

CITY OF PALO ALTO

HAZARD MITIGATION PLAN

PROGRESS REPORT

Reporting Period

The reporting period for this progress report is 07-01-2022 through 10-01-2023.

Background

This is an annual update of the City of Palo Alto Local Hazard Mitigation Plan. This update also meets annual certification requirements for Palo Alto's floodplain management and Community Rating System (CRS) program.

The City of Palo Alto, as part of the Santa Clara County multijurisdictional planning process (including participating local cities and special districts), developed a hazard mitigation plan in 2017 to reduce risk from all hazards by identifying resources, information, and strategies for risk reduction. The Federal Disaster Mitigation Act of 2000 requires state and local governments to develop hazard mitigation plans as a condition for federal disaster grant assistance. To prepare the plan, the participating planning partners organized resources, assessed risks from natural hazards, developed planning goals and objectives, reviewed mitigation alternatives, and developed an action plan to address probable impacts from natural hazards. By completing this process, these jurisdictions maintained compliance with the Disaster Mitigation Act, achieving eligibility for mitigation grant funding opportunities afforded under the Robert T. Stafford Act. Volume I of the County plan provides the analysis of natural hazards for the Operational Area. It provides the content that informs the Palo Alto LHMP. Volume 1 can be viewed on-line at

<https://emergencymanagement.sccgov.org/sites/g/files/exjcpb261/files/For%20Partners/Local-Hazard-Mitigation-Plan-LHMP-Vol-1.pdf>.

The Palo Alto LHMP, which articulates our local natural hazards and mitigation activities can be viewed online at

<https://www.cityofpaloalto.org/Departments/Emergency-Services/Plans-and-Information/Local-Hazard-Mitigation-Plan>

Purpose

The purpose of this information report is to provide an update on the implementation of the mitigation initiatives identified in the *Santa Clara County Operational Area Hazard Mitigation Plan, 2017*. The

objective is to ensure that there is a continuing planning process that will keep the Santa Clara County Operational Area Hazard Mitigation Plan dynamic and responsive to the needs and capabilities of the City of Palo Alto and its stakeholders.

Summary Overview of the Plan’s Progress

The performance period for the Santa Clara County Operational Area Hazard Mitigation Plan became effective on 12-19-2017, with the final approval of the plan by FEMA. The initial performance period for this plan is 5 years. As of this reporting period, the performance period for this plan is considered to be 47% complete (including complete and ongoing projects). The Palo Alto portion of the Santa Clara County Operational Area Hazard Mitigation Plan has targeted 38 hazard mitigation actions to be pursued during the 5-year performance period. As of the reporting period, the following overall progress can be reported:

- 11 out of 38 initiatives (29%) have been completed.
- 11 out of 38 initiatives (29%) indicated work is conducted as an ongoing capability.
- 11 out of 38 initiatives (29%) reported progress toward completion.
- 5 out of 38 initiatives (16%) reported no progress.

Review of the Action Plan

Table 2 reviews the action plan, reporting the status of each initiative.

TABLE 2 ACTION PLAN MATRIX				
Action Taken?	Timeline	Priority Changed?	Comment (Describe progress or changed priority)	Status
City of Palo Alto				
PA-1 - Develop a comprehensive flood control plan for San Francisquito Creek to minimize the risk of flooding.				
Yes	Long Term (5+yrs.)	No	San Francisquito Creek Lower Reach Flood Reduction and Ecosystem Restoration Project. San Francisquito Creek East of Highway 101 project was completed in December 2018. As a result, the creek can contain flows greater than 9,600 CFS.	Completed
PA-2 - San Francisquito Creek Upper Reach Flood Reduction and Ecosystem Restoration Project. Replacing the Existing Pope/Chaucer Street Bridge and widen the creek at 5 locations to allow 7,500 CFS to pass (approximately the 70-year storm event).				
Yes	Long Term (5+yrs.)	No	JPA and their consultant are evaluating capacity of the creek in light of the NYE 2022 storm event. Analysis	In Progress

			will determine if the current design criterion is applicable or if additional changes are needed for the Chaucer bridge and creek widening design project.	
PA-3 - Newell Road Bridge Replacement Project to increase the flows that pass under the bridge from 6,600 CFS to 7,500 CFS.				
Yes	Short Term (<5yrs.)	No	The project design has been completed. ROW acquisition is under way to secure Temporary Construction Easement. Negotiation with the owners will be required and soon to be completed early in 2024. Approval for funding is still outstanding. Construction to be scheduled to start Spring of 2024.	In Progress
PA-4 - San Francisquito Creek Upper Reach Flood Reduction and Ecosystem Restoration Project. The purpose of the project is to detain excess runoff generated from storms that exceed 70-year storm event.				
Yes	Short Term (<5yrs.)	No	Staff from SFCJPA and their consultant are working with Stanford representatives on the sediment transport analysis that the regulatory agencies required. This will be part of the Reach 2 submittal. This project has been delayed or temporary on hold until PA-2 is resolved.	In Progress
PA-5 - Matadero Creek Storm Water Pump Station Improvements.				
Yes	Short Term (<5yrs.)	No	Project is completed.	Completed
PA-6 - Storm Drain System Replacement and Rehabilitation				
Yes	Long Term (5+yrs)	No	The damaged pipes have been replaced with HDPE pipes. The 2022 storm drain rehabilitation project have been completed in fall 2022. Staff continues to monitor the conditions of the pipes and minor repairs are done in house. Staff monitors hot spots that cannot be repaired in house and will be completed at a later date when funding will be available.	Ongoing Capability
PA-7 - Recycled Water Pipeline Expansion Project to expand the recycled water purple pipeline within South Palo Alto towards Stanford Research Park				
Yes	Long Term (5+yrs.)	No	These projects and other alternative water supply projects will be considered as part of the "One Water" planning process. https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/agendas-minutes/utilities-advisory-	In Progress

			<p>commission/archived-agenda-and-minutes/agendas-and-minutes-2021/07-07-2021-special/id-12332-item-1.pdf.</p> <p>The One Water plan is expected to be completed by early 2024, which will propose alternatives for water supply and conservation.</p>	
PA-8 - Continue to maintain good standing and compliance in the NFIP and maintain the Community Rating System Class to provide higher CRS premium discounts.				
Yes	Short Term (<5yrs.)	No	<p>The City had a CRS cycle visit on November 6, 2023. City staff received comments from the CRS specialist which they will address and return to the CRS specialist for further review. FEMA will finalize the final CRS rating before summer of 2024. Staff anticipates maintaining a rating of 6 to provide 20% savings on flood insurance rates.</p>	Ongoing Capability
PA-9 - Complete the Strategy to Advance Flood protection, Ecosystems and Recreation (SAFER) San Francisco Bay Draft Feasibility Report to identify potential strategies for sea level rise adaptation flood protection and other benefits.				
Yes	Long Term (5+yrs.)	No	<p>San Francisquito Creek Joint Powers Authority released a Public Draft Feasibility Report in June 2019. http://sfcjpa.org/wp-content/uploads/2019/08/SAFER-Bay-Palo-Alto-Public-Draft-Feasibility-Report-June-2019.pdf</p>	Completed
PA-10 - Construct new Public Safety Building to mitigate current risks to public safety essential services				
Yes	Long Term (5+yrs.)	No	<p>The public safety building exterior is complete, with interior construction occurring now. Anticipated move in date is Spring of 2024.</p>	In Progress
PA-11 - Rebuild Fire Stations 3 and 4 to mitigate current risks to essential services				
Yes	Short Term (<5yrs.)	No	<p>Fire Station 3 is complete. A design contract for Fire Station 4 was awarded in May 2022. Design of the new station is underway with construction expected to begin in spring 2024.</p>	In Progress
PA-12 - Continue seven-year cycle for high priority tree trimming to reduce impacts of falling branches and other tree related damages to public and personal property.				
Yes	Long Term (5+yrs.)	No	<p>A new contract was started in October 2021 and will continue until October 2024. The contract scope is</p>	Ongoing Capability

			based on maintaining a minimum of the seven-year cycle of pruning for public trees.	
PA-13 - Replace the Baylands Tide Gate				
Yes	Long Term (5+yrs.)	No	Due to funding limitations the original project was modified to only include the structural integrity of the tide gate for seismic events. The structural modification is scheduled to be completed in calendar year 2025.	In Progress
PA-14 - Consider the use of alternative energy sources for critical infrastructure (essential facilities, key resources)				
Yes	Long Term (5+yrs.)	No	The City began development of a Reliability and Resiliency Strategic Plan to study the reliability and resiliency needs of an electrified community and develop programs to facility community resiliency. In September, Staff discussed the scope of the study with the Utilities Advisory Commission. Two components of the study are expected to be completed by the end of 2023, but aspects related to home and neighborhood resiliency and efficient electrification will extend into 2024.	Ongoing Capability
PA-15 - Implement Wastewater Long-Range Facilities Plan				
Yes	Other, please specify	No	Palo Alto continues to move forward with upgrading the Wastewater Treatment Plant; 80 percent complete with rehabilitating existing primary sedimentation tanks and started the construction of updating the secondary treatment project to remove nutrients. 100% design complete of the Salt Removal Facility to improved existing recycled water. Palo Alto in the next year plans on updating the Long Range Facilities Plan and conducting the preliminary design of the new headworks.	Ongoing Capability
PA-16 - Conduct a feasibility analysis concerning the continued use of water reservoirs in the Foothills region.				
Yes	Short Term (<5yrs.)	No	Staff determined there will be no change layout of Foothills water system facilities. Park and Dahl Reservoirs will be repaired and retrofitted (in FY '23 and '26). Despite low water demand in foothills, Foothills water reservoirs cannot be removed due to requirements for emergency water storage for firefighting operations. The repair and retrofit of these	Completed

			two tanks can be identified as new projects in the upcoming LHMP update.	
PA-17 - Consider construction of a new water reservoir in the low lying areas of Palo Alto.				
Yes	Short Term (<5yrs.)	No	With the decision in PA-16 to repair/retrofit the Park and Dahl Reservoirs, staff will not move forward plans to build a new reservoir on Palo Alto's valley floor.	Completed
PA-18 - Rebuild and Reconfigure Electric System in Stanford Hospital/Mall Area to increase reliability during emergencies				
Yes	Short Term (<5yrs.)	No	This project is complete. New substructure was installed and some circuits were rerouted.	Completed
PA-19 - Install Fiber Optic Service to Montebello Reservoir to improve public safety communications along Skyline Drive				
Yes	Short Term (<5yrs.)	No	Electrical undergrounding is proceeding through the project area, with work completed on Arastradero Road, and work is continuing along Arastradero Creek Trail. Completion of this project will occur in 1-2 years.	In Progress
PA-20 - Convert overhead utility lines to underground transmission. Installation of new underground electric, communication, and cable television systems in Electric Underground Districts 46 and 47				
Yes	Short Term (<5yrs.)	No	District 46 & 47 is completed.	Completed
PA-21 - Construct a second electrical transmission interconnection to PG&E using a new corridor.				
Yes	Long Term (5+yrs.)	No	Stanford and SLAC decided against participating in establishing a new intertie with Palo Alto. Palo Alto Utilities is pursuing a new option and has contracted with a consultant to obtain the California Independent System Operator's (CAISO) approval for a transmission project to construct a 115kV circuit from Palo Alto Adobe Creek Substation to PG&E Ames Substation.	In Progress
PA-22 - Construct a second water interconnection from Palo Alto Utilities to Stanford Hospital				
Yes	Short Term (<5yrs.)	No	The intertie is in place and can be used if needed; staff is working to determine how to finalize the agreement for its use.	In Progress

PA-23 - Connect Palo Alto to adjacent Public Safety agencies' Public Safety Answering Points (PSAPs) by Fiber				
Yes	Long Term (5+yrs.)	No	This project is on hold while the construction of the new Public Safety Building is underway; the feasibility of this project is being reassessed.	No Progress
PA-24 - Implement a Public Safety Wireless Data Network				
Yes	Long Term (5+yrs.)	No	This project is on hold while the City initiates the first pilot phase of the Fiber to the Home project. As this project advances, additional capabilities may be developed.	No Progress
PA-25 - Conduct a Hydrology Study on Buck-Eye Creek for flood protection and erosion control at Foothills Park				
Yes	Short Term (<5yrs.)	No	The study was completed and sent to the Palo Alto City Council on May 29, 2018. Here is the link to the study and the Council staff report: https://www.cityofpaloalto.org/civicax/filebank/documents/65118	Completed
PA-26 - Develop a Baylands Comprehensive Conservation Plan				
Yes	Short Term (<5yrs.)	No	Staff received new recommendations received from Commissioners and stakeholders which staff must adjudicate. Additionally current staff availability is insufficient to make progress on the plan so it is temporarily on hold while staff shortfalls are filled.	No Progress
PA-27 - Address hazardous fuels and reduce structural ignitability in the Foothills region in accordance with the Community Wildfire Protection Plan and Foothills Fire Management Plan				
Yes	Other, please specify	No	In 2023 Palo Alto performed the required wildfire mitigation activities in Foothills and Arastradero Nature Preserves in accordance with the FFMP. Additionally, the Public Works Department Urban Forestry Division contracted for electrical line clearance of the above ground lines in the Foothills. The Palo Alto Fire Department conducted their annual defensible space home assessments for the residential properties in the Palo Alto WUI. They have implemented new management controls to mitigate residences not in compliance with their recommended actions.	Ongoing Capability
PA-28 - Encourage creation by Foothills Residents of a Firewise Ready Community				

Yes	Short Term (<5yrs.)	No	No Change: OES conducted a neighborhood meeting of the Laurel Glen neighbors with PAFD, PAPD, CSD Open Space Rangers and the Santa Clara County Fire Safe Council in June 2023 in which we encouraged the formation of a Firewise Community.	In Progress
PA-29 - Consider a policy for Seismic Retrofitting of earthquake prone structures				
Yes	Short Term (<5yrs.)	No	In 2016, the City contracted a study of building types with a high seismic risk within Palo Alto. Following this study, the City Council was to direct the staff to develop policy recommendations to renovate these structures. This item is now on the work plan for 2024 to build on the work done during the previous SRMAG process.	No Progress
PA-30 - Develop a Policy for Sea-Level Rise considerations (what actions should the City take)				
Yes	Short Term (<5yrs.)	No	The City of Palo Alto City Council adopted a Sea Level rise policy on 18 March 2019. https://www.cityofpaloalto.org/civicax/filebank/blobdload.aspx?t=71340.78&BlobID=70115	Completed
PA-31 - Develop a post-disaster Community Long-term Recovery Plan				
Yes	Short Term (<5yrs.)	No	There is no change to the status of this activity. The ability to develop this plan is reliant on a multi-departmental effort which cannot be supported with current staffing levels.	No Progress
PA-32 - Conduct public education that raises awareness of Palo Alto threats and hazards and improves community resilience				
Yes	Other, please specify	No	Public Safety departments continue community outreach to raise awareness, lower personal risks, and increase preparedness through public education classes, social media posting, and attendance at community events.	Ongoing Capability
PA-33 - Maintain Storm Ready Community designation				
Yes	Other, please specify	No	OES maintains this certification through annual activities and requirements set by the Storm Ready program. See https://www.weather.gov/stormready/ca-sr	Ongoing Capability

PA-34 - Improve Palo Alto Fire Department ISO rating				
Yes	Short Term (<5yrs.)	No	The Fire Department is pursuing an improved ISO rating; the PAFD has a rating of 2 but is pursuing a corrective action plan to attain a rating of 1.	Ongoing Capability
PA-35 - Maintain Building Effectiveness Grading Schedule classification of 1				
Yes	Other, please specify	No	There is no change to the ISO BCEGS rating of Class 3. Staff anticipates a revaluation in of this rating 2024.	Ongoing Capability
PA-36 - Where appropriate, support retrofitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses				
Yes	Short Term (<5yrs.)	No	The City does not currently have a policy to purchase or relocate repetitive loss structures. Additionally, sizable portions of the City are located in high hazard areas where relocation is not feasible. Retrofitting of properties is encouraged for those properties that may be impacted by floods, earthquakes, and wildfires. See also PA-29. Additionally, the City has adopted the most current State building code, which enhances the standard of new construction.	Completed
PA-37 - Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community				
Yes	Other, please specify	No	The Palo Alto Comprehensive Plan recently finalized in 2017 integrates the LHMP in the Safety Element. The Safety Element informs land use planning by describing the natural hazards faced by the Palo Alto community. Additionally, the new Sea Level Rise policy (PA- 30) also integrates the LHMP. Additionally, the City of Palo Alto Sustainability and Climate Action planning take into account land use decisions.	Completed
PA-38 - Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan.				
Yes	Short Term (<5yrs.)	No	The City is in compliance with the stated maintenance protocols.	Ongoing Capability

Public review notice

The contents of this report are considered to be public knowledge and have been prepared for total public disclosure. Copies of the report may be provided to the governing boards of all planning partners and to local media outlets. The report, once approved by the Palo Alto City Manager, and made available for City Council review will be available online on the OES website. Any questions or comments regarding the contents of this report should be directed to: City of Palo Alto OES, 650-617-3197 or lhmp@cityofpaloalto.

Next Plan Update

The LHMP five-year cycle formally ended on 12-19-2022 requiring the City of Palo Alto to provide a formal update to this plan. Between 2022 and 2023, The Santa Clara County Office of Emergency Services conducted a Multijurisdictional Hazard Mitigation Plan (MJHMP) process among cities and special districts within the county, of which the City of Palo Alto was a participant. Staff worked with County representatives and their contractor to provide the appropriate inputs as required by federal guidance. The County submitted the MJHMP to the State of California Office of Emergency Services for a state level review. Following this state review, the State OES will submit the plan to FEMA for federal review. Once approved by FEMA, the City will request the City Local Hazard Mitigation Plan, as an annex to the County plan, be adopted by City Council.