



# Local Hazard Mitigation Plan

*San Mateo County, California*

**City of Brisbane Annex**

**2026**

**DRAFT**



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This Annex details the hazard mitigation elements specific to the City of Brisbane, a participating jurisdiction of the 2026 San Mateo County Local Hazard Mitigation Plan (LHMP or the Plan) update. This Annex is not intended to be a standalone document but supplements the information contained in **Volume 1 (Countywide Planning Elements)**. Therefore, all sections of **Volume 1**, including the planning process, hazard identification and risk assessment, mitigation strategy (includes mitigation goals and objectives), and plan maintenance, apply to and were met by the City of Brisbane. This Annex provides additional information specific to the City, with a focus on providing further details on the hazard risk assessment and mitigation strategy (i.e., mitigation actions) for this community.

## 1. HAZARD MITIGATION LOCAL PLANNING TEAM

The following individuals have been identified as the City of Brisbane Local Planning Team for the 2026 LHMP. These individuals participated in all aspects of the planning process and developed a risk and vulnerability assessment, capability assessment, and mitigation strategy (including mitigation actions) specific to the jurisdiction.

Name	Title	Department
Jeremy Dennis	City Manager	City Manager's Office
Christina Fernandez	Assistant City Manager	City Manager's Office
Maz Bozorginia	Director	Public Works Department
Jeremiah Robbins	Senior Planner	Community Development Department
Nick Gracia	Acting Fire Chief	North County Fire Authority
Adrienne Etherton	Sustainability Manager	City Manager's Office
Mollie Brown	Management Analyst	City Manager's Office

## 2. JURISDICTION PROFILE

The City of Brisbane is located on the western edge of San Francisco Bay, with a western boundary generally delineated by San Bruno Mountain. Neighboring agencies to the north include the City of Daly City and the City and County of San Francisco. South San Francisco is at the City's southern limit. Although the City's total land base is listed as 20.44 square miles, 17 square miles of this amount is covered by the San Francisco Bay.

Brisbane's climate is mild during the summer, with temperatures in the 60s, and cool during the winter, with temperatures in the 50s. Summers are long, arid, and mostly clear, while winters are short, cold, and wet. Over the course of the year, the temperature typically varies from 46°F to 72°F, but is rarely below 39°F or above 82°F. The warmest month of the year is September, with an average high temperature of 73°F, while the coldest is January, with an average low temperature of 45°F.

The average annual precipitation in Brisbane is 21.7 inches. Winter months tend to be wetter than summer months, with January being the wettest, averaging 4.3 inches of rainfall. Brisbane's relative location to San Bruno Mountain tends to deflect seasonal fog to the north and south, away from the City.



## 2.1. Brief History

Brisbane was originally part of the Rancho Canada de Guadalupe la Visitacion y Rodeo Viejo, a large tract of land that included Guadalupe Valley, the Bayshore District of Daly City, the Visitacion Valley District of San Francisco, and San Bruno Mountain. Visitacion City, as Brisbane was originally known, was surveyed in 1908, adjacent to a new Southern Pacific Railroad line that offered a faster and more direct route to San Francisco. The town site remained largely undeveloped for many years, largely due to the “Panic of 1907,” a nationwide financial banking crisis/economic recession. During the 1920s, the area’s name was changed to Brisbane.

Growth was slow; by 1940, the town had a population of just 2,500. The issue of home rule and city formation was controversial among Brisbane residents during the 1940s and 1950s, with some residents seeking a stronger voice in local politics, while others were concerned about losing their town’s close-knit charm to another layer of government. Finally, an incorporation committee was formed in 1960, and after six (6) months of study, it was recommended that the town vote to incorporate a 2.5 square mile area. On September 12, 1961, the residents of Brisbane supported the incorporation committee’s recommendations, with 710 residents voting in favor of incorporation and 296 opposed.

## 2.2. Governing Body Format

The City of Brisbane is governed by a five (5) member City Council elected at large. A Mayor is chosen every year by the Council, and the City Manager is appointed by the Council as Chief Administrator. The City has two (2) standing commissions and five (5) committees whose members are appointed by the City Council.

The City Council will, by resolution, adopt the final approved version of the Brisbane Annex to the San Mateo County LHMP, and the Brisbane City Manager’s Office Division of Emergency Services will oversee its implementation.

## 2.3. Population

In 2024, the City of Brisbane had a population of 4,692, a 3.3% decrease from the estimated 2020 population of 4,851. **Table 1** summarizes population distribution between 2010 and 2024, and the percentage of the 2024 population that is under five (5) years old, over 65 years old, and living below the poverty level.



**Table 1. Population Trends**

Population				Underserved Population		
2010 <sup>1</sup>	2020 <sup>2</sup>	2024 <sup>3</sup>	Population Change (2020 - 2024)	Youth (Under 5 years old)	Elderly (Over 65 years old)	Below Poverty Level <sup>4</sup>
4,282	4,851	4,692	-3.3%	4.7%	23.9%	5.5%

### 3. CHANGES IN DEVELOPMENT

California Law requires counties and cities to prepare and adopt a General Plan, a comprehensive long-range plan to guide community development. The General Plan must contain seven (7) state-mandated elements – land use, circulation, housing, conservation, open space, noise, and safety – and may contain additional elements as a jurisdiction sees fit. Counties and cities that have identified disadvantaged communities must also address environmental justice in their general plans, including air quality. Additionally, the General Plan must comprise an integrated and internally consistent set of goals, policies, and implementation measures. The City of Brisbane adopted its General Plan under this law in June 1994 and has updated various elements several times over the years since.

The City of Brisbane has been reviewing several large development projects over the past several years (and decades), including the Baylands, The Shore at Sierra Point, and Quarry projects. These project developments will increase structures and populations in hazard areas, thereby increasing associated hazard risk. This includes development in areas prone to coastal flooding, sea level rise, landslides, and wildfires.

The Brisbane Baylands encompasses 680 acres and is generally bordered on the west by Bayshore Boulevard, north by the City and County of San Francisco, east by US Highway 101, and south by Brisbane Lagoon. The Baylands was formerly a landfill and a railyard. As such, extensive site remediation is required. The remediated site holds the promise of new sustainable development, including housing in the northwest quadrant, commercial development, and enhanced open spaces, parks, and trails.

The proposed Brisbane Baylands project, located along the Bay's coast, is in an area prone to coastal flooding and may be affected by sea level rise. The Brisbane Baylands Specific Plan includes development of 1,800-2,200 residential units; up to 7 million square feet of commercial space, including 500,000 square feet of hotel, and over 100 acres of open space and amenities.

Sierra Point is located on Brisbane's waterfront, anchoring the south end of The Baylands overlooking Brisbane Marina. The Shore at Sierra Point is a 23-acre waterfront campus with approximately 625,000 square feet of commercial space consisting of five (5) R&D buildings, a 10,000 square foot restaurant

<sup>1</sup> United States Census Bureau. (2010). P1: Race (2010: DEC Redistricting Data (PL 94-171)). Retrieved from <https://data.census.gov/table/DECENNIALPL2010.P1?q=160XX00US0608310>.

<sup>2</sup> United States Census Bureau. (2020). P1:Race (2020: DEC Redistricting Data (PL 94-171)). Retrieved from <https://data.census.gov/table/DECENNIALPL2020.P1?q=160XX00US0608310>.

<sup>3</sup> United States Census Bureau. (2024). S0101 Age and Sex (2024: ACS 5-Year Estimates Subject Tables). Retrieved from <https://data.census.gov/table/ACSST5Y2024.S0101?q=160XX00US0608310>.

<sup>4</sup> United States Census Bureau. (2024). S1701: Poverty Status in the Past 12 Months (2024: ACS 5-Year Estimates Subject Tables). Retrieved from <https://data.census.gov/table/ACSST5Y2024.S1701?q=160XX00US0608310>.



and café bar, and 15,000 square feet of on-site retail. The Sierra Point Open Space and Parks Master Plan seeks to create a welcoming, inclusive, and sustainable waterfront that enhances public access to nature while fostering a strong sense of community. The goal is to balance the Bay Area's natural beauty with innovative design, ensuring Sierra Point serves as a gathering place for generations to come.

The Quarry Innovation Center, formerly known as the Guadalupe Quarry Redevelopment Project, is the potential development of a single 892,000 square foot advanced manufacturing facility on approximately 61 acres of the Guadalupe Quarry Site. The proposed project would involve annexation of the developed 61 acres into the City's limits. Informed by extensive community feedback, the project, if approved, would be committed to balancing economic benefits with protection of San Bruno Mountain, and the remaining 82 acres (about 57%) of the 145-acre quarry site will be permanently set aside for habitat conservation and open space.

**Table 2** summarizes development trends during the performance period since the previous LHMP was developed (i.e., past five (5) years), as well as expected future development trends (i.e., the next five (5) years).

**Table 2. Recent and Expected Development Trends**

Criteria	Description
<p><b>Has your jurisdiction annexed any land since the development of the previous Local Hazard Mitigation Plan?</b>  <i>If yes, give the estimated area annexed and the estimated number of parcels or structures.</i></p>	No
<p><b>Is your jurisdiction expected to annex any areas during the performance period of this Plan?</b></p>	The Quarry Innovation Center, formerly known as the Guadalupe Quarry Redevelopment Project, would include annexation of approximately 61 acres into the City's limits.
<p><b>Has your jurisdiction had any significant changes in development over the past five (5) years that have occurred in hazard-prone areas?</b>  <i>If yes, briefly describe.</i></p>	No



Criteria	Description
<p><b>Are there any areas targeted for development or major redevelopment in the next five (5) years that will occur in hazard-prone areas?</b>  <i>If yes, briefly describe.</i></p>	<p>The Baylands, Sierra Point, and Quarry project developments will increase structures and populations in hazard areas, thereby increasing associated hazard risk. This includes development in areas prone to coastal flooding, sea level rise, landslides, and wildfires.</p> <p>The proposed Brisbane Baylands project, located along the Bay's coast, is in an area prone to coastal flooding and may be affected by sea level rise.</p> <p>The Shore at Sierra Point anchors the south end of The Baylands overlooking Brisbane Marina. Located along the Bay's coast, the area is prone to coastal flooding and may be affected by sea level rise. The Sierra Point Open Space and Parks Master Plan seeks to create a welcoming, inclusive, and sustainable waterfront that enhances public access to nature while fostering a strong sense of community.</p> <p>The Quarry Innovation Center, formerly known as the Guadalupe Quarry Redevelopment Project, is located on San Bruno Mountain, the Quarry is in an area vulnerable to landslides and wildfires.</p>
<p><b>Provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.</b></p>	<p>The City of Brisbane has been reviewing several large development projects over the past several years (and decades), including the Baylands, the Shore at Sierra Point, and Quarry projects.</p>

### 3.1. Changes in Priority

Since the last Plan update, the City of Brisbane has significantly shifted focus to sea level rise and landslide mitigation in response to evolving state and regional requirements as well as recent impacts from atmospheric rivers and storm events. Brisbane experienced a major landslide on New Year's Day 2023, resulting in the need for assistance from state and federal agencies. As new developments unfold, there may be additional shifts in priority. Additionally, mitigation actions from the previous Plan were updated, and a more concerted effort to achieve equitable outcomes for all communities, including underserved communities and socially vulnerable populations, has been implemented.

## 4. CAPABILITY ASSESSMENT

Federal regulations require hazard mitigation plans to identify goals for reducing long-term vulnerabilities to the identified hazards in the planning area (Section 201.6(c)(3)(i)). A critical step in developing specific hazard mitigation actions and projects is assessing existing authorities, policies, programs, and resources and capabilities, and using or modifying local tools to reduce losses and vulnerability from profiled hazards.

A capability assessment was conducted for the City of Brisbane's authorities, policies, programs, and resources. Goals and mitigation actions were developed using input from this assessment. Information



regarding the City’s implementation of and continued participation in the National Flood Insurance Program (NFIP) can be found in Section 5 of this Annex.

The Local Planning Team assessed the City of Brisbane's capabilities that can contribute to the reduction of long-term vulnerabilities to hazards. The capabilities include the following categories:

- Planning and Regulatory Capabilities
- Administrative and Technical Capabilities
- Fiscal Capabilities
- Education and Outreach Capabilities

Additionally, ways to expand and improve these existing policies and programs to integrate hazard mitigation into the City’s day-to-day activities were considered.

## 4.1. Planning and Regulatory Capabilities

**Table 3** includes local ordinances, policies, and laws to manage growth and development (e.g., land use plans, capital improvement plans, transportation plans, emergency preparedness and response plans, building codes, and zoning ordinances).

**Table 3. Planning and Regulatory Capabilities**

Capability Category	Yes/No	Authority <i>(local, county, state, federal)</i>	Responsible Department/ Agency	Code Citation and Comments <i>(e.g., Code Chapter, name of plan, explanation of authority, etc.)</i>
<b>Planning Capacity</b>				
Comprehensive Plan / General Plan	Yes	Local	Community Development Department	General Plan (June 1994), various elements have been updated several times over the years
Capital Improvement Plan	Yes	Local	Finance Department	Annual Plan and Budget (2025-26) Updated annually, covers all public facilities
Floodplain Management / Basin Plan	Yes	Federal	FEMA	FEMA Flood Insurance Study
Stormwater Management Plan	Yes	Local	Public Works Department	2003 Storm Drainage Master Plan
Open Space Plan	Yes	Local	Community Development Department	Open Space Element in the General Plan (June 1994, update in progress); Brisbane Open Space Plan (August 2001)
Stream Corridor Management Plan	No	n/a	n/a	n/a
Watershed Management or Protection Plan	Yes	Local	San Francisco Public Utilities Commission (PUC)	SFPUC Watershed Sanitary Survey



Capability Category	Yes/No	Authority (local, county, state, federal)	Responsible Department/ Agency	Code Citation and Comments (e.g., Code Chapter, name of plan, explanation of authority, etc.)
Economic Development Plan	Yes	Local	Community Development Department	Local Economic Development Element in the General Plan (June 1994)
Comprehensive Emergency Management Plan	Yes	Local	City Manager's Office (Emergency Services Division)	Emergency Operations Plan (2024)
Emergency Operations Plan	Yes	Local	City Manager's Office (Emergency Services Division), Police Department	Updated in December 2024
Evacuation Plan	Yes	Local	North County Fire Authority	Included in the North County Fire Authority Wildland Fire Action Plan
Post-Disaster Recovery Plan	Yes	Local	City Manager's Office (Emergency Services Division)	Included in the EOP
Transportation Plan	Yes	Local	Public Works Department	Local Road Safety Plan (May 2024); Bicycle and Pedestrian Safety Plan (September 2017)
Strategic Recovery Planning Report	Yes	Local	City Manager's Office (Economic Development Division)	Chapter IV. Local Economic Development of the General Plan (1994)
Climate Adaptation Plan	Yes	Local	Community Development Department, Public Works Department	Climate Action Plan (September 2015); Brisbane Lagoon Watershed Sea Level Rise Adaptation Plan (Under Development); Sustainability Framework for the Baylands (November 2015)
Resilience Plan	Yes	Local	Public Works Department	Brisbane Shoreline Resilience Plan (Under Development)
Shoreline Management Plan	Yes	County	San Francisco Bay Conservation and Development Commission	Managed by the San Francisco Bay Conservation and Development Commission, created in 1965, revised in 2019
Community Wildfire Protection Plan	Yes	Local	North County Fire Authority	North County Fire Authority Wildland Fire Plan



Capability Category	Yes/No	Authority (local, county, state, federal)	Responsible Department/ Agency	Code Citation and Comments (e.g., Code Chapter, name of plan, explanation of authority, etc.)
<b>Regulatory Capability</b>				
Building Code	Yes	Local	Community Development Department	Title 15 of the City Code
Zoning Code	Yes	Local	Community Development Department	Title 17 of the City Code
Subdivision Code	Yes	Local	Community Development Department	Title 16 of the City Code
Flood Damage Prevention Ordinance	Yes	Local	Public Works Department	Title 15, Chapter 15.56 of the City Code
Cumulative Substantial Damage Ordinance	No	n/a	n/a	n/a
Freeboard	No	n/a	n/a	n/a
Growth Management Ordinance	Yes	Local	Community Development Department	General Plan (June 1994), various elements have been updated several times over the years
Site Plan Review	Yes	Local	Community Development Department	Titles 15 and 17 of the City Code
Stormwater Management Ordinance	Yes	Local	Public Works Department	Title 13, Chapter 13.06 of the City Code
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Public Works Department	Title 13, Chapter 13.06 of the City Code
Natural Hazard Ordinance	Yes	Local	Public Works Department	Title 15, Chapter 15.56 of the City Code
Post-Disaster Recovery Ordinance	Yes	Local	Community Development Department	Title 2, Chapter 2.28 of the City Code
Real Estate Disclosure Requirement	Yes	State	California Department of Real Estate	Section 1102 of the California Civil Code

## 4.2. Administrative and Technical Capabilities

The administrative and technical capabilities listed in **Table 4** include community (i.e., public and private) staff, their skills, and tools that can be used for mitigation planning and implementation. This capability includes engineers, planners, emergency managers, Geographic Information System (GIS) analysts, building inspectors, grant writers, and floodplain managers. Small communities may rely on other government entities, such as counties or special districts, for resources.



**Table 4. Administration and Technical Capabilities**

Capability	Yes/No	Comments <i>(e.g., position, department, agency, explanation)</i>
<b>Administrative Capabilities</b>		
Planning Board	Yes	Planning Commission
Mitigation Planning Committee	Yes	Complete Streets Safety Committee
Environmental Board/Commission	Yes	Open Space and Ecology Committee
Open Space Board/Committee	Yes	Parks and Recreation Commission Open Space and Ecology Committee
Economic Development Commission/Committee	Yes	Chamber of Commerce
Maintenance programs to reduce risk	Yes	Building Efficiency Program SB2 Planning Grant Implementation Program
Mutual Aid Agreements	Yes	Police Department; Public Works Department; North County Fire Authority
<b>Technical/Staffing Capabilities</b>		
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Public Works Department (Director) Community Development Department (Director)
Engineer(s) or professional(s) trained in building or infrastructure construction practices	Yes	Public Works Department (Director) Community Development Department (Building Official)
Planners or engineers with an understanding of natural hazards	Yes	Public Works Department (Director) Community Development Department (Director)
NFIP Floodplain Administrator	Yes	Community Development Department (Chief Building Official)
Surveyor(s)	Yes	All surveying is provided under contract
Personnel skilled or trained in GIS applications	Yes	GIS Manager, City Manager's Office
A scientist familiar with natural hazards	Yes	Utilize the resources of the local US Geological Survey staff
Warning systems/services	Yes	SMC Alert, in partnership with the San Mateo County Department of Emergency Management
Emergency manager	Yes	City Manager's Office (Emergency Services Division)
Grantwriter(s)	Yes	City Manager's Office
Staff with expertise or training in benefit cost analysis	Yes	Public Works Department (Senior Civil Engineer)
Professionals trained in conducting damage assessments	Yes	Public Works Department (Senior Civil Engineer)

### 4.3. Fiscal Capabilities

**Table 5** lists fiscal capabilities available to the City of Brisbane that may be used to implement mitigation activities to reduce risk and enhance resiliency. This capability includes available funding sources from



local budgets, state and federal grants, potential cost-sharing arrangements with private entities, existing insurance policies, and the ability to generate additional revenue through mitigation-related fees and bonds.

**Table 5. Financial Capabilities**

Capability	Accessible or Eligible to Use
Community Development Block Grants (CDBG, CDBG-DR)	No
Federal Hazard Mitigation Assistance Program <i>(i.e., Hazard Mitigation Grant Program (HMGP), HMGP Post Fire, Flood Mitigation Assistance (FMA) Program)</i>	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	Yes
Withhold public expenditures in hazard-prone areas	Yes
Other federal or state funding programs	Yes
Open space acquisition funding programs	Yes

## 4.4. Education and Outreach Capabilities

**Table 6** lists the City’s education and public outreach capabilities that can be used to inform residents about potential hazards, educate on mitigation strategies, and encourage proactive actions to reduce the community’s impacts to disasters. These capabilities include fire safety programs, hazard awareness campaigns, public information, and communications offices.

**Table 6. Education and Outreach Capabilities**

Capability	Yes/No	Comments <i>(e.g., position, department, agency, explanation)</i>
Public Information Officer	Yes	City Manager’s Office (Assistant to the City Manager)
Personnel skilled or trained in website development	Yes	City Manager’s Office (Assistant to the City Manager)
Hazard mitigation information is available on the jurisdiction’s website	Yes	City Manager’s Office (Emergency Services Division)
Utilize social media for hazard mitigation education and outreach	Yes	Facebook: <a href="https://www.facebook.com/brisbane94005/">Facebook.com/brisbane94005/</a> Instagram: <a href="https://www.instagram.com/cityofbrisbaneca/">Instagram.com/cityofbrisbaneca/</a> X: <a href="https://twitter.com/brisbaneca">X.com/brisbaneca</a> YouTube: <a href="https://www.youtube.com/brisbaneca">Youtube.com/brisbaneca</a>
Citizen boards or commissions that address issues related to hazard mitigation	Yes	County’s Emergency Services Council



Capability	Yes/No	Comments <i>(e.g., position, department, agency, explanation)</i>
Other programs already in place that could be used to communicate hazard-related information	Yes	Weekly E-Newsletter; City Website; City Monthly Print Newsletter
An established warning system for hazard events	Yes	SMC Alert, in partnership with the San Mateo County Department of Emergency Management

## 4.5. Community Classifications

The community classification relates to the community’s ability to provide effective services to reduce its vulnerability to the identified hazards. These classifications can be viewed as indicators of the community’s capabilities across all phases of emergency management (i.e., preparedness, response, recovery, and mitigation) and are used as underwriting parameters to determine the costs of various forms of insurance. **Table 7** summarizes the classifications of community programs available to the City of Brisbane.

**Table 7. Community Classifications**

Program	Yes/No	Classification <i>(if applicable)</i>	Date Classified <i>(if applicable)</i>
Community Rating System (CRS)	No	n/a	n/a
Building Code Effectiveness Grading Schedule (BCEGS)	No	n/a	n/a
Public Protection (ISO Fire Protection Classes 1 to 10)	No	n/a	n/a
NWS StormReady®	No	n/a	n/a
NWS TsunamiReady®	No	n/a	n/a
Firewise USA®	No	n/a	n/a
NWS Weather Ready Nation Ambassador	Yes	n/a	n/a

## 4.6. Needs to Expand/Improve Capabilities

The City of Brisbane identified existing authorities, policies, programs, funding, and/or resources that need to be expanded and/or improved to support the implementation of the hazard mitigation initiatives identified in this Plan (e.g., mitigation actions).

- City codes and ordinances (e.g., building, zoning, land use, fire) should be reviewed based on developing trends in identified hazards and mitigation measures that can make them more effective at preventing losses.
- The ability to implement the various mitigation strategies is limited by available staffing, capacities, and resources. Securing mitigation grants funding and resource partnerships to find staff and implement programs and projects, assists in implementing the various strategies.



## 5. NATIONAL FLOOD INSURANCE PROGRAM

The City of Brisbane is a member of the National Flood Insurance Program (NFIP) but has not chosen to participate in the NFIP Community Rating System (CRS) Program. The City is in good standing with the NFIP through adoption and enforcement of floodplain management requirements (e.g., regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community. The City’s NFIP participation information is listed in **Table 8**.

**Table 8. NFIP Participation Information**

Community ID	NFIP Participation Date	Current Effective FIRM Date	CRS Entry Date	CRS Current Effective Date	CRS Class
060314	5/24/1974	4/5/2019	n/a	n/a	n/a

### 5.1. NFIP Floodplain Administrator

All NFIP participating jurisdictions have a designated Floodplain Administrator who is charged with enforcing floodplain regulations, routinely monitoring the floodplains, and providing community assistance, such as encouraging owners to maintain flood insurance. The City of Brisbane Floodplain Administrator information is listed in **Table 9**.

**Table 9. Floodplain Administrator**

Name	Title	Department	Phone Number
Julia Ayres	Chief Building Official	Community Development	(415) 508-2120

### 5.2. Repetitive Loss and Severe Repetitive Loss Property

FEMA defines a Repetitive Loss property as an NFIP-insured property meeting at least one (1) of the following paid loss criteria since 1978, regardless of any changes in ownership:

- Four (4) or more separate claims payments greater than \$5,000 each (including building and contents payment).
- Two (2) or more separate flood insurance claims payments (building payments only), where the total of the payments is greater than the property’s current value.

Additionally, to receive a designation, at least two (2) of the claim payments must occur within 10 years of one another.<sup>5</sup>

<sup>5</sup> Federal Emergency Management Agency, National Flood Insurance Program. (2023). A Policyholder’s Guide to Severe Repetitive Loss. Retrieved from [https://agents.floodsmart.gov/sites/default/files/fema\\_nfip-policyholders-guide-severe-repetitive-loss\\_brochure\\_07-2023.pdf](https://agents.floodsmart.gov/sites/default/files/fema_nfip-policyholders-guide-severe-repetitive-loss_brochure_07-2023.pdf).



A Severe Repetitive Loss property is defined by FEMA as any NFIP-insured single-family or multi-family residential building meeting at least one (1) of the following paid loss criteria since 1978 or from a building constructed after 1978, regardless of any changes in ownership:<sup>6</sup>

- That has incurred flood-related damage for which four (4) or more separate claims payments have been made, with the amount of each claim (including building and contents payments) exceeding \$5,000, and with the cumulative amount of such claims payments exceeding \$20,000.
- For which at least two (2) separate claims payments (building payments only) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the building.

**Table 10** summarizes FEMA Repetitive Loss and Severe Repetitive Loss properties within the City of Brisbane.

**Table 10. Repetitive Loss and Severe Repetitive Loss Properties**

Repetitive Loss Properties		Severe Repetitive Loss Properties	
Total	Occupancy	Total	Occupancy
0	n/a	0	n/a
<p><b>Occupancy Type:</b> Single Family = Single family residence • Two (2)-Four (4) Unit Residential Building = Two (2)-four (4) unit residential building • More Than Four (4) Units Residential Building = Residential building with more than four (4) units • Non-Residential Building = Non-residential building • Non-Residential Business = Non-residential business • Single Family Residential Building = Single-family residential building with the exception of a mobile home or a single residential unit within a multi-unit building • Residential (2, 3, or 4 units) Non-Condo Building = Residential non-condo building with two (2), three (3), or four (4) units seeking insurance on all units • Residential (5 or more units) Non-Condo Building = Residential non-condo building with 5 or more units seeking insurance on all units • Residential Mobile/Manufactured Home = Residential mobile/manufactured home • Residential Condo Association = Residential condo association seeking coverage on a building with one (1) or more units • Single Residential Unit = Single residential unit within a multi-unit building • Non-Residential Mobile/manufactured Home = Non-residential mobile/manufactured home • Non-Residential Building = Non-residential building • Non-Residential Unit = Non-residential unit within a multi-unit building</p>			

**Table 11** summarizes NFIP active policies and coverage in force data for the City of Brisbane.

**Table 11. NFIP Policies**

NFIP Policies	Insurance in Force	Total Claims Paid	Sum of Claims Paid
3	\$1,500,000	1	\$602

### 5.3. Participation Activities

The City of Brisbane's NFIP participation over the last five (5) years includes the following:

- Community staff provide the following services – permit reviews, GIS, inspections, and engineering capability.

<sup>6</sup> Federal Emergency Management Agency, National Flood Insurance Program. (2021). National Flood Insurance Program: Flood Insurance Manual. Retrieved from [https://www.fema.gov/sites/default/files/documents/fema\\_nfip-all-flood-insurance-manual-apr-2021.pdf](https://www.fema.gov/sites/default/files/documents/fema_nfip-all-flood-insurance-manual-apr-2021.pdf).



- The community teaches property owners or other stakeholders about the importance of flood insurance through public outreach events, workshops, and/or seminars.
- The community enforces local floodplain regulations and monitors compliance.
- The community's floodplain development regulations meet or exceed Federal Emergency Management Agency (FEMA) or State minimum requirements.

### 5.3.1. Substantial Damage

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 50% of the market value of the structure before the damage occurred. (Title 15, Chapter 15.56.050 of the City Code)

### 5.3.2. Substantial Improvement

Substantial improvement means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure either: before improvement or repair is started; or if the structure has been damaged, and is being restored, before the damage occurred.

For the purpose of this definition, substantial improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either:

- Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions.
- Any alteration of a structure listed on the National Register of Historic Places or a state inventory of historic places. (Title 15, Chapter 15.56.050 of the City Code)

### 5.3.3. Substantial Damage/Substantial Improvement Determination Process

The City of Brisbane's Substantial Damage/Substantial Improvement determination process ensures compliance with the NFIP and the local floodplain management ordinances. To determine whether a structure has sustained Substantial Damage/Substantial Improvement after a flood event, the City will use the FEMA Substantial Damage Estimator tool, along with a collaborative review conducted by the Codes Inspectors, the Public Works Department, the floodplain manager, and other relevant officials.

## 6. HAZARD MITIGATION PLAN INTEGRATION

For a community to successfully reduce long-term risk, hazard mitigation must be integrated into day-to-day planning mechanisms and initiatives. Plan integration is the process by which communities critically assess the existing planning framework and align efforts to reduce long-term risks and build a more resilient community. It involves a two (2) way exchange of information and incorporation of ideas and concepts between hazard mitigation plans and other community plans. In particular, plan integration involves incorporating hazard mitigation principles and actions into other plans and integrating planning mechanisms into hazard mitigation plans. Plan integration involves community plans, policies, codes,



and programs that guide development and define roles and responsibilities for implementing these capabilities. Additionally, plan integration is achieved through the involvement of key staff and community officials in collaborative hazard mitigation planning.

## 6.1. Existing Plan Integration

A hazard mitigation plan must explain how the jurisdiction incorporated the previous Plan update over the last five (5) years to demonstrate progress in local mitigation efforts. During the performance period since the adoption of the previous LHMP, the City of Brisbane has made progress in integrating components of the hazard mitigation strategy (e.g., goals, objectives, and actions) into planning initiatives and mechanisms. **Table 12** highlights the planning mechanisms/initiatives in which the previous Plan was integrated, as well as the information integrated.

**Table 12. Existing Plan Integration**

Planning Initiative	Current Integration Description
General Plan	State law requires a General Plan to address the protection of a community from the risks of natural hazards. Brisbane’s Chapter X (Community Health and Safety) exceeds this requirement by also speaking to human-caused hazards that are a part of urban life. The requirements of this section align with the LHMP’s goal of identifying natural hazards and strategies to mitigate them. The City also recently completed the 2023-2030 Housing Element update and the 2021 Safety Element update. Both incorporate the LHMP by reference pursuant to AB 2140.
Municipal Code, Chapter 2.28	Given that the local Office of Emergency Services has overall responsibility for implementing the LHMP, the creation of the Disaster Services Council and the Office of Emergency Services align directly with the LHMP’s goal of establishing a coordinated approach to implementing the Plan.
Brisbane Baylands Final Environmental Impact Report	The Brisbane City Council certified the Final (Program) Environmental Impact Report on July 19, 2018, for a General Plan amendment to allow development on an approximately 684-acre project site directly connected to the San Francisco Bay. CEQA review is in line with the LHMP’s goal of identifying natural hazards and identifying mitigation for them.
North County Fire Authority Wildland Pre-Fire Attack Plan	The cities of Daly City, Pacifica, and Brisbane have entered into a JPA where administrative oversight and training of fire departments is provided by Daly City to the other cities. North County Fire Authority has developed and conducts an annual exercise plan that includes familiarization training on the boundary, integration of multiple fire responders (including CalFire land and air crews), and citizen evacuation awareness. Extensive pre-planning to mitigate the effects of a wildfire on San Bruno Mountain is clearly consistent with the goals of the LHMP.
Emergency Operations Plan	The Emergency Operations Plan (EOP) integrates mitigation considerations in its response actions to reduce risk exposure to the community. The LHMP is currently used as an essential tool to update the City EOP.
Capital Improvement Plan	The City’s capital improvement plan (CIP), developed in 2004 and updated bi-annually, includes projects that can help mitigate potential hazards. The City will act to ensure consistency between the LHMP and the current and future capital improvement plans. The LHMP may identify new possible funding sources for capital improvement projects, which may result in modifications to proposed projects based on the results of the risk assessment.



## 6.2. Potential Future Integration

A hazard mitigation plan must explain how the jurisdiction intends to incorporate this Plan update into planning mechanisms over the next five (5) years. The capability assessment presented in Section 4 of this Annex identifies codes, plans, and programs that provide opportunities for integration. **Table 13** outlines planning mechanisms/initiatives that do not currently integrate the goals and recommendations of this Plan but provide opportunities to do so in the future.

**Table 13. Potential Future Integration**

Planning Initiative	Current Integration Description
General Plan	The City of Brisbane’s last comprehensive update of its General Plan occurred in 1994. Sustainable development is a key conceptual framework for updates to the General Plan and Housing Element, reflecting the City’s recognition of the serious threats posed by climate change, as well as by local hazards such as landslides, fires, earthquakes, flooding, and sea level rise. Any future updates provide Brisbane an opportunity to fully integrate the goals, risk assessment, and/or recommendations of the LHMP, maintain compliance with AB 2140, and ensure compliance with SB 379.
Capital Improvement Projects	The City will continue to ensure consistency between this LHMP and future updates of the Capital Improvement Plan. The LHMP may identify new possible funding sources for capital improvement projects, which may result in modifications to proposed projects based on the results of the risk assessment.
Storm Drain Master Plan	The largest dollar amount of structural projects identified in this Plan is located in the planning application area known as the Baylands. The majority of the Storm Drain Master Plan improvements necessary to mitigate flooding in this area have already been studied. Pre-identification of natural hazards (e.g., flooding) and the requirement to mitigate them during the development of a land area from its current brownfield status are consistent with the LHMP. Furthermore, mitigation actions in this LHMP can inform updates and revisions to the Storm Drain Master Plan.
Climate Action Plan	The City will continue to include and consider the LHMP in future updates of the Climate Action Plan (CAP). The LHMP will serve as a crucial tool in shaping policies and actions within the CAP, which is scheduled to be updated in FY 2026-2027.
Emergency Operations Plan	This LHMP will continue to be an essential tool to update the City EOP. The latest hazard descriptions in this LHMP will be included in the City EOP, as appropriate. Mitigation actions that are of a preparedness and response nature will be analyzed for applicability and inclusion in the description of EOP processes and procedures.
Brisbane Baylands Specific Plan Environmental Impact Report	The City, as the Lead Agency, has prepared a Draft EIR for the proposed Baylands Specific Plan. It builds on the information and analyses set forth in the earlier certified Program EIR, with new and updated environmental impact analyses, including the identification and mitigation of natural hazards, and incorporates elements of the LHMP in its analysis. The Final EIR is expected to retain the incorporated elements from the LHMP.

The City's Local Planning Team will identify all relevant planning initiatives scheduled for update in the next year and during the annual update process of the LHMP. Additionally, the Local Planning Team will identify opportunities to integrate key elements of the LHMP, specifically relevant strategies, into the



planning initiatives. Mitigation actions were identified to promote plan integration in future revisions of this Plan.

## 7. SIGNIFICANT PAST EVENTS

A complete risk assessment, including past incidents, for each identified hazard of concern, can be found in **Volume 1** of this Plan. A summary of past events is provided under each hazard profile and includes a chronology of events that have affected the County and its municipalities. **Table 14** provides information on significant hazard events that uniquely impacted the City of Brisbane.

**Table 14. Significant Past Events**

Date	Event Type <i>(include Disaster Declaration, if applicable)</i>	Description of Event and Impacts
July 2, 2024	Wildfire	Grass fire at San Bruno Mountain.
December 2022 - January 2023	Landslides, Severe Flooding <i>(DR-4683-CA)</i>	Atmospheric rivers and winter storms caused landslides at Firth Canyon and Buckeye Canyon and severe flooding in the City.
June 3, 2022	Wildfire	Grass fire at San Bruno Mountain.
April 1, 2017	Severe Winter Storms	Severe flooding.
August 15, 2016	Wildfire	Grass Fire at San Bruno Mountain.
February 6, 2015	Severe Winter Storms	Severe flooding.
December 2015	Severe Winter Storms	Severe flooding.
February 27, 2009	Drought	
June 22, 2008	Wildfire	Grass Fire at Buckeye and Owl Canyons.
Spring 2006	Severe Storms <i>(DR 1646)</i>	Severe flooding.
December 2005- January 2006	Severe Storms <i>(DR 1628)</i>	Severe flooding.
Summer 2002	Wildfire	Wildfire at San Bruno Mountain.
February 2, 1998	Severe Storms <i>(DR 1203)</i>	
October 17, 1989	Earthquake <i>(DR-845)</i>	Loma Prieta Earthquake.
January 1982	Severe Storms <i>(DR-651)</i>	Severe flooding.
Winter 1980	Landslide	A landslide damaged 12 homes.
Fall 1962	Severe Storms	Severe flooding.



## 8. HAZARD VULNERABILITY AND IMPACT ASSESSMENT

Exposure and vulnerability to certain hazards affect the entire County, and others are geographically defined. Although the entire County may be vulnerable to these hazards, their impacts may vary depending on existing community conditions (e.g., underserved populations or those with access and functional needs may be more susceptible under certain conditions).

The Local Planning Team identified **unique vulnerabilities and impacts** to the following natural hazards, based on the hazards profiled in **Volume 1**.

- Flood (riverine flooding, urban/flash flooding, coastal flooding)
- Landslide
- Sea Level Rise
- Wildfire

It was determined that the planning area did not have unique vulnerabilities or impacts from the following natural hazards; rather, its vulnerabilities and impacts are consistent with those experienced throughout the County.

- Dam Failure
- Drought
- Earthquake
- Severe Weather (*heavy rainfall, severe thunderstorms, strong winds, tornadoes, heat wave/extreme heat, fog*)
- Tsunami

**Note:** Severe weather and flood are profiled as the two (2) hazards. However, to conduct a more thorough risk assessment, the sub-hazards (i.e., heavy rainfall, heat wave/extreme heat, fog, severe thunderstorms, tornadoes, strong winds, riverine flooding, urban/flash flooding, and coastal flooding) were ranked individually. The hazard risk assessment methodology can be found in Chapter 4 of **Volume 1** of this Plan.

**Table 15** outlines the **unique vulnerabilities and impacts** for the City of Brisbane and addresses only the hazards relevant to the jurisdiction. A complete risk assessment for each identified hazard of concern is in **Volume 1** of this Plan. Hazard mapping can be found in Appendix A of this Annex.



**Table 15. Hazard Vulnerability and Impact Assessment**

Hazard	Vulnerability and Impacts
Dam Failure	The Local Planning Team determined that the City does not have unique vulnerabilities or impacts from dam failure; rather, the jurisdiction’s vulnerabilities and impacts are consistent with those experienced throughout the County.
Drought	The Local Planning Team determined that the City does not have unique vulnerabilities or impacts from drought; rather, the jurisdiction’s vulnerabilities and impacts are consistent with those experienced throughout the County.
Earthquake	The Local Planning Team determined that the City does not have unique vulnerabilities or impacts from earthquakes; rather, the jurisdiction’s vulnerabilities and impacts are consistent with those experienced throughout the County.
Flood ( <i>riverine flooding, urban/flash flooding, coastal flooding</i> )	The City has a publicly owned and operated Brisbane Marina, which is susceptible to coastal flooding. The City also has the Brisbane Lagoon, which serves as the main point of stormwater drainage for inland areas and is at risk of flooding during heavy rainfall events. Both the Brisbane Lagoon and the Brisbane Shoreline are susceptible to King Tide events. FEMA and the Department of Water Resources mapped flood zones that occur in various parts of the City, including near the City’s major commercial area and along Bayshore Boulevard. The mapped 100-year floodplain in Brisbane includes Valley Drive and surrounding properties; the Visitacion Creek Marsh and surrounding areas near Main Street; several Baylands industrial properties along Bayshore Boulevard; and the wetlands at the southern end of the Brisbane Lagoon. A large section of the Baylands west of the Caltrain tracks is in the mapped 500-year floodplain. Flooding can lead to long-term public health problems if mold and mildew grow in buildings, displace residents if homes are destroyed or become uninhabitable, and increase economic burdens, such as rising home insurance costs. Floods can also contribute to other natural hazards, especially landslides.
Landslide	The highest landslide risk in Brisbane is around the southern end of Bayshore Boulevard and where Sierra Point Parkway crosses under US Highway 101. Several areas of the community face a lower but still elevated risk of landslides, including the residential neighborhoods in the hills around Downtown and the Northeast Ridge neighborhoods. Although not directly in Brisbane, most of San Bruno Mountain is landslide-prone, and landslides in the Unincorporated County area could affect Brisbane itself.



Hazard	Vulnerability and Impacts
Sea Level Rise	The risk of sea level rise in Brisbane is mostly associated with temporary flooding. Even 6.5 feet of sea level rise is not likely to cause permanent inundation, except around the US Highway 101 on- and off-ramps at the end of Harney Way. However, by 2100, a 20-year storm could cause temporary sea level rise at properties east of Bayshore Boulevard immediately adjacent to the Brisbane Lagoon, areas along the shore of Sierra Point Parkway, and overtop sections of US Highway 101. Brisbane is working through various adaptation and feasibility studies to mitigate against sea level rise at the Brisbane Lagoon. Along the Brisbane Marina shoreline, Brisbane is beginning the Regional Shoreline Adaptation Plan work. Another consequence of sea level rise is the infiltration of dense, saline water into soils near shorelines. These waters can push fresh groundwater upwards, raising the water table. Rising groundwater can infiltrate storm drains, destabilize and corrode buried infrastructure, spread soil or groundwater contamination, undermine building foundations, and increase liquefaction hazards. Groundwater is expected to rise at the same rate as sea level rise in Brisbane, causing it to emerge at the surface in low-lying areas.
Severe Weather ( <i>heavy rainfall, severe thunderstorms, strong winds, tornadoes, heat wave/extreme heat, fog</i> )	The Local Planning Team determined that the City does not have unique vulnerabilities or impacts from severe weather; rather, the jurisdiction’s vulnerabilities and impacts are consistent with those experienced throughout the County.
Tsunami	The Local Planning Team determined that the City does not have unique vulnerabilities or impacts from tsunamis; rather, the jurisdiction’s vulnerabilities and impacts are consistent with those experienced throughout the County.
Wildfire	Wildfires have periodically occurred in the Brisbane area, with the most recent major event occurring in July 2024. The potential impact of wildland fires on Brisbane’s urban area is an ongoing concern. Most wildfire hazards are associated with proximity to the San Bruno Mountain State and County Park and the 145-acre Guadalupe Valley Quarry area. Parts of Brisbane are designated a Moderate fire hazard severity zone, including the Northeast Ridge neighborhood, most of the Brisbane Acres area, and parts of Central Brisbane and Crocker Park. Unincorporated San Bruno Mountain is also an area of Moderate fire hazard severity zone.

The City evaluated whether vulnerability in hazard-prone areas had increased, decreased, or remained the same for each natural hazard identified in this LHMP. Climate change, changes in population, infrastructure expansion, and economic shifts that can affect vulnerability were considered. For example, if planned development is in an identified hazard area or is not built to the updated building codes, it may increase the community’s vulnerability to future hazards and disasters. On the other hand, if development occurred with mitigation practices in place, the vulnerability may have remained the same or decreased. Additionally, shifting demographics (e.g., underserved population) were taken into consideration.

**Table 16** outlines whether climate change has increased or decreased the City’s vulnerability (i.e., exposure) and impact to each natural hazard over the past five (5) years, and the effect of climate change on the future probability of occurrence and impacts from each natural hazard



**Table 16. Climate Change: Current and Future Vulnerability and Impact**

Hazard	Vulnerability and Impact
<b>Current Vulnerability and Impact</b>	
Dam Failure	Not Applicable
Drought	Remained the Same
Earthquake	Remained the Same
Flood ( <i>riverine flooding, urban/flash flooding, coastal flooding</i> )	Increased
Landslide	Increased
Sea Level Rise	Remained the Same
Severe Weather ( <i>heavy rainfall, severe thunderstorms, strong winds, tornadoes, heat wave/extreme heat, fog</i> )	Increased
Tsunami	Remained the Same
Wildfire	Remained the Same
<b>Future Vulnerability and Impact</b>	
Dam Failure	Not Applicable
Drought	No Change Anticipated
Earthquake	No Change Anticipated
Flood ( <i>riverine flooding, urban/flash flooding, coastal flooding</i> )	Increase
Landslide	Increase
Sea Level Rise	Increase
Severe Weather ( <i>heavy rainfall, severe thunderstorms, strong winds, tornadoes, heat wave/extreme heat, fog</i> )	Increase
Tsunami	No Change Anticipated
Wildfire	Increase

**Table 17** outlines whether changes in population within the City over the past five (5) years have increased or decreased the vulnerability (i.e., exposure) and impact to these natural hazards, and the anticipated effects changes in population may have on the future probability of occurrence and impacts from these natural hazards.

**Table 17. Changes in Population: Current and Future Vulnerability and Impact**

Hazard	Vulnerability and Impact
<b>Current Vulnerability and Impact</b>	
Dam Failure	Not Applicable
Drought	Remained the Same
Earthquake	Remained the Same
Flood ( <i>riverine flooding, urban/flash flooding, coastal flooding</i> )	Increased



Hazard	Vulnerability and Impact
Landslide	Remained the Same
Sea Level Rise	Remained the Same
Severe Weather ( <i>heavy rainfall, severe thunderstorms, strong winds, tornadoes, heat wave/extreme heat, fog</i> )	Increased
Tsunami	Remained the Same
Wildfire	Remained the Same
<b>Future Vulnerability and Impact</b>	
Dam Failure	Not Applicable
Drought	No Change Anticipated
Earthquake	Increase
Flood ( <i>riverine flooding, urban/flash flooding, coastal flooding</i> )	Increase
Landslide	No Change Anticipated
Sea Level Rise	Increase
Severe Weather ( <i>heavy rainfall, severe thunderstorms, strong winds, tornadoes, heat wave/extreme heat, fog</i> )	Increase
Tsunami	No Change Anticipated
Wildfire	No Change Anticipated

**Table 18** outlines whether development over the past five (5) years has increased or decreased the City’s vulnerability (i.e., exposure) and impact to these natural hazards, and the anticipated effects changes in development may have on the future probability of occurrence and impacts from these natural hazards.

**Table 18. Changes in Development: Current and Future Vulnerability and Impact**

Hazard	Vulnerability and Impact
<b>Current Vulnerability and Impact</b>	
Dam Failure	Not Applicable
Drought	Remained the Same
Earthquake	Remained the Same
Flood ( <i>riverine flooding, urban/flash flooding, coastal flooding</i> )	Increased
Landslide	Remained the Same
Sea Level Rise	Remained the Same
Severe Weather ( <i>heavy rainfall, severe thunderstorms, strong winds, tornadoes, heat wave/extreme heat, fog</i> )	Remained the Same
Tsunami	Remained the Same
Wildfire	Remained the Same
<b>Future Vulnerability and Impact</b>	
Dam Failure	Not Applicable



Hazard	Vulnerability and Impact
Drought	No Change Anticipated
Earthquake	No Change Anticipated
Flood ( <i>riverine flooding, urban/flash flooding, coastal flooding</i> )	Increase
Landslide	Increase
Sea Level Rise	Increase
Severe Weather ( <i>heavy rainfall, severe thunderstorms, strong winds, tornadoes, heat wave/extreme heat, fog</i> )	No Change Anticipated
Tsunami	No Change Anticipated
Wildfire	No Change Anticipated

## 8.1. Future Major Assets

Community assets should include anything that is important to a community’s character and function. Assets include people (i.e., underserved population); structures (i.e., new and existing buildings); community lifelines and other critical facilities; natural, historic, and cultural resources; and the economy and other activities that have value to the community. Any new assets (e.g., new construction in hazard-prone areas) will be built to comply with the latest building codes and standards and will be mitigated to protect them from identified and anticipated hazards, especially those expected to increase due to climate change.

## 9. HAZARD RISK RANKING

**Table 19** presents the local hazard ranking for the City of Brisbane of all hazards of concern listed in **Volume 1** of this Plan. This ranking summarizes how hazards vary for this jurisdiction. As thoroughly described in **Volume 1** of this Plan, 14 factors were evaluated to provide an informed and comprehensive analysis and ranking of the hazards included in this LHMP.

- **Probability** (likelihood of annual occurrence)
- **Extent** of the hazard, including catastrophic potential
- **Vulnerability** (i.e., exposure) of the population, property (including critical infrastructure), and changes in the development (over the past five (5) years)
- **Impacts** on population and life safety, underserved population, property (including critical infrastructure), the economy, the environment, continuity of operations/delivery of services, future development, and climate change

The scores for extent, vulnerability, and impact were weighted and combined to produce a consequence score. This consequence score was then multiplied by the probability score to calculate the total risk score for each hazard. At the fundamental level, the consequence is an assessment of the potential impact(s) if the hazards incident were to occur. In this assessment, the consequence score (i.e., the consequence of an event) will be independent of the extent, vulnerability, and impacts. The probability of the hazards is not included in assessing the consequence because, without an event, there is no



consequence or impact. For further details on how the probability, extent, vulnerability, and impact factors in **Table 19** were calculated, please refer to Chapter 4 in **Volume 1** of this Plan. Details of the hazard ranking results are provided in Appendix C of this Annex.

It is important to note that the sub-hazards for severe weather (i.e., heavy rainfall, severe thunderstorms, strong winds, tornadoes, heat wave/extreme heat, and fog) and flood (i.e., riverine flooding, urban/flash flooding, coastal flooding) were individually ranked in the hazard risk ranking; however, severe weather and flood are each considered as the main hazard throughout this Annex and **Volume 1**.



**Table 19. City of Brisbane Hazard Risk Ranking**

Hazard Event	Probability Factor	Sum of Weighted Extent Factors	Sum of Weighted Vulnerability Factors	Sum of Weighted Impact Factors	Consequence Score	Total Risk Score*
Urban/Flash Flooding (Flood)	3	18	14	32	64	89
Heavy Rainfall (Severe Weather)	3	12	13	23	48	67
Earthquake	2	18	14	35	67	62
Wildfire	2	18	12	34	64	59
Strong Winds (Severe Weather)	3	6	13	22	41	57
Sea Level Rise	3	6	8	26	40	56
Landslide	2	9	9	30	48	44
Coastal Flooding (Flood)	2	12	9	26	47	44
Heat Wave/Extreme Heat (Severe Weather)	3	6	10	15	31	43
Severe Thunderstorm (Severe Weather)	2	9	13	21	43	40
Riverine Flooding (Flood)	2	9	6	28	43	40
Drought	2	6	11	22	39	36
Tornado (Severe Weather)	1	6	13	13	32	15
Fog (Severe Weather)	1	6	9	11	26	12
Tsunami	1	6	5	12	23	11
Dam Failure	0	0	0	0	0	0

**Extent:** Sum of the weighted Extent factors.  
**Vulnerability:** Sum of the weighted Vulnerability factors.  
**Impact:** Sum of the weighted Impact factors.

**Consequence Score:** Extent + Vulnerability + Impact  
 (Sum of all weighted factors).  
**Total Risk Score =** Probability x Consequence  
 \* Normalized to 100

**Total Risk Score Legend**

Classification	Probability	Extent	Vulnerability	Impact	Consequence Score	Total Risk Score
Low (L)	1	0 – 6	0 – 4	0 – 12	0 – 24	0 – 32
Medium (M)	2	7 – 12	5 – 10	13 – 26	25 – 48	33 – 66
High (H)	3	13 – 18	11 – 15	27 – 39	49 – 72	67 – 100

The **legend**—specifically the assignment of low, medium, and high—provides an additional means to qualitatively assess the probability factor, sum of weighted factors, and the total risk scores for each hazard. The **Consequence Score** represents the sum of the Extent, Vulnerability, and Impact Factors. The **Total Risk Score** is a measure of Probability and Consequence.



## 10. MITIGATION ACTIONS

This section includes the mitigation actions developed to address the risks and vulnerabilities to the hazards identified in this Plan. This Plan serves only to recommend mitigation measures based on the potential for risk reduction and available funding. Implementation of mitigation actions is dependent on risk reduction priorities, feasibility, and available funding. It is also dependent on the cooperation and support of the jurisdiction and/or department responsible for each action item. Additionally, all mitigation actions identified in the 2021 update or before were updated accordingly. Any new mitigation actions are listed as *New* (under Project Status).

The City of Brisbane agreed to **17** mitigation actions that apply to the jurisdiction’s properties for which it has jurisdictional responsibility and authority. A summary of the City’s mitigation actions status is listed in **Table 20**.

**Note:** The mitigation actions outlined in this Plan are designed only to address those natural hazards that received a risk ranking of *medium* or *high* during the hazard risk assessment (**Table 19**). Hazards that ranked *low* (dam failure and tsunami) may not have specific mitigation actions detailed in this document.

**Table 20. City of Brisbane Mitigation Actions Summary**

Status		Mitigation Action Total	
Continuing		9	
In Progress		5	
Not Yet Started		2	
New		1	
<b>TOTAL</b>		<b>17</b>	
Completed		1	
No Longer Needed		0	
Mitigation Actions per Hazard			
Dam Failure	n/a	Sea Level Rise	11
Drought	9	Severe Weather <i>(heavy rainfall, severe thunderstorms, strong winds, tornadoes, heat wave/extreme heat, fog)</i>	17
Earthquake	13	Tsunami	12
Flood <i>(riverine flooding, urban/flash flooding, coastal flooding)</i>	16	Wildfire	13
Landslide	15		

A detailed explanation of the Mitigation Strategy can be found in Chapter 5 of **Volume 1**.



Mitigation Action	Where appropriate, support retrofitting, purchasing, or relocating structures located in high-hazard areas, prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.				
Action Number	BRS-1	Goal(s) Addressed	1, 3, 4	Prioritization Score	29/40
Year Added to the Plan	2016	Timeline (estimated)	Ongoing	Implementation Priority	Medium
Hazard(s) Mitigated	Earthquake, Flood, Landslide, Sea Level Rise, Severe Weather, Tsunami, Wildfire				
Project Status	Continuing	If No Longer Needed, provide reason.	n/a		
Benefits (Loss Avoided)	High				
Lead Agency / Organization	City of Brisbane Community Development Department (Planning Division)				
Supporting Agency / Organization (If applicable)	n/a				
Additional Participating Jurisdictions (If Applicable)	n/a				
Estimated Cost	High	Potential Funding Source	General Fund (Staff Time), HMGP, FMA, BRIC		
Additional Details (optional)					



<b>Mitigation Action</b>	Strengthen the long-term resilience of the Brisbane Baylands' development to sea level rise and extreme storms, and provide environmental, recreational, and community/connectivity enhancements where possible.				
<b>Action Number</b>	BRS-2	<b>Goal(s) Addressed</b>	1, 2, 3, 4, 5	<b>Prioritization Score</b>	32/40
<b>Year Added to the Plan</b>	2021	<b>Timeline (estimated)</b>	4 to 5 Years (2030-2031)	<b>Implementation Priority</b>	High
<b>Hazard(s) Mitigated</b>	Drought, Earthquake, Flood, Landslide, Sea Level Rise, Severe Weather, Tsunami, Wildfire				
<b>Project Status</b>	In Progress	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	High				
<b>Lead Agency / Organization</b>	City of Brisbane Community Development Department (Planning Division), City of Brisbane Public Works Department				
<b>Supporting Agency / Organization (If applicable)</b>	n/a				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	High	<b>Potential Funding Source</b>	General Fund (Staff Time), HMGP, FMA, BRIC, Private Developer, Caltrans funds, California Proposition 68, San Francisco Bay Restoration Authority Measure AA		
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Develop and implement a program to capture perishable data after significant incidents (e.g., high-water marks, preliminary damage estimates, damage photos) in a database to support future mitigation efforts, including implementing and enhancing hazard mitigation, climate action, and other plans. Furthermore, develop a cost-tracking system to ensure maximum reimbursement after a major disaster.				
<b>Action Number</b>	BRS-3	<b>Goal(s) Addressed</b>	1, 3, 5	<b>Prioritization Score</b>	30/40
<b>Year Added to the Plan</b>	2016	<b>Timeline (estimated)</b>	4 to 5 Years (2030-2031)	<b>Implementation Priority</b>	High
<b>Hazard(s) Mitigated</b>	Drought, Earthquake, Flood, Landslide, Sea Level Rise, Severe Weather, Tsunami, Wildfire				
<b>Project Status</b>	In Progress	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	High				
<b>Lead Agency / Organization</b>	City of Brisbane City Manager's Office (Emergency Services Division)				
<b>Supporting Agency / Organization (If applicable)</b>	n/a				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	Medium	<b>Potential Funding Source</b>	General Fund (Staff Time)		
<b>Additional Details (optional)</b>					



Mitigation Action	Support countywide hazard mitigation actions and initiatives identified in the San Mateo County Local Hazard Mitigation Plan, specifically those taking place within the City.				
Action Number	BRS-4	Goal(s) Addressed	1, 2, 3, 4, 5	Prioritization Score	27/40
Year Added to the Plan	2016	Timeline (estimated)	Ongoing	Implementation Priority	Medium
Hazard(s) Mitigated	Drought, Earthquake, Flood, Landslide, Sea Level Rise, Severe Weather, Tsunami, Wildfire				
Project Status	Continuing	If No Longer Needed, provide reason.		n/a	
Benefits (Loss Avoided)	Medium				
Lead Agency / Organization	City of Brisbane City Manager's Office (Emergency Services Division)				
Supporting Agency / Organization (If applicable)	n/a				
Additional Participating Jurisdictions (If Applicable)	n/a				
Estimated Cost	Medium	Potential Funding Source	General Fund (Staff Time)		
Additional Details (optional)					



<b>Mitigation Action</b>	Actively participate in the Hazard Mitigation Plan maintenance protocols outlined in Volume 1 of the San Mateo County Local Hazard Mitigation Plan.				
<b>Action Number</b>	BRS-5	<b>Goal(s) Addressed</b>	1, 2, 3, 4, 5	<b>Prioritization Score</b>	27/40
<b>Year Added to the Plan</b>	2016	<b>Timeline (estimated)</b>	Ongoing	<b>Implementation Priority</b>	Medium
<b>Hazard(s) Mitigated</b>	Drought, Earthquake, Flood, Landslide, Sea Level Rise, Severe Weather, Tsunami, Wildfire				
<b>Project Status</b>	Continuing	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	Medium				
<b>Lead Agency / Organization</b>	City of Brisbane City Manager's Office (Emergency Services Division)				
<b>Supporting Agency / Organization (If applicable)</b>	n/a				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	Medium	<b>Potential Funding Source</b>	General Fund (Staff Time)		
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Continue to keep good standing and compliance with the National Flood Insurance Program (NFIP) by implementing floodplain management programs that, at a minimum, meet NFIP requirements. These include, but are not limited to, enforcing the City's flood damage prevention ordinance, participating in floodplain identification and mapping updates, and providing public assistance/information on floodplain requirements and impacts.				
<b>Action Number</b>	BRS-6	<b>Goal(s) Addressed</b>	1, 2, 3, 5	<b>Prioritization Score</b>	28/40
<b>Year Added to the Plan</b>	2016	<b>Timeline (estimated)</b>	Ongoing	<b>Implementation Priority</b>	Medium
<b>Hazard(s) Mitigated</b>	Flood, Severe Weather				
<b>Project Status</b>	Continuing	<i>If No Longer Needed, provide reason.</i>	n/a		
<b>Benefits (Loss Avoided)</b>	Medium				
<b>Lead Agency / Organization</b>	City of Brisbane Public Works Department				
<b>Supporting Agency / Organization (If applicable)</b>	n/a				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	Low	<b>Potential Funding Source</b>	General Fund (Staff Time)		
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Update and strengthen local building codes by adopting the latest International Building Code (IBC) and state revisions to ensure that all public and private development (including new development and redevelopment) meets the highest resilience and safety requirements, helping reduce long-term vulnerabilities in the community.				
<b>Action Number</b>	BRS-7	<b>Goal(s) Addressed</b>	1, 3, 4	<b>Prioritization Score</b>	27/40
<b>Year Added to the Plan</b>	2016	<b>Timeline (estimated)</b>	Ongoing	<b>Implementation Priority</b>	Medium
<b>Hazard(s) Mitigated</b>	Earthquake, Flood, Landslide, Severe Weather, Wildfire				
<b>Project Status</b>	Continuing	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	Medium				
<b>Lead Agency / Organization</b>	City of Brisbane Community Development Department (Planning Division)				
<b>Supporting Agency / Organization (If applicable)</b>	City of Brisbane City Manager's Office (Sustainability Division); North County Fire Authority				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	Low	<b>Potential Funding Source</b>	General Fund (Staff Time)		
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Develop and implement a Post-Disaster Recovery Plan and a Debris Management Plan with the intention of institutionalizing post-disaster resilience, mitigating economic and environmental impacts.				
<b>Action Number</b>	BRS-8	<b>Goal(s) Addressed</b>	1, 4, 5	<b>Prioritization Score</b>	27/40
<b>Year Added to the Plan</b>	2016	<b>Timeline (estimated)</b>	4 to 5 Years (2030-2031)	<b>Implementation Priority</b>	Medium
<b>Hazard(s) Mitigated</b>	Drought, Earthquake, Flood, Landslide, Sea Level Rise, Severe Weather, Tsunami, Wildfire				
<b>Project Status</b>	In Progress	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	Medium				
<b>Lead Agency / Organization</b>	City of Brisbane City Manager's Office (Emergency Services Division), City of Brisbane Public Works Department				
<b>Supporting Agency / Organization (If applicable)</b>	n/a				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	Low	<b>Potential Funding Source</b>	General Fund (Staff Time)		
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Acquire a standby emergency backup generator or microgrid for City Hall, which serves as the City’s Emergency Operations Center backup location, to establish permanent power redundancy and ensure continuous operation and uninterrupted service delivery during and after a major disaster.				
<b>Action Number</b>	BRS-9	<b>Goal(s) Addressed</b>	1, 3, 5	<b>Prioritization Score</b>	34/40
<b>Year Added to the Plan</b>	2016	<b>Timeline (estimated)</b>	3 to 6 months	<b>Implementation Priority</b>	High
<b>Hazard(s) Mitigated</b>	Earthquake, Flood, Landslide, Severe Weather, Wildfire				
<b>Project Status</b>	In Progress	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	High				
<b>Lead Agency / Organization</b>	City of Brisbane City Manager's Office (Emergency Services Division)				
<b>Supporting Agency / Organization (If applicable)</b>	City of Brisbane City Manager's Office (Sustainability Division)				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	Medium	<b>Potential Funding Source</b>	General Fund (Staff Time), HMGP, Cal OES grants		
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Establish a permanent local fuel supply and delivery system capable of supporting three (3) to five (5) days of fuel needs for emergency responders and standby generators to mitigate the risk of critical infrastructure failure and ensure the continuous operation of emergency responders and water and sewer facilities during and after major disasters.				
<b>Action Number</b>	BRS-10	<b>Goal(s) Addressed</b>	4	<b>Prioritization Score</b>	18/40
<b>Year Added to the Plan</b>	2016	<b>Timeline (estimated)</b>	4 to 5 Years (2027-2031)	<b>Implementation Priority</b>	Low
<b>Hazard(s) Mitigated</b>	Earthquake, Flood, Landslide, Severe Weather, Tsunami, Wildfire				
<b>Project Status</b>	Not Yet Started	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	Medium				
<b>Lead Agency / Organization</b>	City of Brisbane Public Works Department				
<b>Supporting Agency / Organization (If applicable)</b>	n/a				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	High	<b>Potential Funding Source</b>	General Fund (Staff Time), HMGP, Cal OES grants		
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Design and build a new ingress/egress intersection at Glen Park Way/Humboldt Road to mitigate the risk of isolation and structural loss, and to provide emergency responders with access to the southern portion of the community, which is adjacent to the wildland urban interface (WUI).				
<b>Action Number</b>	BRS-11	<b>Goal(s) Addressed</b>	1	<b>Prioritization Score</b>	16/40
<b>Year Added to the Plan</b>	2016	<b>Timeline (estimated)</b>	4 to 5 Years (2030-2031)	<b>Implementation Priority</b>	Low
<b>Hazard(s) Mitigated</b>	Earthquake, Landslide, Severe Weather, Wildfire				
<b>Project Status</b>	Not Yet Started	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	Medium				
<b>Lead Agency / Organization</b>	City of Brisbane Department of Public Works				
<b>Supporting Agency / Organization (If applicable)</b>	City of Brisbane City Manager's Office (Emergency Services Division)				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	High	<b>Potential Funding Source</b>	General Fund (Staff Time), HMGP, Cal OES funds		
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Enhance the City's response and recovery capabilities through the San Mateo Operational Area Emergency Services Organization, the San Mateo Emergency Managers Association, and the San Mateo County Public Works Mutual Aid Agreement to ensure continuity of services during major disasters.				
<b>Action Number</b>	BRS-12	<b>Goal(s) Addressed</b>	1, 3, 4	<b>Prioritization Score</b>	31/40
<b>Year Added to the Plan</b>	2016	<b>Timeline (estimated)</b>	Ongoing	<b>Implementation Priority</b>	High
<b>Hazard(s) Mitigated</b>	Drought, Earthquake, Flood, Landslide, Sea Level Rise, Severe Weather, Tsunami, Wildfire				
<b>Project Status</b>	Continuing	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	High				
<b>Lead Agency / Organization</b>	City of Brisbane City Manager's Office (Emergency Services Division)				
<b>Supporting Agency / Organization (If applicable)</b>	n/a				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	Low	<b>Potential Funding Source</b>	General Fund (Staff Time)		
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Institutionalize a comprehensive training program for City personnel to ensure the specialized technical capacity required to implement long-term risk reduction, hazard-specific safety protocols, and disaster response.				
<b>Action Number</b>	BRS-13	<b>Goal(s) Addressed</b>	1, 5	<b>Prioritization Score</b>	31/40
<b>Year Added to the Plan</b>	2016	<b>Timeline (estimated)</b>	3 to 6 Months	<b>Implementation Priority</b>	Medium
<b>Hazard(s) Mitigated</b>	Drought, Earthquake, Flood, Landslide, Sea Level Rise, Severe Weather, Tsunami, Wildfire				
<b>Project Status</b>	In Progress	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	High				
<b>Lead Agency / Organization</b>	City of Brisbane City Manager's Office (Emergency Services Division)				
<b>Supporting Agency / Organization (If applicable)</b>	n/a				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	Low	<b>Potential Funding Source</b>	General Fund (Staff Time)		
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Participate in the Sea Change San Mateo County initiative to develop an understanding of future sea level rise vulnerabilities and help identify mitigation efforts within the City to increase adaptive capacity to climate change and sea level rise.				
<b>Action Number</b>	BRS-14	<b>Goal(s) Addressed</b>	n/a	<b>Prioritization Score</b>	n/a
<b>Year Added to the Plan</b>	2016	<b>Timeline (estimated)</b>	n/a	<b>Implementation Priority</b>	n/a
<b>Hazard(s) Mitigated</b>	Flood, Sea Level Rise, Severe Weather				
<b>Project Status</b>	Completed	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	n/a				
<b>Lead Agency / Organization</b>	n/a				
<b>Supporting Agency / Organization (If applicable)</b>	n/a				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	n/a	<b>Potential Funding Source</b>		n/a	
<b>Additional Details (optional)</b>	City successfully participated in Sea Change San Mateo County and is currently undertaking further sea level rise adaptation planning with OneShoreline.				



<b>Mitigation Action</b>	Identify, pursue, and support San Mateo County Flood and Sea Level Rise Resiliency District (OneShoreline) strategies and infrastructure projects that enhance resilience to natural disasters and, where feasible, incorporate green design elements into hazard mitigation projects, including assets identified in the Caltrans District 4 Adaptation Priorities Report.				
<b>Action Number</b>	BRS-15	<b>Goal(s) Addressed</b>	1, 3, 5	<b>Prioritization Score</b>	33/40
<b>Year Added to the Plan</b>	2021	<b>Timeline (estimated)</b>	Ongoing	<b>Implementation Priority</b>	High
<b>Hazard(s) Mitigated</b>	Drought, Flood, Landslide, Severe Weather, Tsunami				
<b>Project Status</b>	Continuing	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	Medium				
<b>Lead Agency / Organization</b>	City of Brisbane City Manager's Office (Emergency Services Division)				
<b>Supporting Agency / Organization (If applicable)</b>	San Mateo County Flood and Sea Level Rise Resiliency District (OneShoreline); City of Brisbane Department of Public Works				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	High	<b>Potential Funding Source</b>		General Fund (Staff Time)	
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Integrate the San Mateo County Local Hazard Mitigation Plan into other City plans, ordinances, and programs that govern land use decisions in the community, including, but not limited to, the General Plan (and its elements, as appropriate).				
<b>Action Number</b>	BRS-16	<b>Goal(s) Addressed</b>	1, 2, 3, 4, 5	<b>Prioritization Score</b>	36/40
<b>Year Added to the Plan</b>	2021	<b>Timeline (estimated)</b>	Ongoing	<b>Implementation Priority</b>	High
<b>Hazard(s) Mitigated</b>	Drought, Earthquake, Flood, Landslide, Sea Level Rise, Severe Weather, Tsunami, Wildfire				
<b>Project Status</b>	Continuing	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	Medium				
<b>Lead Agency / Organization</b>	City of Brisbane Community Development Department (Planning Division)				
<b>Supporting Agency / Organization (If applicable)</b>	n/a				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	Low	<b>Potential Funding Source</b>	General Fund (Staff Time)		
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Mandate integration of FEMA 100-year tide levels, projected sea level rise, and climate-driven extreme storm data into land use planning and shoreline development.				
<b>Action Number</b>	BRS-17	<b>Goal(s) Addressed</b>	1, 3, 4, 5	<b>Prioritization Score</b>	36/40
<b>Year Added to the Plan</b>	2021	<b>Timeline (estimated)</b>	Ongoing	<b>Implementation Priority</b>	Medium
<b>Hazard(s) Mitigated</b>	Flood, Landslide, Sea Level Rise, Severe Weather				
<b>Project Status</b>	Continuing	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	Medium				
<b>Lead Agency / Organization</b>	City of Brisbane Community Development Department (Planning Division)				
<b>Supporting Agency / Organization (If applicable)</b>	n/a				
<b>Additional Participating Jurisdictions (If Applicable)</b>	n/a				
<b>Estimated Cost</b>	Low	<b>Potential Funding Source</b>	General Fund (Staff Time)		
<b>Additional Details (optional)</b>					



<b>Mitigation Action</b>	Evaluate the potential impacts of sea level rise on the Brisbane Lagoon through a planning and vulnerability assessment. Using regional sea level rise projections and hydrologic modeling, the City will identify areas that may become vulnerable to future tidal flooding and explore potential adaptation strategies, such as shoreline protection, infrastructure improvements, and other resilience measures. This effort is intended to inform long-term planning and help position the City to pursue funding and coordinated regional solutions as sea level rise progresses.				
<b>Action Number</b>	BRS-18	<b>Goal(s) Addressed</b>	1, 3	<b>Prioritization Score</b>	33/40
<b>Year Added to the Plan</b>	2026	<b>Timeline (estimated)</b>	1 to 2 Years (2027-2028)	<b>Implementation Priority</b>	High
<b>Hazard(s) Mitigated</b>	Flood, Sea Level Rise, Severe Weather, Tsunami				
<b>Project Status</b>	New	If No Longer Needed, provide reason.		n/a	
<b>Benefits (Loss Avoided)</b>	Medium				
<b>Lead Agency / Organization</b>	City of Brisbane Department of Public Works				
<b>Supporting Agency / Organization (If applicable)</b>	Caltrans				
<b>Additional Participating Jurisdictions (If Applicable)</b>	Bay Conservation and Development Commission				
<b>Estimated Cost</b>	High	<b>Potential Funding Source</b>	General Fund (Staff Time), Sustainable Transportation Planning Grant (with City match)		
<b>Additional Details (optional)</b>					



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## APPENDIX A. HAZARD MAPS

[Maps are under development...]



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## APPENDIX B. STAKEHOLDER AND PUBLIC ENGAGEMENT

*[Information and supporting documentation will be added after the Public Comment Period concludes.]*



## APPENDIX C. HAZARD RISK RANKING DETAILS

This appendix provides the details of the hazard ranking results presented in Section 9 of this Annex. For a comprehensive explanation of the risk assessment methodology used for the 2026 LHMP rankings, refer to Chapter 4 in **Volume 1** of this Plan.

### C.1. Probability of Occurrence

Hazard Event	Probability of Occurrence		Probability Factor	Weighted Factor
Dam Failure	Unlikely	There is little to no probability of a significant occurrence, or the recurrence interval is greater than every 100 years.	0	N/A
Drought	Medium	A significant hazard event is likely to occur within 25 years.	2	N/A
Earthquake	Medium	A significant hazard event is likely to occur within 25 years.	2	N/A
Riverine Flooding ( <i>Flood</i> )	Medium	A significant hazard event is likely to occur within 25 years.	2	N/A
Urban/Flash Flooding ( <i>Flood</i> )	High	A significant hazard event is likely to occur annually.	3	N/A
Coastal Flooding ( <i>Flood</i> )	Medium	A significant hazard event is likely to occur within 25 years.	2	N/A
Landslide	Medium	A significant hazard event is likely to occur within 25 years.	2	N/A
Sea Level Rise	High	A significant hazard event is likely to occur annually.	3	N/A
Heavy Rainfall ( <i>Severe Weather</i> )	High	A significant hazard event is likely to occur annually.	3	N/A
Heat Wave/Extreme Heat ( <i>Severe Weather</i> )	High	A significant hazard event is likely to occur annually.	3	N/A
Fog ( <i>Severe Weather</i> )	Low	A significant hazard event is likely to occur within 100 years.	1	N/A
Severe Thunderstorm ( <i>Severe Weather</i> )	Medium	A significant hazard event is likely to occur within 25 years.	2	N/A
Tornado ( <i>Severe Weather</i> )	Low	A significant hazard event is likely to occur within 100 years.	1	N/A
Strong Winds ( <i>Severe Weather</i> )	High	A significant hazard event is likely to occur annually.	3	N/A
Tsunami	Low	A significant hazard event is likely to occur within 100 years.	1	N/A
Wildfire	Medium	A significant hazard event is likely to occur within 25 years.	2	N/A



## C.2. Extent Factors

Hazard Event	Extent Factor	Extent		Extent Factor	Weighted Factor	Score
Dam Failure	<b>Extent/Severity</b>	Unlikely	Historical and/or probabilistic models/studies for this hazard indicate the possibility of little to no intensity.	0	3	0
	<b>Catastrophic</b>	Unlikely	Virtually no probability that this hazard could be catastrophic.	0	3	0
Drought	<b>Extent/Severity</b>	Low	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a low-intensity incident.	1	3	3
	<b>Catastrophic</b>	Low	Low potential that this hazard could be catastrophic.	1	3	3
Earthquake	<b>Extent/Severity</b>	High	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a high-intensity incident.	3	3	9
	<b>Catastrophic</b>	High	High potential that this hazard could be catastrophic.	3	3	9
Riverine Flooding (Flood)	<b>Extent/Severity</b>	Medium	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a medium-intensity incident.	2	3	6
	<b>Catastrophic</b>	Low	Low potential that this hazard could be catastrophic.	1	3	3
Urban/Flash Flooding (Flood)	<b>Extent/Severity</b>	High	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a high-intensity incident.	3	3	9
	<b>Catastrophic</b>	High	High potential that this hazard could be catastrophic.	3	3	9
Coastal Flooding (Flood)	<b>Extent/Severity</b>	Medium	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a medium-intensity incident.	2	3	6
	<b>Catastrophic</b>	Medium	Medium potential that this hazard could be catastrophic.	2	3	6
Landslide	<b>Extent/Severity</b>	Medium	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a medium-intensity incident.	2	3	6
	<b>Catastrophic</b>	Low	Low potential that this hazard could be catastrophic.	1	3	3



Hazard Event	Extent Factor	Extent		Extent Factor	Weighted Factor	Score
Sea Level Rise	<b>Extent/Severity</b>	Low	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a low-intensity incident.	1	3	3
	<b>Catastrophic</b>	Low	Low potential that this hazard could be catastrophic.	1	3	3
Heavy Rainfall (Severe Weather)	<b>Extent/Severity</b>	Medium	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a medium-intensity incident.	2	3	6
	<b>Catastrophic</b>	Medium	Medium potential that this hazard could be catastrophic.	2	3	6
Heat Wave/Extreme Heat (Severe Weather)	<b>Extent/Severity</b>	Low	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a low-intensity incident.	1	3	3
	<b>Catastrophic</b>	Low	Low potential that this hazard could be catastrophic.	1	3	3
Fog (Severe Weather)	<b>Extent/Severity</b>	Low	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a low-intensity incident.	1	3	3
	<b>Catastrophic</b>	Low	Low potential that this hazard could be catastrophic.	1	3	3
Severe Thunderstorm (Severe Weather)	<b>Extent/Severity</b>	Low	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a low-intensity incident.	1	3	3
	<b>Catastrophic</b>	Medium	Medium potential that this hazard could be catastrophic.	2	3	6
Tornado (Severe Weather)	<b>Extent/Severity</b>	Low	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a low-intensity incident.	1	3	3
	<b>Catastrophic</b>	Low	Low potential that this hazard could be catastrophic.	1	3	3
Strong Winds (Severe Weather)	<b>Extent/Severity</b>	Low	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a low-intensity incident.	1	3	3
	<b>Catastrophic</b>	Low	Low potential that this hazard could be catastrophic.	1	3	3



Hazard Event	Extent Factor	Extent		Extent Factor	Weighted Factor	Score
Tsunami	<i>Extent/Severity</i>	Low	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a low-intensity incident.	1	3	3
	<i>Catastrophic</i>	Low	Low potential that this hazard could be catastrophic.	1	3	3
Wildfire	<i>Extent/Severity</i>	High	Historical and/or probabilistic models/studies for this hazard indicate the possibility of a high-intensity incident.	3	3	9
	<i>Catastrophic</i>	High	High potential that this hazard could be catastrophic.	3	3	9

### C.3. Vulnerability Factors

Hazard Event	Vulnerability Factor	Vulnerability		Vulnerability Factor	Weighted Factor	Score
Dam Failure	<i>Population Exposure</i>	No Vulnerability	None of the population is exposed to the hazard.	0	3	0
	<i>Property Exposure</i>	No Vulnerability	None of the total assessed property value is exposed to a hazard.	0	1	0
	<i>Changes in Development</i>	No Vulnerability	Changes in development have had no effect and/or have decreased the community's exposure to the hazard.	0	1	0
Drought	<i>Population Exposure</i>	High	30% or more of the population is exposed to the hazard.	3	3	9
	<i>Property Exposure</i>	Low	9% or less of the total assessed property value is exposed to a hazard.	1	1	1
	<i>Changes in Development</i>	Low	Changes in development have increased the community's exposure to the hazard by 4% or less.	1	1	1
Earthquake	<i>Population Exposure</i>	High	30% or more of the population is exposed to the hazard.	3	3	9
	<i>Property Exposure</i>	High	25% or more of the total assessed property value is exposed to the hazard.	3	1	3
	<i>Changes in Development</i>	Medium	Changes in development have increased the community's exposure to the hazard between 5% and 9%.	2	1	2



Hazard Event	Vulnerability Factor	Vulnerability		Vulnerability Factor	Weighted Factor	Score
Riverine Flooding (Flood)	<i>Population Exposure</i>	Low	14% or less of the population is exposed to the hazard.	1	3	3
	<i>Property Exposure</i>	Medium	10% to 24% of the total assessed property value is exposed to a hazard.	2	1	2
	<i>Changes in Development</i>	Low	Changes in development have increased the community's exposure to the hazard by 4% or less.	1	1	1
Urban/Flash Flooding (Flood)	<i>Population Exposure</i>	High	30% or more of the population is exposed to the hazard.	3	3	9
	<i>Property Exposure</i>	High	25% or more of the total assessed property value is exposed to the hazard.	3	1	3
	<i>Changes in Development</i>	Medium	Changes in development have increased the community's exposure to the hazard between 5% and 9%.	2	1	2
Coastal Flooding (Flood)	<i>Population Exposure</i>	Medium	15% to 29% of the population is exposed to the hazard.	2	3	6
	<i>Property Exposure</i>	Medium	10% to 24% of the total assessed property value is exposed to a hazard.	2	1	2
	<i>Changes in Development</i>	Low	Changes in development have increased the community's exposure to the hazard by 4% or less.	1	1	1
Landslide	<i>Population Exposure</i>	Medium	15% to 29% of the population is exposed to the hazard.	2	3	6
	<i>Property Exposure</i>	Medium	10% to 24% of the total assessed property value is exposed to a hazard.	2	1	2
	<i>Changes in Development</i>	Low	Changes in development have increased the community's exposure to the hazard by 4% or less.	1	1	1
Sea Level Rise	<i>Population Exposure</i>	Low	14% or less of the population is exposed to the hazard.	1	3	3
	<i>Property Exposure</i>	High	25% or more of the total assessed property value is exposed to the hazard.	3	1	3
	<i>Changes in Development</i>	Medium	Changes in development have increased the community's exposure to the hazard between 5% and 9%.	2	1	2



Hazard Event	Vulnerability Factor	Vulnerability		Vulnerability Factor	Weighted Factor	Score
Heavy Rainfall (Severe Weather)	Population Exposure	High	30% or more of the population is exposed to the hazard.	3	3	9
	Property Exposure	High	25% or more of the total assessed property value is exposed to the hazard.	3	1	3
	Changes in Development	Low	Changes in development have increased the community's exposure to the hazard by 4% or less.	1	1	1
Heat Wave/Extreme Heat (Severe Weather)	Population Exposure	High	30% or more of the population is exposed to the hazard.	3	3	9
	Property Exposure	No Vulnerability	None of the total assessed property value is exposed to a hazard.	0	1	0
	Changes in Development	Low	Changes in development have increased the community's exposure to the hazard by 4% or less.	1	1	1
Fog (Severe Weather)	Population Exposure	High	30% or more of the population is exposed to the hazard.	3	3	9
	Property Exposure	No Vulnerability	None of the total assessed property value is exposed to a hazard.	0	1	0
	Changes in Development	No Vulnerability	Changes in development have had no effect and/or have decreased the community's exposure to the hazard.	0	1	0
Severe Thunderstorm (Severe Weather)	Population Exposure	High	30% or more of the population is exposed to the hazard.	3	3	9
	Property Exposure	High	25% or more of the total assessed property value is exposed to the hazard.	3	1	3
	Changes in Development	Low	Changes in development have increased the community's exposure to the hazard by 4% or less.	1	1	1
Tornado (Severe Weather)	Population Exposure	High	30% or more of the population is exposed to the hazard.	3	3	9
	Property Exposure	High	25% or more of the total assessed property value is exposed to the hazard.	3	1	3
	Changes in Development	Low	Changes in development have increased the community's exposure to the hazard by 4% or less.	1	1	1



Hazard Event	Vulnerability Factor	Vulnerability		Vulnerability Factor	Weighted Factor	Score
Strong Winds (Severe Weather)	<i>Population Exposure</i>	High	30% or more of the population is exposed to the hazard.	3	3	9
	<i>Property Exposure</i>	High	25% or more of the total assessed property value is exposed to the hazard.	3	1	3
	<i>Changes in Development</i>	Low	Changes in development have increased the community's exposure to the hazard by 4% or less.	1	1	1
Tsunami	<i>Population Exposure</i>	Low	14% or less of the population is exposed to the hazard.	1	3	3
	<i>Property Exposure</i>	Low	9% or less of the total assessed property value is exposed to a hazard.	1	1	1
	<i>Changes in Development</i>	Low	Changes in development have increased the community's exposure to the hazard by 4% or less.	1	1	1
Wildfire	<i>Population Exposure</i>	Medium	15% to 29% of the population is exposed to the hazard.	2	3	6
	<i>Property Exposure</i>	Medium	10% to 24% of the total assessed property value is exposed to a hazard.	2	1	2
	<i>Changes in Development</i>	Low	Changes in development have increased the community's exposure to the hazard by 4% or less.	1	1	1



## C.4. Impact Factors

Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Dam Failure	<b>Population and Life Safety</b>	No Impact	Populations exposed to this hazard are not likely to experience significant adverse impacts.	0	3	0
	<b>Underserved Population</b>	No Impact	Underserved populations exposed to the hazard are not likely to experience significant adverse/disproportionate impacts.	0	3	0
	<b>Property, Facilities, and Critical Infrastructure</b>	No Impact	Little to no property, facilities, and infrastructure damage is expected from a single significant event.	0	2	0
	<b>Economic</b>	No Impact	Virtually no significant economic impact.	0	1	0
	<b>Environmental</b>	No Impact	No environmental impacts from a significant event are likely.	0	1	0
	<b>Continuity of Operations/Delivery of Services</b>	No Impact	No impact on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	0	1	0
	<b>Future Development</b>	No Impact	Future development trends will not increase the impacts of this hazard, and/or may even decrease it.	0	1	0
	<b>Climate Change</b>	No Impact	Climate change trends will not increase the impacts of this hazard.	0	1	0



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Drought	<b>Population and Life Safety</b>	Low	Populations exposed to this hazard are likely to experience minimal adverse impacts, such as ambulatory injuries.	1	3	3
	<b>Underserved Population</b>	Medium	Underserved populations exposed to the hazard are likely to experience some adverse/disproportionate impacts, such as injuries requiring acute medical care.	2	3	6
	<b>Property, Facilities, and Critical Infrastructure</b>	Low	Less than \$500,000 in property, facilities, and infrastructure damages is expected from a single significant event, or damages are expected to occur to less than 5% of the property value within the jurisdiction.	1	2	2
	<b>Economic</b>	Medium	Total economic impact is likely to be greater than \$100,000, but less than or equal to \$10 million.	2	1	2
	<b>Environmental</b>	Medium	Environmental impact from a single significant event is likely to be localized, requiring some outside resources and support; and/or repair, cleanup, restoration, or preservation work.	2	1	2
	<b>Continuity of Operations/Delivery of Services</b>	Medium	Impact lasting between 24 and 72 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	2	1	2
	<b>Future Development</b>	Medium	Future development trends will increase the impacts of this hazard, but not significantly.	2	1	2
	<b>Climate Change</b>	High	Climate Change trends will significantly increase the impacts of this hazard.	3	1	3



Hazard Event	Impact Factor	Impact	Impact Factor	Weighted Factor	Score	
Earthquake	<b>Population and Life Safety</b>	High	Populations exposed to this hazard are likely to experience significant adverse impacts, such as fatalities and severe injuries.	3	3	9
	<b>Underserved Population</b>	High	Underserved populations exposed to the hazard are likely to experience significant adverse/disproportionate impacts, such as fatalities and severe injuries.	3	3	9
	<b>Property, Facilities, and Critical Infrastructure</b>	High	More than \$5 million in property, facilities, and infrastructure damage is expected from a single significant event, or damages are expected to occur to 15% or more of the property value within the jurisdiction.	3	2	6
	<b>Economic</b>	High	Total economic impact is likely to be greater than \$10 million.	3	1	3
	<b>Environmental</b>	High	Environmental impact from a single significant event is likely to be substantial, requiring extensive outside resources and support; and/or repair, cleanup, restoration, and/or preservation work.	3	1	3
	<b>Continuity of Operations/Delivery of Services</b>	High	Impact lasting more than 72 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	3	1	3
	<b>Future Development</b>	Medium	Future development trends will increase the impacts of this hazard, but not significantly.	2	1	2
	<b>Climate Change</b>	No Impact	Climate change trends will not increase the impacts of this hazard.	0	1	0



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Riverine Flooding (Flood)	<b>Population and Life Safety</b>	Medium	Populations exposed to this hazard are likely to experience some adverse impacts, such as injuries requiring acute medical care.	2	3	6
	<b>Underserved Population</b>	High	Underserved populations exposed to the hazard are likely to experience significant adverse/disproportionate impacts, such as fatalities and severe injuries.	3	3	9
	<b>Property, Facilities, and Critical Infrastructure</b>	Medium	More than \$500,000 but less than \$5 million in property, facilities, and infrastructure damage is expected from a single significant event, or damages are expected to occur to more than 5% but less than 15% of the property value within the jurisdiction.	2	2	4
	<b>Economic</b>	Medium	Total economic impact is likely to be greater than \$100,000, but less than or equal to \$10 million.	2	1	2
	<b>Environmental</b>	Medium	Environmental impact from a single significant event is likely to be localized, requiring some outside resources and support; and/or repair, cleanup, restoration, or preservation work.	2	1	2
	<b>Continuity of Operations/Delivery of Services</b>	Low	Impact lasting less than 24 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	1	1	1
	<b>Future Development</b>	Low	Future development trends will minimally increase the impacts of this hazard.	1	1	1
	<b>Climate Change</b>	High	Climate Change trends will significantly increase the impacts of this hazard.	3	1	3



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Urban/Flash Flooding (Flood)	<b>Population and Life Safety</b>	Medium	Populations exposed to this hazard are likely to experience some adverse impacts, such as injuries requiring acute medical care.	2	3	6
	<b>Underserved Population</b>	High	Underserved populations exposed to the hazard are likely to experience significant adverse/disproportionate impacts, such as fatalities and severe injuries.	3	3	9
	<b>Property, Facilities, and Critical Infrastructure</b>	High	More than \$5 million in property, facilities, and infrastructure damage is expected from a single significant event, or damages are expected to occur to 15% or more of the property value within the jurisdiction.	3	2	6
	<b>Economic</b>	Medium	Total economic impact is likely to be greater than \$100,000, but less than or equal to \$10 million.	2	1	2
	<b>Environmental</b>	Medium	Environmental impact from a single significant event is likely to be localized, requiring some outside resources and support; and/or repair, cleanup, restoration, or preservation work.	2	1	2
	<b>Continuity of Operations/Delivery of Services</b>	Medium	Impact lasting between 24 and 72 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	2	1	2
	<b>Future Development</b>	Medium	Future development trends will increase the impacts of this hazard, but not significantly.	2	1	2
	<b>Climate Change</b>	High	Climate Change trends will significantly increase the impacts of this hazard.	3	1	3



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Coastal Flooding (Flood)	<b>Population and Life Safety</b>	Low	Populations exposed to this hazard are likely to experience minimal adverse impacts, such as ambulatory injuries.	1	3	3
	<b>Underserved Population</b>	Medium	Underserved populations exposed to the hazard are likely to experience some adverse/disproportionate impacts, such as injuries requiring acute medical care.	2	3	6
	<b>Property, Facilities, and Critical Infrastructure</b>	High	More than \$5 million in property, facilities, and infrastructure damage is expected from a single significant event, or damages are expected to occur to 15% or more of the property value within the jurisdiction.	3	2	6
	<b>Economic</b>	Medium	Total economic impact is likely to be greater than \$100,000, but less than or equal to \$10 million.	2	1	2
	<b>Environmental</b>	Medium	Environmental impact from a single significant event is likely to be localized, requiring some outside resources and support; and/or repair, cleanup, restoration, or preservation work.	2	1	2
	<b>Continuity of Operations/Delivery of Services</b>	Medium	Impact lasting between 24 and 72 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	2	1	2
	<b>Future Development</b>	Medium	Future development trends will increase the impacts of this hazard, but not significantly.	2	1	2
	<b>Climate Change</b>	High	Climate Change trends will significantly increase the impacts of this hazard.	3	1	3



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Landslide	<b>Population and Life Safety</b>	High	Populations exposed to this hazard are likely to experience significant adverse impacts, such as fatalities and severe injuries.	3	3	9
	<b>Underserved Population</b>	High	Underserved populations exposed to the hazard are likely to experience significant adverse/disproportionate impacts, such as fatalities and severe injuries.	3	3	9
	<b>Property, Facilities, and Critical Infrastructure</b>	Medium	More than \$500,000 but less than \$5 million in property, facilities, and infrastructure damage is expected from a single significant event, or damages are expected to occur to more than 5% but less than 15% of the property value within the jurisdiction.	2	2	4
	<b>Economic</b>	Medium	Total economic impact is likely to be greater than \$100,000, but less than or equal to \$10 million.	2	1	2
	<b>Environmental</b>	Medium	Environmental impact from a single significant event is likely to be localized, requiring some outside resources and support; and/or repair, cleanup, restoration, or preservation work.	2	1	2
	<b>Continuity of Operations/Delivery of Services</b>	Low	Impact lasting less than 24 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	1	1	1
	<b>Future Development</b>	Low	Future development trends will minimally increase the impacts of this hazard.	1	1	1
	<b>Climate Change</b>	Medium	Climate Change trends will increase the impacts of this hazard, but not significantly.	2	1	2



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Sea Level Rise	<b>Population and Life Safety</b>	Medium	Populations exposed to this hazard are likely to experience some adverse impacts, such as injuries requiring acute medical care.	2	3	6
	<b>Underserved Population</b>	Medium	Underserved populations exposed to the hazard are likely to experience some adverse/disproportionate impacts, such as injuries requiring acute medical care.	2	3	6
	<b>Property, Facilities, and Critical Infrastructure</b>	High	More than \$5 million in property, facilities, and infrastructure damage is expected from a single significant event, or damages are expected to occur to 15% or more of the property value within the jurisdiction.	3	2	6
	<b>Economic</b>	Medium	Total economic impact is likely to be greater than \$100,000, but less than or equal to \$10 million.	2	1	2
	<b>Environmental</b>	Low	Environmental impact from a single significant event is likely to be minimal, requiring little to no outside resources and support; and/or minimal repair, cleanup, restoration, or preservation work.	1	1	1
	<b>Continuity of Operations/Delivery of Services</b>	No Impact	No impact on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	0	1	0
	<b>Future Development</b>	Medium	Future development trends will increase the impacts of this hazard, but not significantly.	2	1	2
	<b>Climate Change</b>	High	Climate Change trends will significantly increase the impacts of this hazard.	3	1	3



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Heavy Rainfall (Severe Weather)	<b>Population and Life Safety</b>	Low	Populations exposed to this hazard are likely to experience minimal adverse impacts, such as ambulatory injuries.	1	3	3
	<b>Underserved Population</b>	Medium	Underserved populations exposed to the hazard are likely to experience some adverse/disproportionate impacts, such as injuries requiring acute medical care.	2	3	6
	<b>Property, Facilities, and Critical Infrastructure</b>	Medium	More than \$500,000 but less than \$5 million in property, facilities, and infrastructure damage is expected from a single significant event, or damages are expected to occur to more than 5% but less than 15% of the property value within the jurisdiction.	2	2	4
	<b>Economic</b>	Medium	Total economic impact is likely to be greater than \$100,000, but less than or equal to \$10 million.	2	1	2
	<b>Environmental</b>	Medium	Environmental impact from a single significant event is likely to be localized, requiring some outside resources and support; and/or repair, cleanup, restoration, or preservation work.	2	1	2
	<b>Continuity of Operations/Delivery of Services</b>	Medium	Impact lasting between 24 and 72 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	2	1	2
	<b>Future Development</b>	Medium	Future development trends will increase the impacts of this hazard, but not significantly.	2	1	2
	<b>Climate Change</b>	Medium	Climate Change trends will increase the impacts of this hazard, but not significantly.	2	1	2



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Heat Wave/Extreme Heat (Severe Weather)	<b>Population and Life Safety</b>	Low	Populations exposed to this hazard are likely to experience minimal adverse impacts, such as ambulatory injuries.	1	3	3
	<b>Underserved Population</b>	Medium	Underserved populations exposed to the hazard are likely to experience some adverse/disproportionate impacts, such as injuries requiring acute medical care.	2	3	6
	<b>Property, Facilities, and Critical Infrastructure</b>	No Impact	Little to no property, facilities, and infrastructure damage is expected from a single significant event.	0	2	0
	<b>Economic</b>	Low	Total economic impact is not likely to be greater than \$100,000.	1	1	1
	<b>Environmental</b>	Low	Environmental impact from a single significant event is likely to be minimal, requiring little to no outside resources and support; and/or minimal repair, cleanup, restoration, or preservation work.	1	1	1
	<b>Continuity of Operations/Delivery of Services</b>	No Impact	No impact on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	0	1	0
	<b>Future Development</b>	Low	Future development trends will minimally increase the impacts of this hazard.	1	1	1
	<b>Climate Change</b>	High	Climate Change trends will significantly increase the impacts of this hazard.	3	1	3



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Fog (Severe Weather)	<b>Population and Life Safety</b>	Low	Populations exposed to this hazard are likely to experience minimal adverse impacts, such as ambulatory injuries.	1	3	3
	<b>Underserved Population</b>	Low	Underserved populations exposed to the hazard are likely to experience minimal adverse/disproportionate impacts, such as ambulatory injuries.	1	3	3
	<b>Property, Facilities, and Critical Infrastructure</b>	Low	Less than \$500,000 in property, facilities, and infrastructure damages is expected from a single significant event, or damages are expected to occur to less than 5% of the property value within the jurisdiction.	1	2	2
	<b>Economic</b>	Low	Total economic impact is not likely to be greater than \$100,000.	1	1	1
	<b>Environmental</b>	Low	Environmental impact from a single significant event is likely to be minimal, requiring little to no outside resources and support; and/or minimal repair, cleanup, restoration, or preservation work.	1	1	1
	<b>Continuity of Operations/Delivery of Services</b>	Low	Impact lasting less than 24 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	1	1	1
	<b>Future Development</b>	No Impact	Future development trends will not increase the impacts of this hazard, and/or may even decrease it.	0	1	0
	<b>Climate Change</b>	No Impact	Climate change trends will not increase the impacts of this hazard.	0	1	0



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Severe Thunderstorm (Severe Weather)	<b>Population and Life Safety</b>	Low	Populations exposed to this hazard are likely to experience minimal adverse impacts, such as ambulatory injuries.	1	3	3
	<b>Underserved Population</b>	Medium	Underserved populations exposed to the hazard are likely to experience some adverse/disproportionate impacts, such as injuries requiring acute medical care.	2	3	6
	<b>Property, Facilities, and Critical Infrastructure</b>	Medium	More than \$500,000 but less than \$5 million in property, facilities, and infrastructure damage is expected from a single significant event, or damages are expected to occur to more than 5% but less than 15% of the property value within the jurisdiction.	2	2	4
	<b>Economic</b>	Medium	Total economic impact is likely to be greater than \$100,000, but less than or equal to \$10 million.	2	1	2
	<b>Environmental</b>	Medium	Environmental impact from a single significant event is likely to be localized, requiring some outside resources and support; and/or repair, cleanup, restoration, or preservation work.	2	1	2
	<b>Continuity of Operations/Delivery of Services</b>	Low	Impact lasting less than 24 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	1	1	1
	<b>Future Development</b>	Medium	Future development trends will increase the impacts of this hazard, but not significantly.	2	1	2
	<b>Climate Change</b>	Low	Climate Change trends will minimally increase the impacts of this hazard.	1	1	1



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Tornado (Severe Weather)	<b>Population and Life Safety</b>	Low	Populations exposed to this hazard are likely to experience minimal adverse impacts, such as ambulatory injuries.	1	3	3
	<b>Underserved Population</b>	Low	Underserved populations exposed to the hazard are likely to experience minimal adverse/disproportionate impacts, such as ambulatory injuries.	1	3	3
	<b>Property, Facilities, and Critical Infrastructure</b>	Low	Less than \$500,000 in property, facilities, and infrastructure damages is expected from a single significant event, or damages are expected to occur to less than 5% of the property value within the jurisdiction.	1	2	2
	<b>Economic</b>	Medium	Total economic impact is likely to be greater than \$100,000, but less than or equal to \$10 million.	2	1	2
	<b>Environmental</b>	Low	Environmental impact from a single significant event is likely to be minimal, requiring little to no outside resources and support; and/or minimal repair, cleanup, restoration, or preservation work.	1	1	1
	<b>Continuity of Operations/Delivery of Services</b>	Low	Impact lasting less than 24 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	1	1	1
	<b>Future Development</b>	Low	Future development trends will minimally increase the impacts of this hazard.	1	1	1
	<b>Climate Change</b>	Low	Climate Change trends will minimally increase the impacts of this hazard.	1	1	1



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Strong Winds (Severe Weather)	<b>Population and Life Safety</b>	Medium	Populations exposed to this hazard are likely to experience some adverse impacts, such as injuries requiring acute medical care.	2	3	6
	<b>Underserved Population</b>	Medium	Underserved populations exposed to the hazard are likely to experience some adverse/disproportionate impacts, such as injuries requiring acute medical care.	2	3	6
	<b>Property, Facilities, and Critical Infrastructure</b>	Medium	More than \$500,000 but less than \$5 million in property, facilities, and infrastructure damage is expected from a single significant event, or damages are expected to occur to more than 5% but less than 15% of the property value within the jurisdiction.	2	2	4
	<b>Economic</b>	Medium	Total economic impact is likely to be greater than \$100,000, but less than or equal to \$10 million.	2	1	2
	<b>Environmental</b>	Low	Environmental impact from a single significant event is likely to be minimal, requiring little to no outside resources and support; and/or minimal repair, cleanup, restoration, or preservation work.	1	1	1
	<b>Continuity of Operations/Delivery of Services</b>	Low	Impact lasting less than 24 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	1	1	1
	<b>Future Development</b>	Low	Future development trends will minimally increase the impacts of this hazard.	1	1	1
	<b>Climate Change</b>	Low	Climate Change trends will minimally increase the impacts of this hazard.	1	1	1



Hazard Event	Impact Factor	Impact		Impact Factor	Weighted Factor	Score
Tsunami	<b>Population and Life Safety</b>	Low	Populations exposed to this hazard are likely to experience minimal adverse impacts, such as ambulatory injuries.	1	3	3
	<b>Underserved Population</b>	Low	Underserved populations exposed to the hazard are likely to experience minimal adverse/disproportionate impacts, such as ambulatory injuries.	1	3	3
	<b>Property, Facilities, and Critical Infrastructure</b>	Low	Less than \$500,000 in property, facilities, and infrastructure damages is expected from a single significant event, or damages are expected to occur to less than 5% of the property value within the jurisdiction.	1	2	2
	<b>Economic</b>	Low	Total economic impact is not likely to be greater than \$100,000.	1	1	1
	<b>Environmental</b>	Low	Environmental impact from a single significant event is likely to be minimal, requiring little to no outside resources and support; and/or minimal repair, cleanup, restoration, or preservation work.	1	1	1
	<b>Continuity of Operations/Delivery of Services</b>	Low	Impact lasting less than 24 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	1	1	1
	<b>Future Development</b>	Low	Future development trends will minimally increase the impacts of this hazard.	1	1	1
	<b>Climate Change</b>	No Impact	Climate change trends will not increase the impacts of this hazard.	0	1	0



Hazard Event	Impact Factor	Impact	Impact Factor	Weighted Factor	Score	
Wildfire	<b>Population and Life Safety</b>	Medium	Populations exposed to this hazard are likely to experience some adverse impacts, such as injuries requiring acute medical care.	2	3	6
	<b>Underserved Population</b>	High	Underserved populations exposed to the hazard are likely to experience significant adverse/disproportionate impacts, such as fatalities and severe injuries.	3	3	9
	<b>Property, Facilities, and Critical Infrastructure</b>	High	More than \$5 million in property, facilities, and infrastructure damage is expected from a single significant event, or damages are expected to occur to 15% or more of the property value within the jurisdiction.	3	2	6
	<b>Economic</b>	Medium	Total economic impact is likely to be greater than \$100,000, but less than or equal to \$10 million.	2	1	2
	<b>Environmental</b>	High	Environmental impact from a single significant event is likely to be substantial, requiring extensive outside resources and support; and/or repair, cleanup, restoration, and/or preservation work.	3	1	3
	<b>Continuity of Operations/Delivery of Services</b>	High	Impact lasting more than 72 hours on the ability of the jurisdiction to meet the essential day-to-day operational demands and needs of the community from a single significant event.	3	1	3
	<b>Future Development</b>	Medium	Future development trends will increase the impacts of this hazard, but not significantly.	2	1	2
	<b>Climate Change</b>	High	Climate Change trends will significantly increase the impacts of this hazard.	3	1	3



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## APPENDIX D. PLAN ADOPTION

*[Placeholder for adoption documentation after State and FEMA approval]*