

# Mission Viejo Local Hazard Mitigation Plan Update

C.E.P.A. Member Presentation

April 13, 2023



Lake Mission Viejo. (2022, March 20). In Wikipedia. [https://en.wikipedia.org/wiki/Lake\\_Mission\\_Viejo](https://en.wikipedia.org/wiki/Lake_Mission_Viejo)

# Meeting Outcomes

Provide and Overview of Mission Viejo's LHMP Update Process

Share Mission Viejos's Hazards of Concern

Share Mission Viejo's Potential Mitigation Strategies

Enlist Feedback from CEPA Members

# Who is this Plan For?

## Emergency Management Staff

- Pursue Grants
- Reduce future hazard risks

## City Departments

- Increase funding for project and programs

## Stakeholders

- Opportunities to partner with the City
- Opportunities to leverage federal grants for community benefit

## Residents, CEPA Members, and Businesses

- Reduce future hazard risks
- Improved quality of life

# What is Hazard Mitigation?



Sustained actions taken to reduce or eliminate long-term risk to life and property from hazards



Actions that make the community less vulnerable to natural hazards before disasters strike



Communities reduce their vulnerability through the development of a Local Hazard Mitigation Plan (LHMP)

# WHY PREPARE AN LHMP?



Reduces injury, loss of life, property damage, and loss of services from natural disasters.

## **AB 2140 Compliance**

Eligibility for FEMA Grants:

*Building Resilient Infrastructure and Communities (BRIC)\**

*Flood Mitigation Assistance (FMA)*

*Hazard Mitigation Grant Program (HMGP)*

\* Replaces the Pre-Disaster Mitigation (PDM) Grant Program

# Fitting the pieces together



# Review of Hazard Prioritization Table

## Plan Organization

Earthquake/Geologic Hazards  
(Seismic Shaking, Liquefaction)

Severe Weather (Windstorm,  
Extreme Heat, Winter/Coastal  
Storms)

Wildfire

Landslide (Earth Movement)

Flooding (Including Dam  
Inundation)

HAZARD RANKING WORKSHEET - City of Mission Viejo 2023 LHMP					
Hazard Type	Probability	Impact			Hazard Planning Consideration
		Location	Primary Impact	Secondary Impacts	
Severe Weather (Windstorm)	Highly Likely	Extensive	Severe	Limited	<b>High</b>
Earthquake	Likely	Extensive	Severe	High	<b>High</b>
Winter/ Coastal Storms	Highly Likely	Significant	Moderate	Limited	<b>Medium</b>
Wildfire	Highly Likely	Limited	Severe	Moderate	<b>Medium</b>
Severe Weather (Extreme Heat)	Highly Likely	Extensive	Weak	Negligible	<b>Medium</b>
Landslide (Earth Movement)	Highly Likely	Negligible	Severe	Limited	<b>Medium</b>
Flooding (Includes Dam Inundation)	Occasional	Limited	Moderate	Limited	<b>Medium</b>

\* Climate Change considerations discussed as appropriate within this hazard.

# Severe Weather

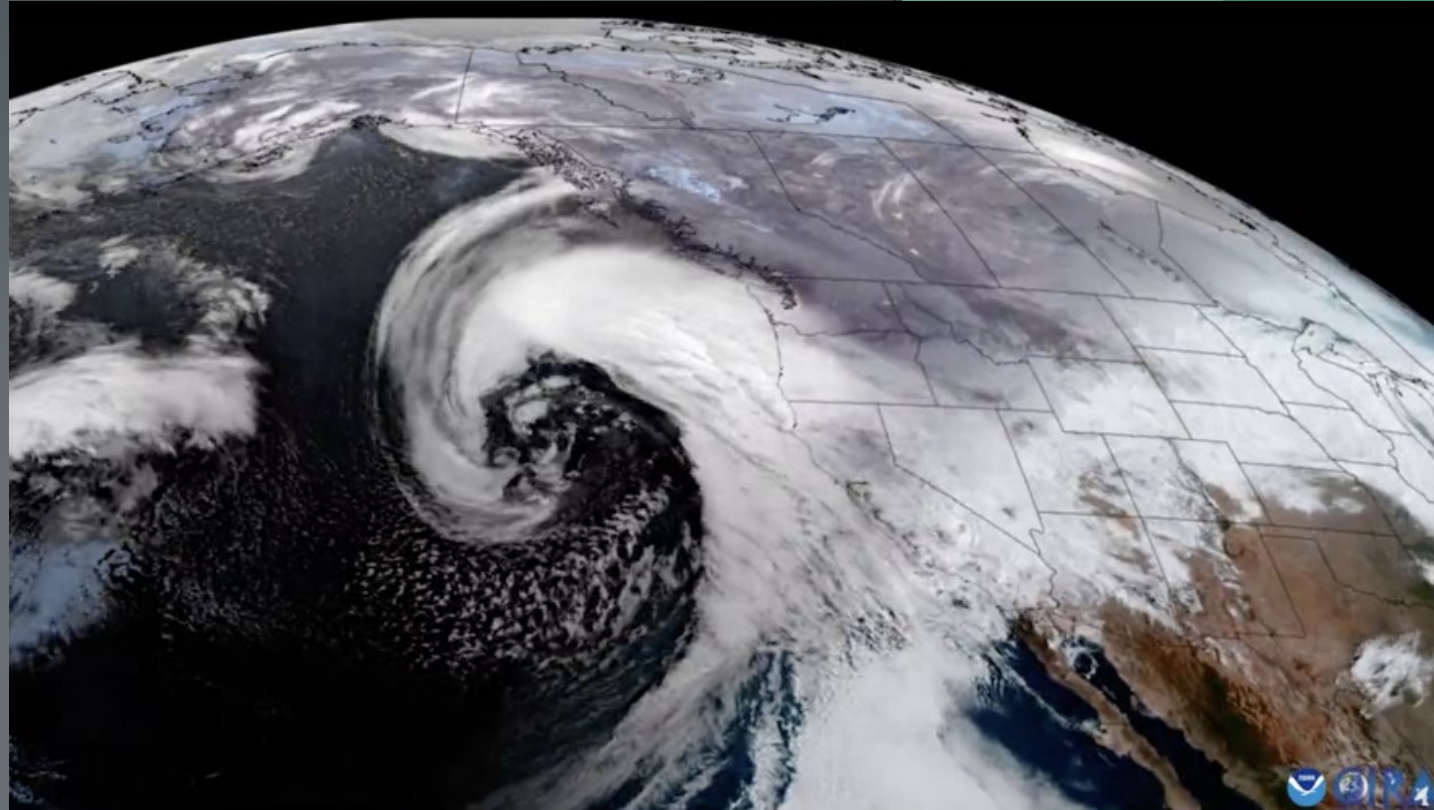
## Winter/Coastal Storms

**Winter/Coastal Storm** - Coastal storms happen when different meteorological conditions converge. Coastal storms are organized systems that have unique characteristics, but each type can turn deadly due to their hazardous consequences — sustained destructive winds, heavy rainfall, storm surge, coastal flooding, and erosion.

Winter/Coastal Storm events will continue in the future and are expected to change as a result of climate change.

### Recent Events

- December 2021, major storm brought intense rainfall, flash flooding, and high winds to the city, and Orange County.
- December 2022, massive winter storms impact southern California causing flash flooding and damage throughout Orange County.
- January 2023, another winter storm in a series of major storms impacts all of southern California and Orange County.

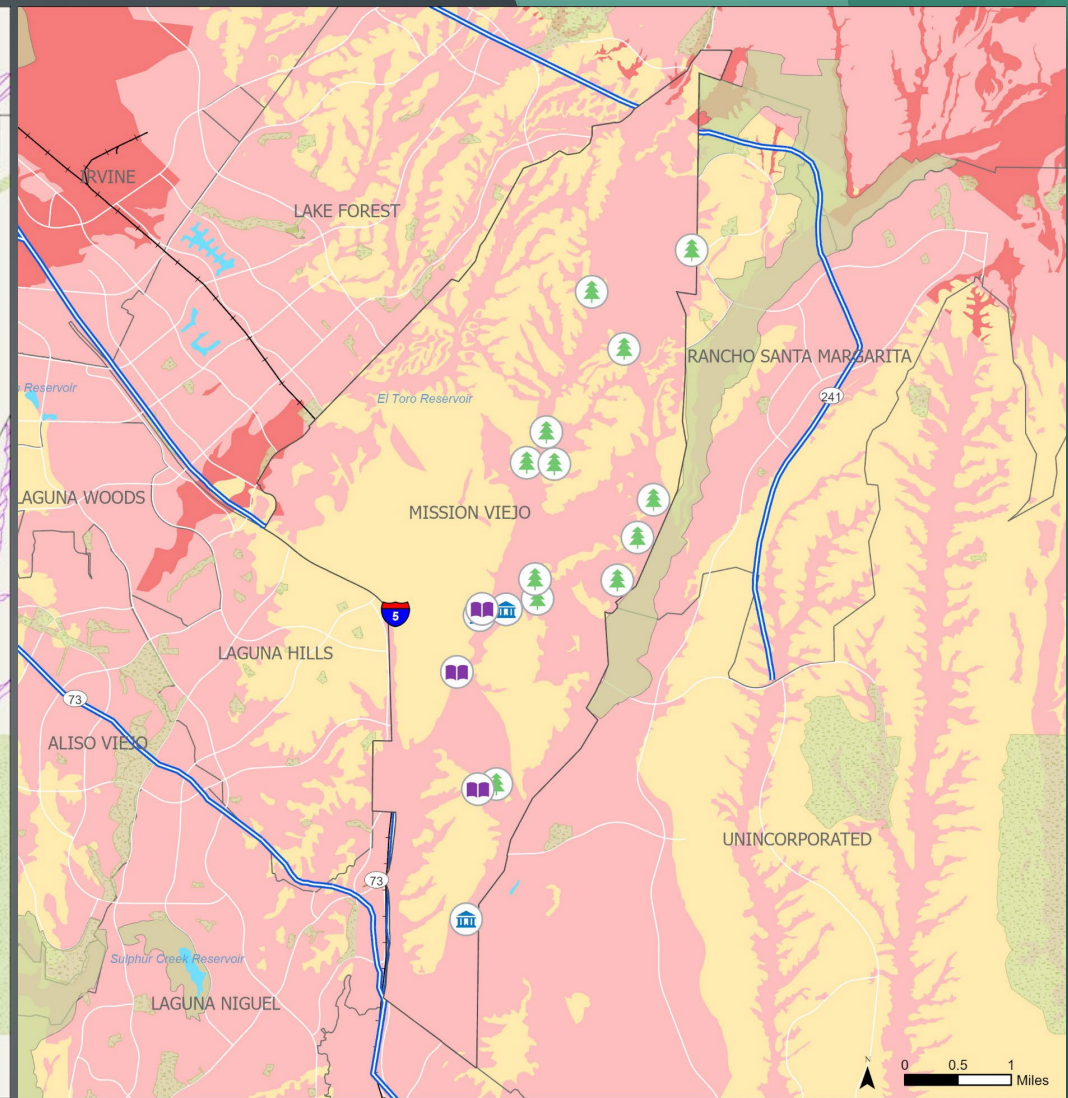
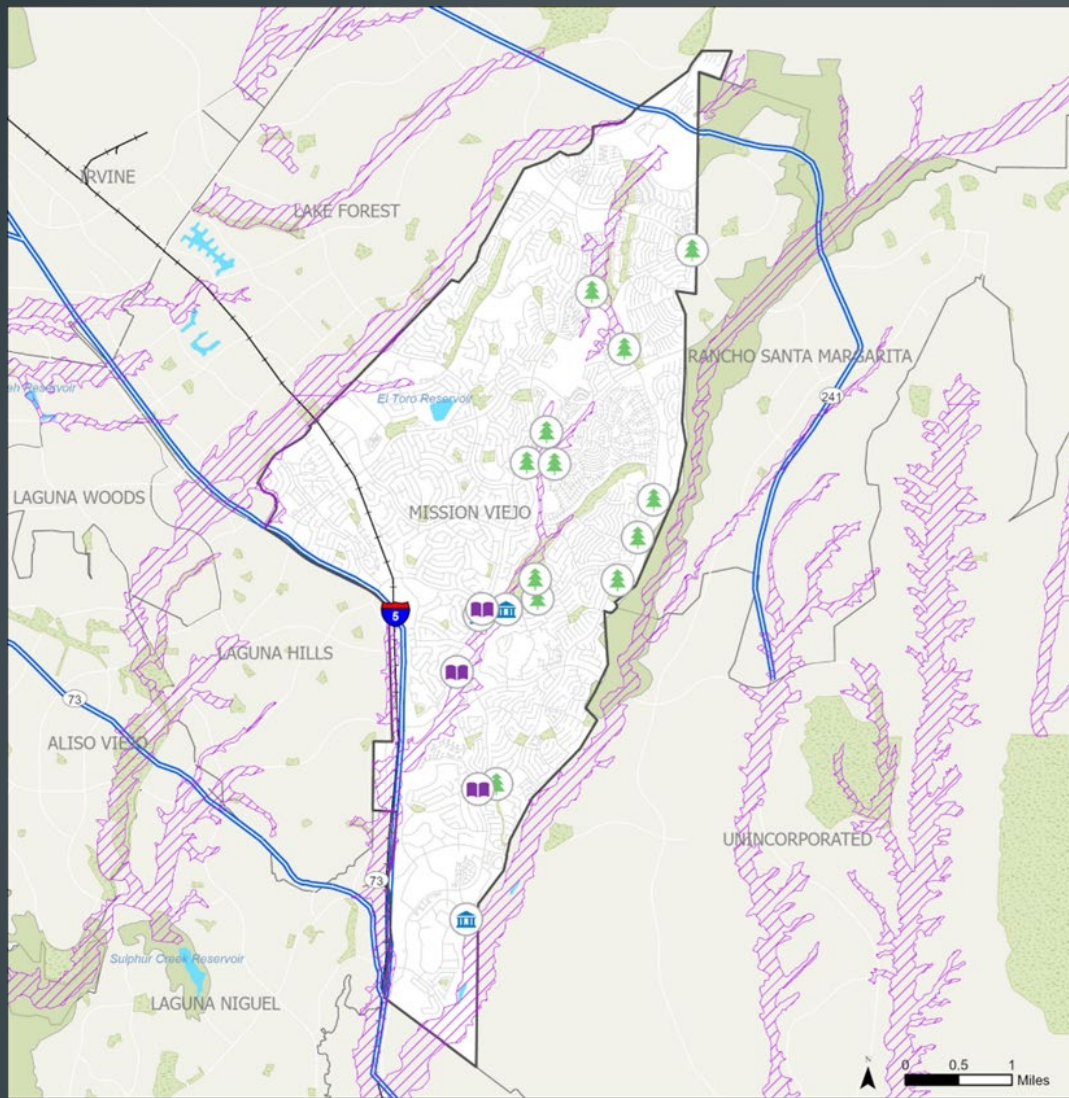










**Winter/Coastal Storms are a city-wide hazard and does not necessarily affect one area of the city more than another.**

**Vulnerable populations, however, may experience greater hardship in mitigating the effects of winter storms.**













# Seismic Hazards



-  City Boundary
-  Parks
-  Water Bodies
-  Rail
-  City Facility (City Hall, Fire, Police)
-  Community Center
-  Parks
-  Liquefaction Potential

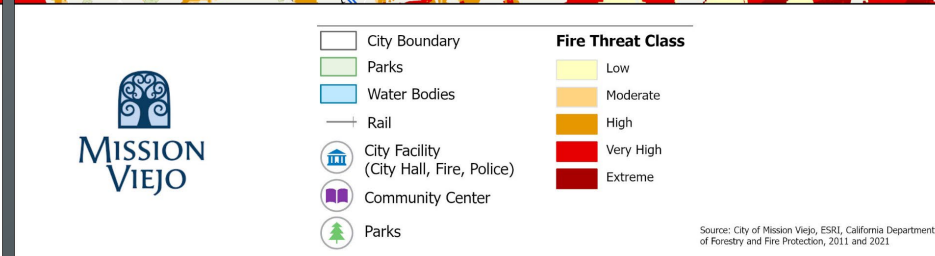
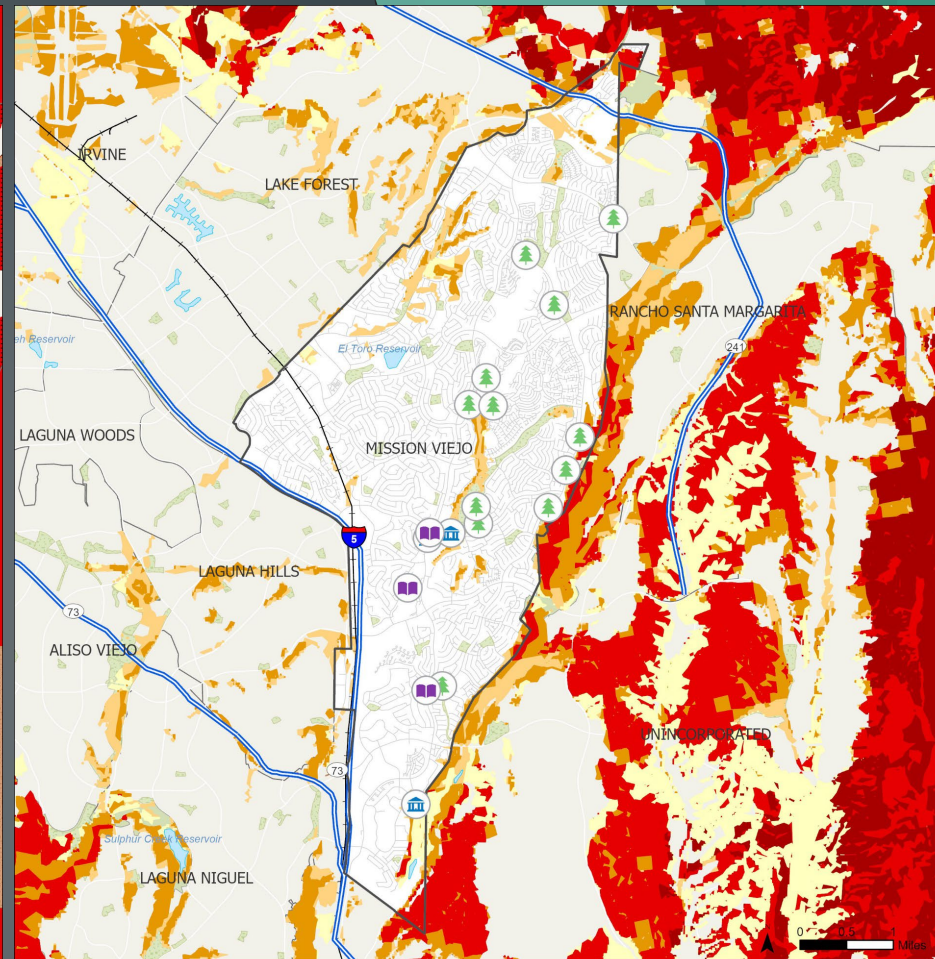
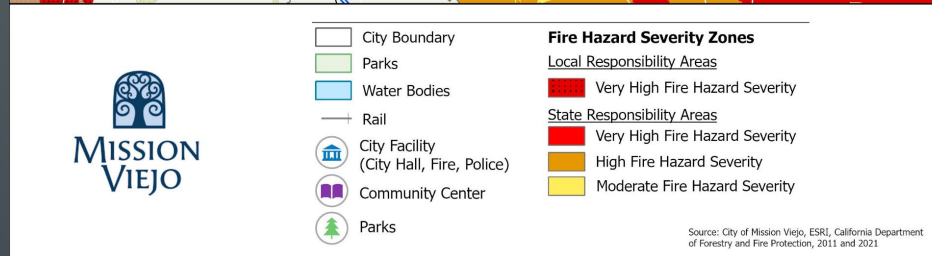
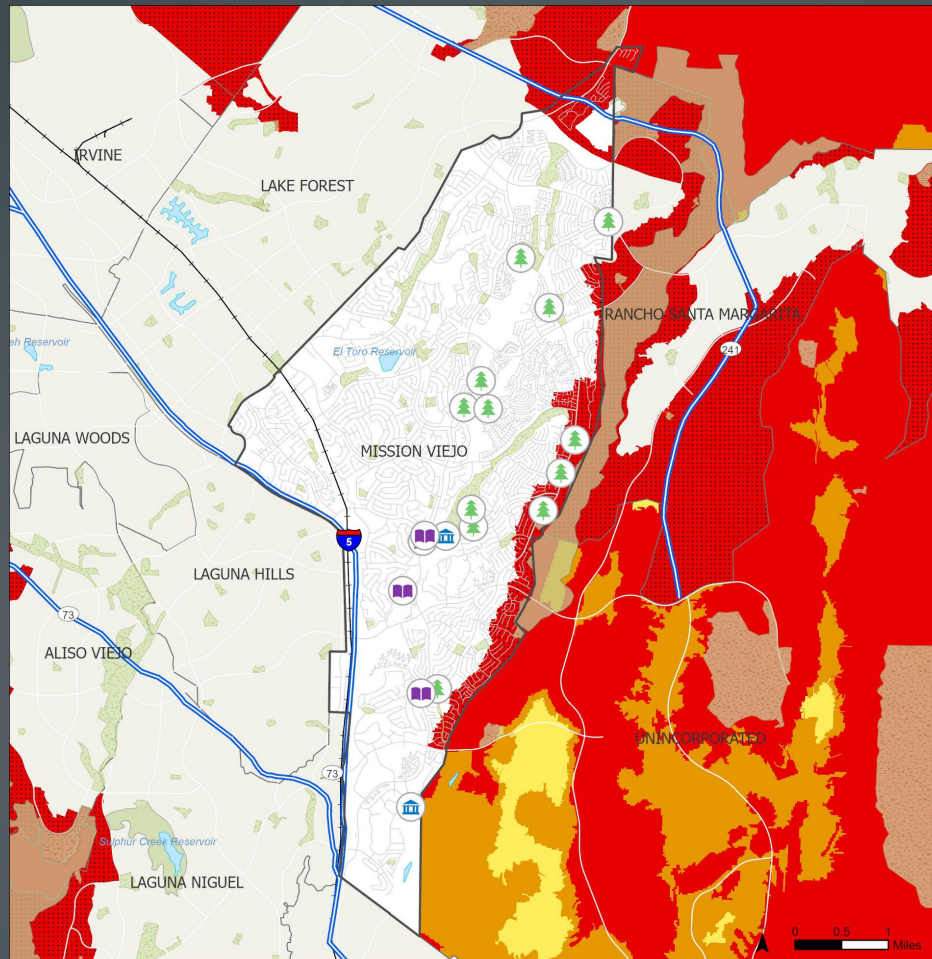
Source: City of Mission Viejo, ESRI, California Department of Conservation, California Geological Survey



-  City Boundary
  -  Parks
  -  Water Bodies
  -  Rail
  -  City Facility (City Hall, Fire, Police)
  -  Community Center
  -  Parks
- Seismic Shake Potential (2% at 50 years)
-  0.25 - 0.55
  -  0.551 - 0.65
  -  0.651 - 2.15

Source: City of Mission Viejo, ESRI, California Department of Conservation

# Wildfire



## Fire Threat Zones, Very High Fire Hazard Severity Zones within the City

- Local Responsibility Area (LRA) –City of Mission Viejo (OCFA)
- State Responsibility Area (SRA) – OCFA

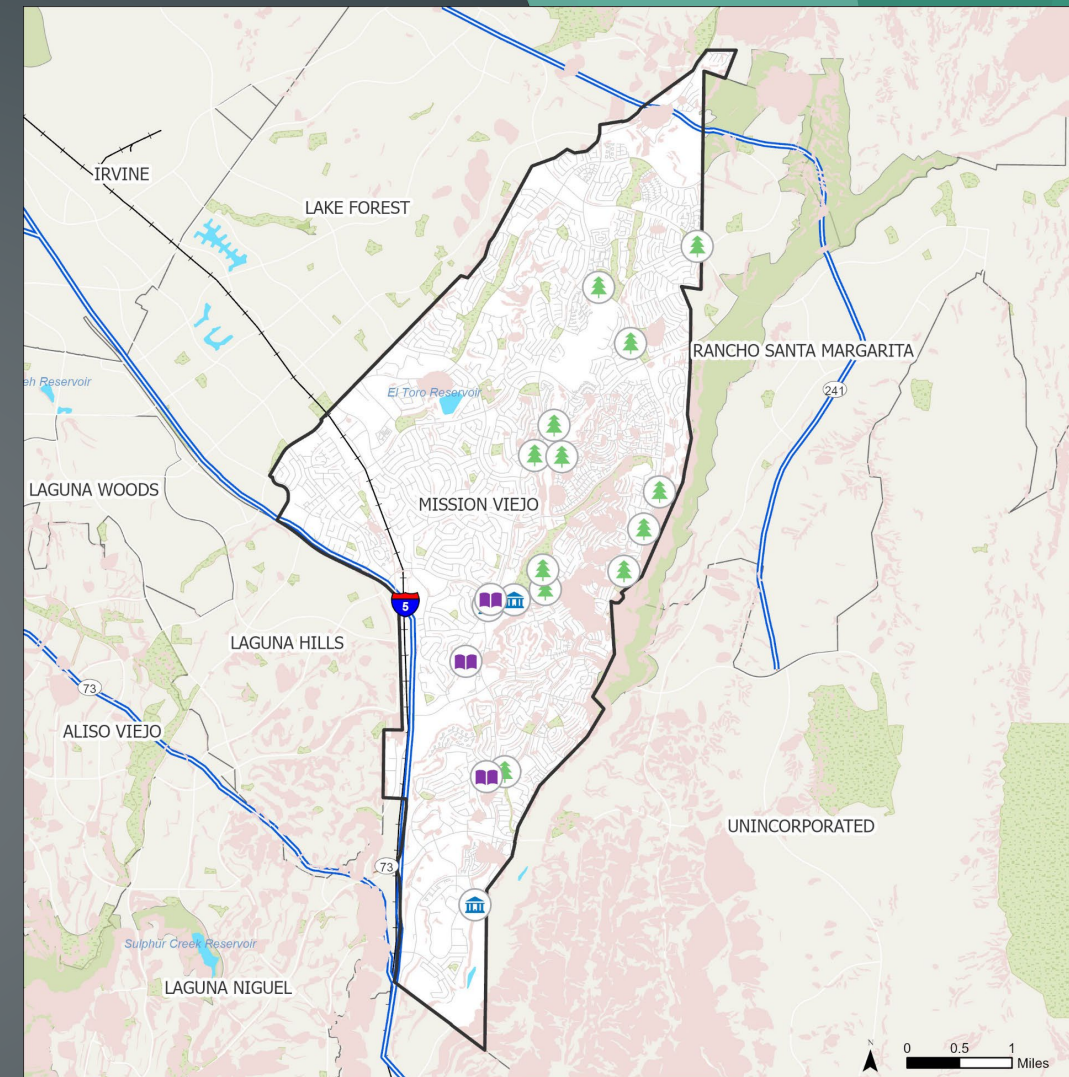
# Landslide/Earth Movement Hazards

Masses of earth whose center of gravity has moved outward and downward. Can destroy homes, businesses, and more importantly can injure and kill people caught in the shifting earth. Areas of concern are generally found in locations with steep slopes within the City.

## Recent Events

**1998/99** - slope failure along the Mojave Slope/Open Space area in the City. No structures were damaged.

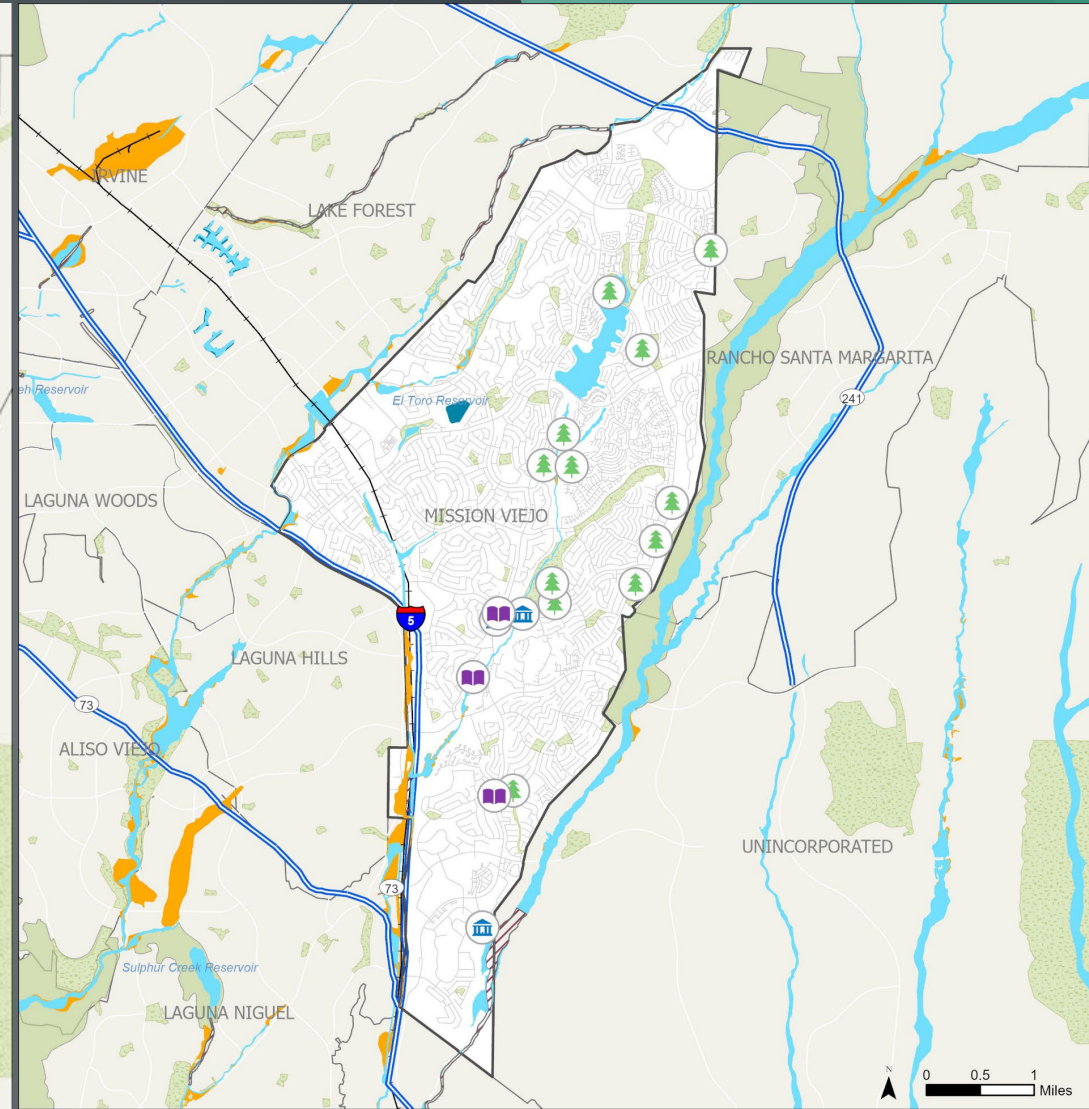
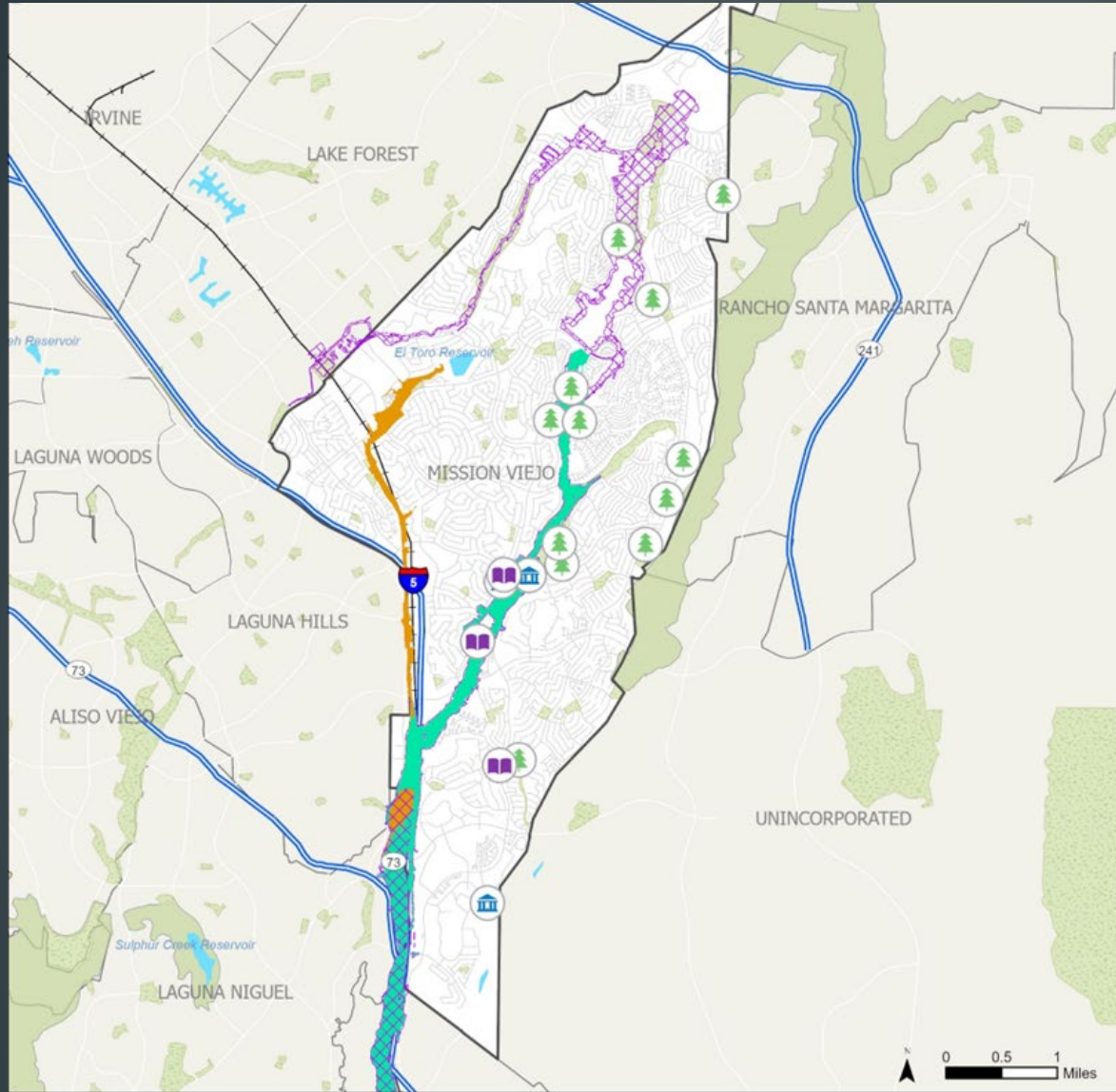
**2005** - large residential landslide between Ferrocarril and Encorvado Lane. Landslide consisted of an approximate 300 foot wide by 70-foot-high slope failure that occurred during winter storms.



- |  |                |
|--|----------------|
| City Boundary                              | Landslide Zone |
| Parks                                      |                |
| Water Bodies                               |                |
| Rail                                       |                |
| City Facility<br>(City Hall, Fire, Police) |                |
| Community Center                           |                |
| Parks                                      |                |

Source: City of Mission Viejo, ESRI, California Department of Conservation, California Geological Survey

# Flooding and Dam Inundation



- |   |                                    |
|---|------------------------------------|
| City Boundary                           | <b>Dam Breach Inundation Areas</b> |
| Parks                                   | Upper Oso                          |
| Water Bodies                            | El Toro Reservoir                  |
| Rail                                    | Lake Mission Viejo                 |
| City Facility (City Hall, Fire, Police) |                                    |
| Community Center                        |                                    |



- |   |                                    |
|---|------------------------------------|
| City Boundary                           | <b>Flood Hazard Zones</b>          |
| Parks                                   | 1% Annual Chance of Flood Hazard   |
| Water Bodies                            | 0.2% Annual Chance of Flood Hazard |
| Rail                                    | Floodway                           |
| City Facility (City Hall, Fire, Police) |                                    |
| Community Center                        |                                    |
| Parks                                   |                                    |

# Potential Types of Mitigation Actions

## Plans and Regulations

- Ordinances
- Regulations
- Guidelines

## Structural Projects

- Infrastructure improvements
- Utility relocation
- Structural Retrofits

## Natural Systems Protection

- Stream restoration
- Erosion control

## Education Programs

- Outreach materials
- Websites
- Presentations
- Trainings

## Preparedness and Response Actions

- Mutual aid agreements
- Equipment purchases
- Notification protocols

# High Priority Mitigation Actions in the 2023 Update

## Emergency Preparedness Activities

- Conduct regular emergency preparedness drills and training exercises for City Staff, including all hazards training at CSTI.
- Maintain at least one emergency power-generating station in all critical facilities that the City could use as an emergency public assembly area, such as City Hall, Community Centers, and any other locations designated in the future.
- Increase number of City staff who have CalOES Safety Assessment Program (SAP) credentials.

# High Priority Mitigation Actions in the 2023 Update

## Multiple Hazards

- Install and harden emergency backup power at critical facilities deemed necessary. Prioritize installations for facilities that serve as key cooling/warming centers, and evacuation centers.

(Hazards addressed: All)

## Wildfire

- Conduct regular fuel modification projects to reduce fire hazard risks, such as clearing out dead vegetation in parks, open spaces, right-of-way embankments, and areas adjacent to the wildland-urban interface.

# How Can You Get Involved?

**Check Out  
the LHMP  
Webpage**

## **Comment on the Draft Plan**

- Expected to be released in Spring/Summer 2023



**Online Survey**

<https://cityofmissionviejo.org/departments/city-manager/local-hazard-mitigation-plan>



# C.E.P.A. Member Feedback

Questions about the LHMP Planning Process



Questions about the Hazards of Concern?



Thoughts on Potential Mitigation Strategies



Other Suggestions or Comments

# Questions?

Paul Catsimanes

[Pcatsimanes@cityofmissionviejo.org](mailto:Pcatsimanes@cityofmissionviejo.org)

949-246-7014

Aaron Pfannenstiel, AICP

[aaron@atlasplanning.org](mailto:aaron@atlasplanning.org)

951-444-9379

