

SECTION 4: GOALS AND MITIGATION ACTIONS

The ultimate goal of Local Hazard Mitigation Plans is hazard mitigation, that is, a risk-based approach to reduce or eliminate, if possible, the long-term risk to life, property and infrastructure from natural hazards. Thus, a successful hazard mitigation strategy provides a mechanism by which, during the process of preparing for, responding to and recovering from natural hazards, the community reduces its vulnerability to future hazard events. Historically, communities impacted by a natural hazard will repair the damage and reconstruct to similar pre-disaster conditions. Such efforts may expedite the return to normalcy, but in the process engender a cycle of damage, reconstruction, and repeated damage. Hazard mitigation involves the implementation of actions that enable the community to not only respond effectively to a disaster, but to recover in such a way that the post-disaster repairs and reconstruction truly strengthen it. This Local Hazards Mitigation Plan Update outlines opportunities that Newport Beach can use to increase its resiliency to future natural hazard events.

This section provides information on the process used to develop goals and action items aimed at reducing the impact of several natural hazards on the City of Newport Beach. The action items were developed after an in-depth review of the City's vulnerabilities and capabilities as described in Sections 2, and 6 through 10. The mitigation actions presented here are organized by implementation timing as follows: 1) actions that are already being implemented on an on-going basis, 2) actions that the City wants to implement in the next five (5) years, and 3) action items that the City would like to implement in the next ten (10) years. This organization takes into account the City's priorities and the realities of funding and personnel availability. Action items identified in the 2008 Plan that have already been implemented and completed are listed in Section 5. The mitigation actions are also classified by the hazard that they address, with action items that address two or more hazards at the same time referred to as multi-hazard action items.

Hazard Mitigation Overview

Many Federal and State programs have been implemented over the years to reduce losses created by natural hazards. These programs are described in detail in the appropriate sections of the Plan – the reader is referred to Sections 6 through 10 for additional information. The most significant of these programs are summarized below.

National Flood Insurance Program

The National Flood Insurance Program (NFIP) was created by the U.S. Congress in 1968. Although a community's participation in the NFIP is voluntary, in order to receive assistance and funding from FEMA following a flood, the community must participate in the program. The City of Newport Beach has participated in the NFIP since September 1, 1978 (City ID No. 060227). Development in the flood prone areas of the City is regulated in accordance with Chapter 15.50 – Floodplain Management of the City's Municipal Code.

The Community Rating System (CRS) is a voluntary part of the National Flood Insurance Program (NFIP) that seeks to coordinate all flood-related activities, reduce flood losses, facilitate accurate insurance rating, and promote public awareness of flood insurance by creating incentives for a community to pursue beyond the minimum requirements of the NFIP. CRS ratings are on a ten-point scale, from 1 to 10, with 1 being the best rating. Residents who live within FEMA's Special Flood Hazard Areas (SFHA) receive a 5% reduction in flood insurance rates for every one-point improvement in the Community's CRS rating. As of October 1, 2014, the City of Newport Beach

has a CRS rating of 8, which means that residents within the SFHA receive a 10% discount on their flood insurance rates, and residents in non-SFHA areas that purchase flood insurance can get a 5% discount.

FEMA's records include 263 flood claims filed by residents of Newport Beach, including Balboa Island and Corona del Mar, between 1977 and 2010. The amounts paid by FEMA on these claims range from \$0 to nearly \$275,000.00, with an average of \$6,040.00. Of the properties impacted, twelve (12) have filed repetitive losses (Repetitive Loss Properties). As of the end of 2010, five of these properties had been mitigated. According to FEMA's records, of the remaining seven properties that have not been mitigated, only three are currently insured for flooding.

Senate Bill 1241

At the State level, and to address the increasing losses associated with wildfires at the wildland-urban interface, Senate Bill 1241 (2012 Kehoe Statutes) requires that cities revising their Housing Element of the General Plan on or after January 1, 2014 to also review and update their Safety Element to address the risk of fire in State Responsibility Areas and in very high fire hazard severity zones. The City of Newport Beach will update the Fire Hazards section of the Safety Element to comply with this requirement, utilizing the data presented in Section 8 of this Plan.

Assembly Bill 2140

AB 2140 provides a financial incentive for local agencies to adopt a Local Hazard Mitigation Plan as a component of the Safety Element of their General Plan. The City of Newport Beach adopted its 2008 Hazard Mitigation Plan and linked it, by reference, to their 2006 Safety Element. This 2014 Update will be treated similarly, recognizing that sections of the Safety Element need to be updated to comply with the requirements of Senate Bill 1241, as discussed above.

Plan Components

Mission

The mission of the City of Newport Beach's Natural Hazards Mitigation Plan is "to promote sound public policy designed to protect citizens, critical facilities, infrastructure, private property, and the environment from natural hazards."

This is being achieved by increasing public awareness, documenting the resources available for risk reduction and loss-prevention, and identifying and implementing activities that will help the City of Newport Beach become a safer, more disaster-resilient and sustainable community.

Goals

The Plan Goals describe the overall direction that City agencies, organizations, and citizens are taking and will continue to take to minimize the impacts of natural hazards. The goals are stepping-stones between the broad direction of the mission statement and the specific recommendations that are outlined in the action items.

Action Items

The Action Items are activities that City departments, other organizations, businesses and residents can implement to reduce risk. Each action item includes an estimate of the time line for implementation. Short-term action items are activities that City departments may implement with existing resources and authorities within the next five years or sooner. Short-term action items also include activities that, although the resources to implement them are not readily available, are considered priorities that need to be implemented within this update cycle (that is, in the next five

years). Long-term action items are considered less of a priority, and because they may require new or additional resources or authorities, are not likely to be implemented within the next five years, but may be implemented in years six through ten. There are also several mitigation activities that the City conducts on an on-going basis, as part of its development and permit processing, or upgrading of existing facilities. These activities are also listed in this document, as they are an important component in the City's efforts to reduce its vulnerability to natural disasters.

Mitigation Plan Goals and Public Participation

The Plan Goals help guide the direction of future activities aimed at reducing risk and preventing loss from natural hazards. Essentially, the goals provide a framework by which to promote sound public policy designed to protect from natural hazards the City's residents and visitors, the City's critical facilities and infrastructure, private property and the environment. The goals listed here serve as checklist items that City staff, Council members and the public can refer back as City departments and other organizations begin implementing the action items. These goals have been prioritized, with the most important goal (protect life and property) listed first. Other goals include public awareness, public participation, natural systems, emergency services, and partnerships and implementation. Elements of each of these goals are described further below.

Protect Life and Property

- Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to natural hazards.
- Reduce losses and repetitive damages from chronic (frequently recurring) hazard events while promoting insurance coverage for catastrophic hazards.
- Improve hazard assessment information from which to make recommendations to discourage new development and encourage preventive measures for existing development in areas particularly vulnerable to natural hazards.

Public Awareness

- Develop and implement educational and outreach programs that increase public awareness of the risks associated with natural hazards.
- Keep the public informed of natural hazards mitigation initiatives and activities through local newspapers, the local access channel, the City's website, newsletters, utility bill inserts, and other similar media.
- Provide information on tools, partnership opportunities, and funding resources that can help in the implementation of mitigation activities.

Public Participation

- Obtain input from City staff and the public when updating the Disaster Mitigation Plan and other similar efforts, including during the process of developing and prioritizing the Plan goals and action items and the assignment of responsibilities, taking into consideration the expected efficacy of the proposed action items and the proposed timelines.

Natural Systems

- Balance the need to protect and manage the natural resources and areas in the City (such as Newport Bay, the aquifers, watershed, etc.) with the need for hazard mitigation to protect

lives and property in the developed areas, to reduce any conflict that may arise between these two objectives.

- Whenever possible, preserve, rehabilitate, and enhance the natural systems in ways that also provide natural hazard mitigation functions.

Emergency Services

- Establish policy to ensure that mitigation projects to strengthen critical and essential facilities, services, and infrastructure, where needed, are considered and prioritized.
- Coordinate and integrate natural hazard mitigation activities, where appropriate, with emergency operations, plans and procedures.
- Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, businesses, and industry.

Partnerships and Implementation

- Strengthen communication and coordinate participation among and within City departments, other agencies, citizens, non-profit organizations, businesses, and industry so that there is a mutual, vested interest in the implementation of the action items.
- Encourage leadership within public and private sector organizations to prioritize and implement local, county, and regional hazard mitigation activities.

Hazard Mitigation Plan Action Items

As discussed above, this Hazards Mitigation Plan identifies both short- and long-term action items, and multi-hazard (MH) and hazard-specific action items. The action items are listed all together in this Section to make this document as user-friendly as possible. This provides the reader with a concise document that clearly establishes the path the City has chosen to reduce its vulnerability to natural hazards over the next five- and ten-year period. It also allows the City departments and organizations identified as responsible for the implementation of the action items to see and manage their charges more effectively.

Mitigation Plan activities may be considered for funding through Federal and State grant programs, and when other funds are made available through the City. To help ensure activity implementation, each action item includes information on its timeline and coordinating organization(s). Upon implementation, the coordinating organization(s) may look to partner with other organizations for resources and technical assistance. A description of possible partner organizations is provided in Appendix A, the Resource Directory of this Plan.

Many of the action items in the City's 2008 Disaster Mitigation Plan mirrored or complemented the policies in the City's 2006 Safety Element of the General Plan, but were more specific in that they identified the coordinating organization, timeline for implementation, goal(s) being addressed, and potential constraints, in accordance with FEMA's requirements. In the Safety Element, the policies are not prioritized, and are typically not assigned to a specific department. By critically assessing the policies of the Safety Element, several policies were found to be "orphans," with no City department willing to take on and implement them. A few initiatives were deemed unfeasible. Other action items in the 2008 Plan were developed as a result of the data collection and research process, whereby specific concerns were identified, or as a result of input from City departments or the public, during the public participation process.

The action items presented in this updated (2014) Disaster Mitigation Plan were developed during meetings of the Advisory Committee, and input from the public during the workshops and document review phases. Action items first identified in the 2008 document that the City performs on an ongoing basis, and will continue to implement, are listed here under separate header. Other mitigation measures that were included in the 2008 Plan that are considered important by the City but have not yet been implemented have moved up in priority.

Coordinating Organization

The coordinating organization is the organization that is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitoring, and evaluation. Coordinating organizations may include local, City, or regional agencies or departments, and private entities that are capable of or responsible for implementing activities and programs.

Timeline

Action items include both short- and long-term activities. Each action item includes an estimate of the timeline for implementation.

Plan Goals Addressed

The Plan goals addressed by each action item are included as a way to monitor and evaluate how well the Hazards Mitigation Plan is achieving its goals once implementation begins.

Constraints

Constraints to the immediate implementation of the action items are typical, usually because of limited resources, as described further below. Constraints may include a lack of City staff to do the work, lack of funds, or vested property rights that might expose the City to legal action as a result of adverse impacts on private property.

Project Evaluation Worksheets

Every jurisdiction has limitations on the number of mitigation activities that can be completed within a given period of time, usually because of limited economic resources. This forces jurisdictions and agencies to review and select the most cost-effective mitigation projects first, in essence prioritizing mitigation projects by their return on investment. Given the competition for available funding, multi-hazard action items are generally attractive and more likely to be implemented first. The challenge is to maintain a balance between mitigating projects that can be implemented readily and for a relatively small amount of money, with longer-term projects that cost more but have the potential to more significantly reduce the City's vulnerability to natural hazards.

The committee prioritized the action items identified in this document using the FEMA-endorsed STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) review and analysis, with each coordinating organization ranking the action items identified as under its jurisdiction. This methodology requires that the social, technical, administrative, political, legal, economic, and environmental implications and considerations of implementing a given action item be taken into account and weighted. By following this process, the committee identified those action items most beneficial or more feasible that can be undertaken to reduce the City's unique vulnerabilities.

FEMA also requires local governments to analyze the benefits and costs of a range of mitigation actions. Benefit-cost analysis is used in hazard mitigation to evaluate whether the benefits to

life and property protected through mitigation efforts exceed the cost of the mitigation activity. Conducting a benefit-cost analysis (BCA) for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster-related losses later. The analysis is based on calculating the frequency and severity of a hazard, avoided future damage, and risk.

A hazard mitigation plan must demonstrate that a process was employed that emphasized a review of benefits and costs when prioritizing the mitigation actions. The BCA review must be comprehensive to the extent that it can evaluate the monetary and non-monetary benefits and costs associated with each action. The BCA should at least consider the following questions:

1. How many people will benefit from the action?
2. How large is the area that would be impacted?
3. How critical are the facilities that benefit from the action?
4. Are there any environmental constraints associated with the action, and if so, is the overall benefit to the community greater than the environmental costs?

To assist the committee in the Benefit Cost Analysis (BCA) required by FEMA, a Project Evaluation Worksheet is included at the end of this section (Table 4-5). This worksheet is based on the “STAPLEE” process, whereby the Social, Technical, Administrative, Political, Legal, Economic, and Environmental benefits of a given proposed action item are weighed against the costs of implementing it (see Tables 4-1 and 4-2 below). The data on these worksheets can help the committee determine the most cost-effective mitigation solutions for the community. Some projects may need a more detailed BCA, but this worksheet provides a first-screening methodology.

Table 4-1: The STAPLEE Process

SOCIAL	Community Acceptance		Effect on Segment of Population		
TECHNICAL	Technical Feasibility	Long-term Solution		Secondary Impacts	
ADMINISTRATIVE	Staffing	Funding Allocated		Maintenance/Operations	
POLITICAL	Political Support	Local Champion		Public Support	
LEGAL	State Authority	Existing Local Authority		Potential Legal Challenge	
ECONOMIC	Benefit of Action	Cost of Action	Contributes to Economic Goals		Outside Funding Required
ENVIRONMENTAL	Effects on Land/Water	Effect on Endangered Species	Effect on HAZMAT / Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws

Table 4-2: STAPLEE Review and Selection Criteria

CRITERIA	SPECIFIC IMPACT	DESCRIPTION of GRADING SCALE for EACH IMPACT
Social	Acceptance	Is the action perceived as socially acceptable to a wide segment of the population? Values range from 0 to 3, with 0 = public indifferent to action; 1 = somewhat popular; 2 = popular; 3 = very popular.
	Effect on Segment of Population	Is the action item likely to impact (positively or negatively) a particular segment of the population? Values range from -3 to 3 with -3 = will negatively impact a segment of the population; 0 = will have no effect; 3 = will have a very positive effect on a segment of the population.
Technical	Feasibility	Is the action feasible given our current knowledge or science? 0 = No; 1 = somewhat; 2 = moderately; 3 = absolutely.
	Long-Term Solution	Is implementation of this action going to reduce the hazard permanently? 0 = no; 1 = slightly; 2 = somewhat; 3 = yes.
Administrative	Staffing	Is there staff currently at the City doing this work? Does it involve 1 person, or more? The resulting number is a weighted sum of individual components, as described below:
		Is there staff currently at the City doing this work? 0 = no; 1 = yes, 1 person; 2 = yes, 2 or more but not enough to do the proposed work; 3 = yes, several, enough to get the work done. -1 = City needs to hire someone to do the work; -2 = City needs to hire 2 people to do the work; -3 = City needs to hire several people to get this done.
	Funding allocated	0 = no funding currently allocated; 1 = some funding allocated, need a lot more \$; 2 = funding available, enough to do the basics; 3 = funding available to do the work without cutting corners.
	Maintenance	Does this action require constant maintenance and upgrade? 0 = no, this is a one-time expenditure; -1 = some minor maintenance required; -2 = constant maintenance by 1 individual required; -3 = constant maintenance and upgrade required, effort requires 2 or more individuals assigned to task.
Political	Public support	Is the action going to be popular with the public? -3 to 3, with -3 = very unpopular; 0 = no public reaction, indifferent; and 3 = very popular.
	Political support	Is the action going to be popular with the Mayor and City Council? -3 to 3, with -3 = very unpopular; 0 = no reaction, indifferent; and 3 = very popular.
Legal	State authority	Is there a State mandate or a recommendation to have this done? 0 = no; 1 = there is minor State interest in doing this; 2 = there is a strong support at the State level to do this; 3 = there is a State mandate to do this, generally with a target date for implementation.
	Local authority	Is there a local mandate or recommendation to implement this action? 0 = no; 1 = there is minor local support to get this done; 2 = there is strong local support to get this done; 3 = there is a City mandate to get this done.
	Possible legal action?	Is this action likely to get challenged in court? 0 = no; -1 = a small possibility; -2 = yes, some people might object enough to go to court; -3 = yes, expect several neighbors to challenge this in court.
Economic	Benefit	The economic benefits of implementing this action. 0 = no benefit; 1 = small benefit; 2 = benefit; 3 = great benefit.
	Cost	The economic costs of implementing this action: 0 = no costs; -1 = small cost; -2 = some cost; -3 = very expensive.
	Outside Funding	Is there outside funding available to implement this action? 0 = no; 1 = small amounts of money, not enough to get it done; 2 = funding available; 3 = enough money available to get this done.
Environmental	Impacts on Environment (Land, Water, Endangered Species, etc.)	Does this action have a positive or negative impact on the environment? -3 = severe negative impact on environment; 0 = no impact; 3 = very positive impact on environment.
	Consistent with Community's Environmental Goals	Is the proposed action consistent with the City's environmental goals? -3 = goes against all goals to protect the environment; 0 = has no impact on the local environmental goals; 3 = is very consistent with the City's environmental goals.

Hazard Action Items

The hazard mitigation actions that the City of Newport Beach has chosen to implement to reduce its vulnerability to the natural hazards discussed in this Plan are listed in Table 4-3, below, with ongoing actions identified under the green headers, actions to be implemented in the short-term identified under the orange headers, and actions to be implemented in the long-term identified under the purple headers. Multi-hazard action items are those activities that pertain to two or more of the five natural hazards identified in the Mitigation Plan: earthquakes, floods, wildfires, landslides and windstorms.

The action items are listed in order based on the results of the prioritization conducted using a simplified STAPLEE analysis based on the criteria and grading scale described in Table 4-2 above. Only the short-term and long-term action items were prioritized, with the responsible department(s) providing input for the STAPLEE assessment. The spreadsheet supporting the prioritization results is presented as Table 4-4.

Table 4-3: City of Newport Beach Hazard Mitigation Actions

Ongoing Actions	Responsible Department, Agency or Committee	Potential Funding Source(s); Constraints	Plan Goals Addressed
Multi-Hazards: To prepare for, and respond to a variety of potential natural and man-made hazards, the City of Newport Beach conducts the following activities:			
1. Pursues funding opportunities to develop and implement local and citywide mitigation activities.	Emergency Preparedness Committee with support from other City departments as needed	FEMA (Hazard Mitigation Grant Program, Pre-Disaster Mitigation grants), Staff Budget, City's General Fund; dependent on personnel available to pursue and apply for grants, and funding availability.	Partnerships and Implementation, Public Participation
A. Supports a position to monitor the availability of Federal, State and local funds that can be used to implement specific action items in the Local Hazard Mitigation Plan.			
B. As action items are identified for potential grant funding, City staff conducts a Benefit Cost Analysis to assess the cost-effectiveness of the proposed measure.			
C. Monitors the effectiveness of mitigation measures or conditions of approval being applied to projects. The Committee meets regularly to evaluate the progress and success (or failure) of the action items in the Plan.			
2. Fosters public and private partnerships to improve hazard mitigation program coordination and collaboration.	Hazard Mitigation Advisory Committee with support from Municipal Operations, Fire, Public Works, Utilities, and Community Development (Planning Division) Departments, as needed, in addition to the City's Public Information Office.	City's General Fund, FEMA's Pre-Disaster Mitigation grant; dependent on funding and personnel availability.	Partnerships and Implementation, Emergency Services, Public Participation
A. Develops and conducts natural hazards awareness programs that are presented at schools, community centers, and other venues.			
B. Conducts public outreach programs aimed at businesses, residents, and organizations that are most likely to be impacted			

Ongoing Actions	Responsible Department, Agency or Committee	Potential Funding Source(s); Constraints	Plan Goals Addressed
<p>by flooding, seismic shaking, slope instability, and wildfire events.</p> <p>C. Makes the Local Hazard Mitigation Plan available to the public by publishing it electronically on the City's website. Hardcopies of the plan are available at City Hall and in the City's main library.</p> <p>D. Continues to strengthen emergency preparedness and response by linking emergency services with hazard mitigation measures and by enhancing public education on a regional scale.</p> <p>E. Works with community planning organizations and other neighboring groups and has formed community response teams.</p> <p>F. Provides training to the Disaster Mitigation Committee members so they remain current on developing issues in the natural hazard-reduction field.</p>			
<p>Seismic and Geologic Hazards: To reduce its vulnerability to seismic and geologic hazards, the City of Newport Beach conducts, in an ongoing basis, the following activities:</p>			
<p>3. Reviews all proposed developments during the project feasibility stage, and compares the location of the proposed project with the hazard maps developed for the LHMP to ensure that the project is not located in an area identified as susceptible to damage from a natural hazard.</p>	<p>Community Development Dept., Planning Division</p>	<p>Development processing fees; no constraints.</p>	<p>Protect Life and Property, Public Awareness</p>
<p>4. Updates, adopts and enforces the most up-to-date California Building Code with local amendments, and City staff train in the provisions of the latest codes.</p>	<p>Community Development Dept., Building Division</p>	<p>Development processing fees; no constraints.</p>	<p>Protect Life and Property, Partnerships and Implementation</p>
<p>5. City staff review all plans for new construction and re-development projects to identify potential structural or fire-code deficiencies that need to be addressed and mitigated as a condition of approval of the project.</p>	<p>Community Development Dept., Building Division, with support from the Fire Department</p>	<p>Development processing fees; no constraints.</p>	<p>Protect Life and Property, Partnership and Implementation</p>
<p>6. Requires geotechnical reviews, conducted by California-certified professionals that address seismic vulnerability, liquefaction potential, and slope stability for all new construction and re-development projects.</p>	<p>Community Development Dept., Building Division</p>	<p>Development processing fees; no constraints.</p>	<p>Protect Life and Property</p>
<p>7. Is supporting the seismic retrofitting and strengthening of essential and critical facilities, such as hospitals and schools, to minimize damage to these facilities and reduce the potential losses of life, limb and property resulting from a seismic or geologic event.</p>	<p>Community Development Department (Building Division), Fire Department</p>	<p>FEMA Pre-Disaster Mitigation grants, Cal OES grants; dependent on funding and personnel availability.</p>	<p>Protect Life and Property, Emergency Services</p>

Ongoing Actions	Responsible Department, Agency or Committee	Potential Funding Source(s); Constraints	Plan Goals Addressed
8. Requires slope stability analyses for all new developments and re-developments that have the potential to be impacted by or have the potential to result in coastal erosion or slope damage. These analyses and erosion rate estimates are to be completed by an experienced and licensed Certified Engineering Geologist and/or Geotechnical Engineer.	Community Development Department (Building Division)	Development processing fees; no constraints.	Protect Life and Property, Natural Systems
9. Requires developments or re-developments adjacent to coastal bluffs to incorporate drainage improvements, irrigation systems, and/or native or drought-resistant vegetation into the design to minimize coastal bluff recession.	Community Development Dept., Building Division with support from the Municipal Operations Department if needed	Development processing fees; no constraints.	Protect Life and Property, Natural Systems
10. Prohibits shoreline and bluff protective devices intended for the economic life (75 years) of new structures unless an environmentally acceptable design that stabilizes the bluff and prevents bluff retreat is devised.	Community Development Department (Building Division), with support from the Public Works Department	Development processing fees, Staff Budget; no constraints.	Natural Systems, Protect Life and Property, Public Awareness
Flood Hazards: To reduce its vulnerability to flood hazards, the City of Newport Beach implements the following activities in an ongoing basis:			
11. Monitors the ocean sand to develop a history of its movement and develop trends along the City's coastline.	Public Works Department (Harbor Resources Division)	City's General fund, Staff Budget; dependent on funding and personnel availability.	Natural Systems, Public Awareness
12. Conducts in-bay beach sand replenishment. This entails dredging sand, and if necessary, importing sand for elsewhere in the watershed, and placing it back up on the beach for recreation and stabilization purposes	Public Works Department (Harbor Resources Division)	City's Tidelands fund; dependent on funding and personnel availability.	Natural Systems, Public Awareness, Protect Life and Property
13. Conducts annual reviews of the water storage basins and dams in the City in accordance California Division of Dam Safety guidelines.	Municipal Operations Department in cooperation with the California Division of Dam Safety and the dam owners/operators	City's Water fund, dam owners; dependent on funding and follow-through by the dam owners/operators.	Emergency Services, Partnerships and Implementation, Protect Life and Property
14. Requires that all new development and re-development in areas susceptible to flooding (such as the 100-year floodplain and areas susceptible to coastal flooding) incorporate mitigation measures to reduce or eliminate the hazard of flooding. These measures may include the design of onsite drainage systems that are connected to the City's storm drainage system, grading of the site so that runoff does not impact adjacent properties, and buildings elevated above the anticipated flood levels.	Community Development Department (Building Division), in cooperation with Municipal Operations Department	Development processing fees; no constraints.	Protect Life and Property, Natural Systems, Public Awareness

Ongoing Actions	Responsible Department, Agency or Committee	Potential Funding Source(s); Constraints	Plan Goals Addressed
15. Requires all new facilities within the flood zones that store, use, or are otherwise involved with substantial quantities of onsite hazardous materials to comply with standards of elevation, anchoring, and flood proofing, and that the hazardous materials are stored in watertight containers.	Community Development Department (Building Division) in cooperation with Fire Department	Development processing fees, Staff Budget, City's General Fund; no constraints.	Protect Life and Property, Public Awareness
16. Limits the use of flood protective devices to the minimum required to protect existing development, and prohibits their use to enlarge or expand areas for new development. Existing development for the purposes of this activity consists only of a principal structure (e.g., residential dwelling, required garage, or second residential unit) and does not include accessory or ancillary structures such as decks, pools, tennis courts, cabanas, stairs, landscaping, etc.	Community Development Department (Planning and Building Divisions) with support as needed from the Public Works Department (Harbor Resources Division)	Development processing fees, Staff Budget, City's General Fund; no constraints.	Protect Life and Property, Public Awareness, Natural Systems
17. Requires all new or remodeled residential structures in areas susceptible to storm surge to raise their floor elevations as required by the latest building code in effect.	Community Development Department (Building Division)	Development processing fees, FEMA's Flood Mitigation Assistance; no constraints	Protect Life and Property, Public Awareness
18. Reviews local and distant tsunami inundation maps for Newport Beach and adjacent communities as they are developed to confirm that the mitigation measures currently in place are adequate.	Emergency Preparedness Committee	City's General fund; dependent on funding and personnel availability.	Protect Life and Property, Public Awareness, Partnerships and Implementation
19. Maintains and regularly cleans out, as needed, the storm drains in low-lying areas, to help reduce the potential for floodwaters to impact the structures in those areas.	Municipal Operations Department	Staff Budget, City's General fund, impacted district fees; FEMA's Flood Mitigation Assistance; no constraints.	Protect Life and Property, Natural Systems
Fire Hazards: To reduce the potential for wildland fires to impact the community, the City of Newport Beach conducts on an ongoing basis the following activities:			
20. Continues to develop and implement educational and public information programs that inform Newport Coast and Corona del Mar residents of the value of the installed Fuel Modification and Hazard Reduction Zones, and continues to enforce their maintenance and upkeep.	Fire Department, with support from the Public Information Office	City's General fund, FEMA's Pre-Disaster Mitigation grants; dependent on funding and personnel availability.	Protect Life and Property, Public Awareness, Natural Systems
21. Continues to enforce the removal of non-native, invasive vegetation and re-landscaping with fire-resistant native vegetation from the City-approved plant list.	Fire Department	Homeowners, Homeowners' Associations, City's General Fund; no constraints.	Protect Life and Property, Natural Systems, Public Awareness

Ongoing Actions	Responsible Department, Agency or Committee	Potential Funding Source(s); Constraints	Plan Goals Addressed
22. Continues to enhance its emergency services to provide effective wildfire response. Activities included in this effort include the constant training of City's fire response personnel.	Fire Department	City's General Fund, Staff Budget, FEMA's Pre-Disaster Mitigation grants; level of preparedness dependent on funding availability.	Emergency Services, Protect Life and Property
23. Enforces hazard reduction activities, including fuel modification and fuel reduction, to reduce wildfire hazards to existing development in the urban-wildland interface areas.	Fire Department	City's General Fund, FEMA's Pre-Disaster Mitigation grants, homeowners and Homeowners' Associations; no constraints.	Natural Systems, Public Awareness, Protect Life and Property
24. Continues to work with the Irvine Ranch Conservancy to develop long-term vegetation management plans for Middle and Upper Buck Gully.	Fire Department, Irvine Ranch Conservancy, and the Recreation and Senior Services Department	City's General Fund; dependent on funding and personnel availability.	Partnerships and Implementation, Public Awareness, Natural Systems
Windstorm Hazards: To reduce the impact that high winds may have on infrastructure and utilities, the City does the following:			
25. Continues to enforce Chapter 7A of the California Building Code in regard to wind construction.	Community Development Department (Building Division)	Development fees	Protect Life and Property, Public Awareness
26. Trims 13,000 to 14,000 trees annually to help reduce the potential for wind-downed branches and trees that could disrupt overhead utilities.	Southern California Edison and Municipal Operations Department	Edison fund, City's General fund, staff budget; dependent on funding and personnel availability.	Protect Life and Property, Natural Systems

Short-Term Actions (To be Implemented in Next 5 Years)	Responsible Department, Agency or Committee	Potential Funding Source(s); Constraints	Plan Goals Addressed
Multi-Hazards: To prepare for, and be better prepared to respond to a variety of potential natural and man-made hazards, the City of Newport Beach will implement the following activities:			
27. Will coordinate with utility providers to strengthen and/or replace the sections of the water distribution network that have been identified as most vulnerable due to their age or location in areas susceptible to ground failure.	Municipal Operations and Public Works Departments in cooperation with the Irvine Ranch and Mesa Consolidated Water Districts	Utilities user fees, FEMA's Pre-Disaster Mitigation grants; dependent on funding and personnel availability.	Emergency Services, Protect Life and Property, Partnerships and Implementation
28. Will assess the storage capacity of its water facilities to ensure that at all times there are at least seven days worth of emergency potable water that can be tapped into in the event of a disaster.	Municipal Operations and Public Works Departments in cooperation with the Irvine Ranch and Mesa	City's Water Fund, staff budget; importance of this issue requires that it be done	Emergency Services, Protect Life and Property,

Short-Term Actions (To be Implemented in Next 5 Years)	Responsible Department, Agency or Committee	Potential Funding Source(s); Constraints	Plan Goals Addressed
	Consolidated Water Districts	regardless of any potential constraints.	Partnerships and Implementation
29. Will identify and engage organizations in the area that have programs or interests in natural hazards mitigation.	Disaster Mitigation Committee	City's General Fund; FEMA's Pre-Disaster Mitigation grants; dependent on the availability of these programs locally, and their interest in partnering with City.	Partnerships and Implementation, Public Awareness
30. Will identify opportunities to partner with citizens, private contractors, and other jurisdictions to increase availability of equipment and manpower available to respond to a disaster, and to increase the efficiency and efficacy of emergency response efforts.	Disaster Mitigation Committee with support from the Fire, Public Works and Municipal Operations Departments	FEMA's Pre-Disaster Mitigation grants; dependent on funding and personnel availability to regularly update the contact information.	Partnerships and Implementation, Public Awareness
31. Will develop incentives for local agencies, residents and businesses to pursue hazard mitigation projects.	Disaster Mitigation Committee	Staff Budget, City's General Fund, FEMA's Pre-Disaster Mitigation grant; dependent on funding and personnel availability.	Partnerships and Implementation, Public Awareness
32. Will monitor hazard mitigation implementation by City divisions and participating organizations through surveys and other reporting methods.	Disaster Mitigation Committee with assistance from the Public Information Office	Staff Budget, City's Funds; dependent on funding and personnel availability.	Public Participation, Public Awareness, Partnerships and Implementation
Seismic and Geologic (Slope Instability) Hazards: To reduce the impact that seismic events and adverse geologic conditions may have on the community, the City will implement the following actions:			
33. Will support and encourage the seismic retrofitting and strengthening of critical facilities, such as schools, to minimize damage in the event of a seismic or geologic disaster.	Community Development Department (Building Division), in cooperation with the Newport-Mesa Unified School District and other school owners	FEMA's Hazard Mitigation grants, Cal-EMA grants, school-retrofit bonds; dependent on funding availability.	Emergency Services, Protect Life and Property
34. Will upgrade and maintain existing essential facilities that are located in areas susceptible to seismic and geologic hazards to prevent or reduce loss.	Municipal Operations Department with support from the Community Development Department (Building Division) as needed	FEMA's Hazard Mitigation grants, Cal-OES grants; dependent on funding availability.	Emergency Services, Partnerships and Implementation
35. Will maintain and update as necessary a map of landslides and slope failures in the City to identify those areas most susceptible to debris flows, surficial mass wasting events, and landslides, especially	Community Development Department (Planning Division) with support from the IT Division	Staff Budget; dependent on personnel availability.	Public Awareness

Short-Term Actions (To be Implemented in Next 5 Years)	Responsible Department, Agency or Committee	Potential Funding Source(s); Constraints	Plan Goals Addressed
during wet winters.			
Fire Hazards: To reduce the hazard of wildland fires in the City, Newport Beach will conduct the following activities:			
36. Will encourage non-sprinklered property owners to retrofit their buildings to include fire sprinklers.	Community Development Department (Building Division) with support from the Fire Department	Staff Budget.	Public Awareness, Partnerships and Implementation, Protect Life and Property
37. Will improve the fuel management program in Lower Buck Gully. This will include an evaluation of alternatives for removing undesirable vegetation from property beyond homeowner's responsibility areas.	Fire Department, and Municipal Operations Department		Natural Systems, Public Awareness, Public Participation
38. Will revise the Hazard Reduction regulations and procedures for existing canyon neighborhoods in Corona del Mar. These changes will include the development and enforcement of defensible space, changes to the existing City ordinances to better regulate vegetation in canyon properties, and the removal of combustible vegetation and replacement with fire-resistive native plant species from the City's approved plant list.	Fire Department	City's General Fund; no constraints.	Public Awareness, Natural Systems, Public Participation

Long-Term Activities (To be Completed in the Next 10 Years)	Responsible Department, Agency or Committee	Potential Funding Source(s); Constraints	Plan Goals Addressed
Multi-Hazards: To further reduce its vulnerability to a variety of natural and man-made hazards, the City will consider implementing these long-term activities:			
39. Will study the impacts that sea-level rise over the next century may have on the City, and develop potential mitigation measures appropriate for the area.	Public Works Department	City's General Fund, Tidelands Fund	Natural Systems, Public Awareness
40. Provide electronic mapping capabilities by creating a City-supported website that provides City-specific information that residents and local businesses can refer to for decision-making purposes. The site would include site-specific hazards information, potential mitigation measures, list of companies that provide earthquake and flood insurance for Newport Beach residents, and educational materials on disaster preparedness and response.	Emergency Preparedness Committee in cooperation with the Community Development, Public Works, and Municipal Services Departments, and support from the Public Information Office and the IT Division	City's General Fund; no constraints.	Public Awareness, Public Participation
41. Will develop education and outreach programs that focus on protecting the natural systems as a mitigation activity.	Emergency Preparedness Committee with support from the Public Works, Municipal Operations, and Community	City's General Fund	Public Awareness, Natural Systems

Long-Term Activities (To be Completed in the Next 10 Years)	Responsible Department, Agency or Committee	Potential Funding Source(s); Constraints	Plan Goals Addressed
	Development Departments, and the Public Information Office		
42. Expand the City's Local Hazard Mitigation Plan to include man-made hazards (e.g., hazardous materials releases, terrorism, civil unrest, aviation hazards, etc.).	Emergency Preparedness Committee with support from other City departments as needed	FEMA's Pre-Disaster Mitigation grants, Hazard Mitigation Grant Program, City's General Fund; dependent on available funding.	Public Awareness, Emergency Services, Protect Life and Property

Table 4-4: STAPLEE Ranking of Action Items

SHORT DESCRIPTION (Refer to Text in Plan for the Complete Description of Each Action Item)	STAPLEE COMPONENTS																TOTAL	RANK	Responsible Agency (PW = Public Works, CD = Community Development)	
	Social		Technical		Administrative			Political		Legal			Economic			Environmental				
	Acceptance Effect on Segment Population	Feasibility Long-Term Solution	Staffing Funding Allocated	Maintenance	Public Support	Political Support	State Authority	Existing Local Authority	Potential Challenge	Benefit	Cost	Outside Funding	Effects on Environment	Consistent with City Goals						
Strengthen and/or replace vulnerable sections of water distribution system.	3	1	3	1	3	3	-1	3	2	2	3	0	3	-2	0	0	3	27	1	PW
Assess storage capacity of water storage facilities to ensure 7-days worth of emergency potable water.	3	3	3	1	3	3	-1	3	2	0	1	-1	3	-2	0	0	3	24	2	PW
Identify and engage organizations with interest in natural hazard mitigation.	1	3	2	3	1	0	1	0	0	2	1	-1	3	-2	0	1	2	17	3	Fire

SHORT DESCRIPTION (Refer to Text in Plan for the Complete Description of Each Action Item)	STAPLEE COMPONENTS																	TOTAL	RANK	Responsible Agency (PW = Public Works, CD = Community Development)
	Social		Technical		Administrative			Political		Legal			Economic			Environmental				
	Acceptance	Effect on Segment Population	Feasibility	Long-Term Solution	Staffing	Funding Allocated	Maintenance	Public Support	Political Support	State Authority	Existing Local Authority	Potential Challenge	Benefit	Cost	Outside Funding	Effects on Environment	Consistent with City Goals			
Develop incentives to pursue hazard mitigation projects.	1	2	1	3	0	0	1	1	1	1	0	-1	2	-3	0	2	0	11	5	Fire
Identify opportunities to partner with others to increase availability of equipment and manpower available during a disaster.	1	1	2	2	1	1	-2	1	1	1	0	0	3	-1	0	0	1	12	4	Fire
Monitor hazard mitigation implementation.	1	2	1	2	1	0	-3	1	1	2	1	-1	2	-3	1	2	1	11	6	Fire
Develop and conduct hazard awareness programs.	2	2	2	1	1	0	-3	1	1	2	1	0	1	-2	0	0	0	9	7	Fire
Support seismic retrofitting and strengthening of essential facilities like schools and hospital.	1	-1	1	3	0	0	-1	0	0	2	1	0	2	-2	0	0	0	6	1	CD
Upgrade and maintain essential facilities located in vulnerable areas to reduce loss.	1	-1	1	3	0	0	-1	0	0	2	1	0	2	-2	0	0	0	6	1	CD
Maintain and update map of landslides and slope failures.	2	3	3	2	3	0	-2	2	2	2	3	0	2	-1	0	0	0	21	1	CD

SHORT DESCRIPTION (Refer to Text in Plan for the Complete Description of Each Action Item)	STAPLEE COMPONENTS																	TOTAL	RANK	Responsible Agency (PW = Public Works, CD = Community Development)
	Social		Technical		Administrative			Political		Legal			Economic			Environmental				
	Acceptance	Effect on Segment Population	Feasibility	Long-Term Solution	Staffing	Funding Allocated	Maintenance	Public Support	Political Support	State Authority	Existing Local Authority	Potential Challenge	Benefit	Cost	Outside Funding	Effects on Environment	Consistent with City Goals			
Develop a tsunami educational program.	1	2	2	0	1	1	-2	1	1	1	0	0	1	-1	0	0	0	8	1	Fire
	2	3	3	0	1	0	-2	1	2	0	3	0	2	-1	0	0	0	14		CD
Develop vegetation management plans for Middle and Upper Buck Gully.	1	0	3	2	-1	0	-2	0	0	2	1	-2	0	-2	0	0	0	2	4	Fire
Improve fuel management plan for Lower Buck Gully.	1	-3	3	2	1	0	-2	0	0	2	1	-2	0	-2	0	0	0	1	5	Fire
Revise the Hazard Reduction regulations and procedures for canyon neighborhoods in CDM.	1	-3	3	2	1	0	-2	0	0	2	1	-2	0	-2	0	0	0	1	6	Fire
Evaluate the relocation of existing fire stations and need for additional fire stations.	0	1	2	1	1	1	-2	-1	1	0	1	-2	2	-3	0	0	1	3	2	Fire
	0	3	3	3	0	0	1	0	0	0	2	0	2	-2	0	0	0	12		CD
Encourage non-sprinklered property owners to retrofit their buildings.	0	-3	3	2	1	0	1	0	0	1	0	0	0	-3	0	0	0	2	3	Fire
	0	-1	3	3	3	0	-2	-1	0	3	3	-1	2	-2	0	0	0	10		CD
Develop educational program for HOAs and residents near Fuel	2	3	3	2	0	0	-1	0	0	1	0	0	0	-2	1	3	3	15	1	Fire

Table 4-5: Project Evaluation Worksheet for Individual Projects

Jurisdiction:		Contact:	
Project Title		Phone:	
Agency:		E-mail:	
Hazard(s):			
Flood Zone:		Base Flood Elevation:	Erosion Rate:
Critical Facility/Population At Risk:			
Environmental Impact:		Historic Preservation Impact:	
High	Medium	Low	High Medium Low
Importance to Protection of Life/Property and Disaster Recovery		Risk of Hazard Impact:	
High	Medium	Low	High Medium Low
Estimated Cost:		Project Duration:	
Value of Facility:		Value of Contents:	
Source(s) of Financing:			
Project Objectives:			
Project Description:			
Proposal Date:			
Evaluation Category	Considerations		Comments
Social	Community Acceptance		
	Adversely Affects Segments of the Population		
Technical	Technical Feasibility		
	Long Term Solution		
	Secondary Impacts		
Administrative	Staffing		
	Funding Allocated		
	Maintenance / Operations		
Political	Political Support		
	Plan Proponent		
	Public Support		
Legal	Authority		
	Action Subject to Legal Challenge		
Economic	Benefit		
	Cost of Action		
	Contributes to Economic Goals		
	Outside Funding Required		
Environmental	Affects Land / Water Bodies		
	Affects Endangered Species		
	Affects Hazardous Materials and Waste Sites		
	Consistent with Community Environmental Goals		
	Consistent with Federal Laws		