2021-03-1518 § 5 (part))

15.42.050 Administration.

A. Establishment of development permit. A development permit shall be obtained for all proposed construction or other development in the community, including the placement of manufactured homes, so that it may be determined whether such construction or other development is within flood-prone areas.

B. Designation of the Floodplain Administrator. The Building Official is hereby appointed to administer, implement, and enforce this chapter by granting or denying development permits in accord with its provisions.

C. Duties and responsibilities of the Floodplain Administrator. The duties and responsibilities of the Floodplain Administrator shall include, but not be limited to the following:

1. Permit review. Review all development permit applications to determine:

a. Permit requirements of this chapter have been satisfied;

b. All other required state and federal permits have been obtained; and

c. The site is reasonably safe from flooding.

2. Review and use of any other base flood data. The Floodplain Administrator shall obtain, review, and reasonably utilize any base flood data available from other federal or state agency or other source.

3. Require applicants who submit hydrologic and hydraulic engineering analyses to support permit applications to submit to FEMA the data and information necessary to maintain the Flood Insurance Rate Maps when the analyses indicate changes in base flood elevations, flood hazard area boundaries, or floodway designations; such submissions shall be made within six months of such data becoming available. (Ord. 2021-03-1518 § 5 (part))

15.42.060 Provisions for flood hazard reduction.

A. Standards of construction. If a proposed building site is in a flood-prone area, all new construction and substantial improvements, including manufactured homes, shall:

1. Be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy; and

2. Be constructed:

a. With materials and utility equipment resistant to flood damage;

b. Using methods and practices that minimize flood damage; and

c. With electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

B. Standards for subdivisions or other proposed new development. If a subdivision proposal or other proposed new development, including manufactured home parks or subdivisions, is in a flood-prone area, any such proposals shall be reviewed to assure that:

1. All such proposals are consistent with the need to minimize flood damage within the flood-prone area;

2. All public utilities and facilities such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage; and

3. Adequate drainage is provided to reduce exposure to flood hazards.

C. Standards for utilities.

1. All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate:

a. Infiltration of flood waters into the systems; and

b. Discharge from the systems into flood waters.

2. On-site waste disposal systems shall be located to avoid impairment to them, or contamination from them during flooding. (Ord. 2021-03-1518 § 5 (part))