



TOWN OF PORTOLA VALLEY
Sustainability Committee Meeting
Thursday, May 19, 2022 7:00 PM
Videoconference Meeting

VIDEOCONFERENCE MEETING AGENDA

Remote Meeting Covid-19 Advisory: On September 16, the Governor signed AB 361, amending the Ralph M. Brown Act (Brown Act) to allow legislative bodies to continue to meet virtually during the present public health emergency. AB 361 is an urgency bill which goes into effect on October 1, 2021. The bill extends the teleconference procedures authorized in Executive Order N-29-20, which expired on September 30, 2021, during the current COVID-19 pandemic and allows future teleconference procedures under limited circumstances defined in the bill. Portola Valley Town Council and commission and committee public meetings are being conducted electronically to prevent imminent risks to the health or safety of attendees. The meeting is not available for in-person attendance. Members of the public may attend the meeting by video or phone linked in this agenda.

Join Zoom Meeting:

<https://us06web.zoom.us/j/89661982357?pwd=b1JZVHg3UzJHUE1JcDBVZUE1eDVkZz09>

Meeting ID: 896 6198 2357

Password: 071447

To access the meeting by phone, dial:

1-699-900-6833

1-877-853-5247 (toll-free)

*Mute/Unmute - press *6 / Raise Hand - press *9*

1. Call to Order
2. Oral Communications
3. Introductions
4. Approval of 4-21-2022 Minutes
5. Old Business
 - a. Updates from Maryann
 - b. Updates from Brandi
 - c. Report from the May 16, 2022 Committee of Committee meeting for the Housing Element
 - d. Subcommittee reports, as needed
6. New Business
 - a. Committee input on draft climate change and resiliency memo for the Safety Element
 - b. Attendance at meetings
 - c. Redefining committee charter to have a maximum of 7 members
 - d. New member search
 - e. As time permits, concrete plans for monthly Public Service Announcements on energy and water
7. Next Meeting and Proposed Agenda Topics for June 16, 2022 7 pm
8. Adjournment



TOWN OF PORTOLA VALLEY
Sustainability Committee Meeting
Thursday, April 21 7:00 PM
Special Videoconference Meeting

MINUTES, Meeting of April 21, 2022

Present: Scott Elrod (chair), Loverine Taylor, (secy), Walter Hays, Jason Saleh, Maryann Derwin, Brandi de Garmeaux (town consultant). Absent : Rebecca Flynn, Stefan Unnasch, Zeenia Framroze.

Public: Dan Quinn, Chris Atwood, Kraust Hauspad, Rita Comes, Ronnie Krashinsky, Kristi Corley.

1. Call to Order 7pm
2. Oral Communications: Earth Day Event 4/24 from noon to 2pm at Valley Presbyterian Church (LT).
3. Introductions: MD introduced speakers Josie Gaillard and Tom Kabat who gave a Presentation on Best Practices in Home Electrification. A recording and slide deck of the presentation is available at <https://www.portolavalley.net/Home/Components/Calendar/Event/29848/892?toggle=allpast>, by navigating to the April 21st meeting, and looking down toward the bottom under "Meeting Resources". A guide to the process is available at <https://redwoodenergy.net/wp-content/uploads/2021/11/SF-Retrofit-Guide-2021-09-08.pdf> and the site showing EV registration per city is at: <https://www.energy.ca.gov/data-reports/energy-almanac/zero-emission-vehicle-and-infrastructure-statistics/>
4. Approval of 3-17-2022 Minutes Motioned and seconded WH/JS. Approved.
5. Old Business
 - a. Updates from Maryann
 - i. The Town Manager wrote a letter of support in favor of San Mateo County's proposed Laundry to Landscape (L2L) Pilot Project. The project, sponsored by C/CAG, has submitted a funding request of \$420,000 from Congresswoman Eshoo's Office. If funded, Portola Valley hopes to be an active partner in the L2L project.
 - ii. At the [Commute.org](https://www.commute.org) Governing Board meeting on Thursday, April 21, Executive Director John Ford and staff made a presentation on the new C/CAG TDM Policy that became effective on January 1, 2022 for all new developments in San Mateo County that will generate more than 100 new (net) average daily trips. In Portola Valley, new, larger developments, such as the one proposed at the Stanford wedge, could be required to comply with the policy. This is good because developers will have to be accountable for the traffic they generate.
 - b. Updates from Brandi.
 - i. The SB 1383 regulations require that jurisdictions conduct education and outreach on organics recycling to all residents, businesses (including those that generate edible food that can be donated) haulers, solid waste facilities, and local food banks and other food recovery organizations. The Town of Portola Valley received a 5 yr waiver for the organic waste requirement. The Town council has implemented part of the plan. They approved a requirement that would mandate that yard trimming in excess of 4 G-ton /waste/week be composted.

- ii. Update to Green Building Ordinance. Currently operating from 2016 version. Working on reach codes and next update will take effect Jan.1 2023. Looking into a regional effort to address electrification projects. Planning Dept. understands the Build it Green check list is difficult to use. How to improve? A cost effectiveness study has to be done: expensive and time consuming for staff.
 - iii. No update on smart meters
 - iv. Climate Action Plan: Brandi is now reporting to Asst. Town Manager Melvin Gaines.
- c. Updates by Subcommittee
 - i. Energy/Blackout protection.
SE: The Backup Battery package is now available for checkout from from the PV library.
 - d. Website Progress Updates
No reports
 - e. Ad Hoc Housing Element Committee of Committees news, if any
No report
 - f. Priorities for 2022
Attached is the updated work product spreadsheet with action items highlighted in red.
 - g. Budget for 2022
Motion to approve budget as modified, WH/LT; copy of the approved version is attached.
6. Next Meeting and Proposed Agenda Topics: May 19, 2022, 7 pm
Town drafting a Safety Element guideline; review memo on Climate Change and Resilency.
7. Adjournment Motion by WH at 8:40pm.

Item	Level of Impact (1, 2, 3; High = 3)	Committee Enthusiasm (1, 2, 3)	Level of Effort (1, 2, 3; Low = 3)	Committee Can Have Unique Impact (1, 2, 3; 3 = Most Unique)	Match to Committee Charter (1, 2, 3; 3 = Best)	2 Committed People?	Total
Community Education : PSAs (monthly) to encourage GHG and water reduction	3	3	3	3	3	Rebecca, Scott, Walt, Jay	15
Smart water meter usage with Cal Water education and outreach	3	3	2	3	3	Rebecca, Walt, Lovey	14
Climate Action Plan (more active role)	3	3	1	3	3	Scott, Walt, Jay	13
Existing building stock electrification ordinances	3	3	1	2	3	Rebecca, Walt, Jay	12
Demos (induction stove top, backup power, smart meter, gadgets)	2	2	3	2	3	Jay (power), Rebecca	12
Update Website with actionable information to reduce GHG and water usage	1.5	1	1.5	3	3	Everyone	10
PV Seminar and Movie Series (in collaboration with Nature& Science, Cultural Arts, Conservation)	2	2	1	2	3	Maryam, Zecnia	10
Other Drought activities (seminars, workshops, hot water recirculators, buckets)	2	2	0	3	3	Lovey	10
Sustainability Book and Podcast Club (Need facilitator and rules. Chapter a week. In depth sharing.)	1.5						1.5
Energy Efficiency Goal for reduction in GHG for PV? How to measure (Climate Action Plan? defer for meeting with Stefan)							0
Green Building Ordinance: (to council by October)	(something we will definitely do)						0
Model Water Efficient Landscape Ordinance: (Lovey to talk with AISill)						Lovey	0
Building Efficiency (what are the specifics?)							0
Compost Event (effort to liaison by Lovey, Maryam to reach out to Brook Coffey)							0



Town of Portola Valley

BUDGET WORKSHEET

Committee/Commission: **Sustainability Committee**

Submitted by: **Scott Elrod, Chair**

ITEM #	BUDGET REQUEST OR ITEM DESCRIPTION/ACTIVITY: Please describe your budget request as clearly as possible.	ADOPTED 2021-2022 BUDGET	PROPOSED 2022-2023 BUDGET	FUTURE YEAR BUDGETS *		
				2023-24	2024-25	2025-26
		\$10,600.00				
1	Education & Outreach - social media ads/printed materials/banners/mailer		\$1,000			
2	Table at Earth Fair or Other Climate Change/Earth Day Activity		\$600			
3	Virtual Technology Tour - EV/Battery Backup with Raffle		\$500			
4	Loaner Solar Panel/Battery Backup for Sustainability/Emergency Prep		\$500			
5	Raffle or Giveaway for Sustainability/Emergency Prep Tool to promote event attendance and/or energy/water efficiency		\$1,000			
6	CalWater Smart Water Meter Implementation - Promote/Educate		\$1,000			
7	Film/Lecture Series & Special Hands-On Workshop		\$2,500			
8	Supplemental Books for Climate Action Book Club		\$500			
			\$7,600			



Town of Portola Valley



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Memorandum

DATE	May 19, 2022		
TO	Sustainability Committee	FROM	Laura Russell, Planning & Building Director Curtis Banks, Project Director Carla Violet, Project Manager Urban Planning Partners Aaron Pfannenstiel, Atlas Planning Solutions Patrick Sutton, Baseline Environmental Consulting

RE: Portola Valley Safety Element Climate Change Adaptation and Resilience Memo

INTRODUCTION/PURPOSE

THE SAFETY ELEMENT UPDATE

Portola Valley is in the process of updating its Safety Element (2010) in coordination with the 6th cycle 2023-2031 Housing Element update. Recent State law changes now require municipalities to update their Safety Element in conjunction with their Housing Element, which occurs on an eight-year cycle.

The Safety Element addresses protection of its people from unreasonable risks associated with disasters, including earthquakes, floods, fires, landslides, and other hazards identified by the local community. The Safety Element must identify hazards and hazard abatement provisions to guide local decisions related to zoning, subdivisions, and entitlement permitting, and should also integrate hazard and risk reduction strategies.

To facilitate review of the draft Safety Element, the Urban Planning Partners consultant team is preparing a series of four memos focused on different topic areas of the Safety Element including 1) Geologic, Seismic, and Flooding Hazards, 2) Climate Change Adaptation and Resilience, 3) Wildfire Hazards, and 4) Analysis of Developments with One-way of Ingress and Egress (Senate Bill (SB) 99 Analysis). Each of these memos will comprise a portion of the Safety Element document. The following committees will review each memo:

- Geologic, Seismic, and Flooding Hazards Memo – Geologic Safety Committee

- Climate Change Adaptation and Resilience Memo – Sustainability Committee
- Wildfire Hazards Memo and SB 99 Analysis – Emergency Preparedness Committee

Following this series of meetings, the full draft Safety Element will go before one or two joint committee meetings in June for review and comment. If desired by the committee(s), these comments may be presented to the Planning Commission along with the draft Safety Element. Following Planning Commission approval, the draft Safety Element will be transmitted to the State Board of Forestry and Fire Protection for review. Following any further revisions, the Town Council will review and approve the final Safety Element at a public meeting.

SUSTAINABILITY COMMITTEE INPUT

This focus of this memorandum is climate change adaptation and resilience which is a new topic area that jurisdictions are required to include in the Safety Element. This memo includes historical data, existing conditions, and new draft policies and implementation actions. Town staff and the consultant team is seeking early input from the Sustainability Committee on topics related to climate change, drought, and sea level rise. Specifically, the consultant/staff team is seeking input on the draft policies and implementation actions. Are there ways they can be strengthened? Does the Committee have other ideas for policies or implementation actions? This input will be used to inform further edits that will be integrated into the draft Safety Element.

CLIMATE CHANGE

Climate is the long-term behavior of the atmosphere – typically represented as averages – for a given time of year. This includes average annual temperature, snowpack, or rainfall. Human emissions of carbon dioxide and other greenhouse gas emissions (greenhouse gases) are important drivers of global climate change, and recent changes across the climate system are unprecedented. Greenhouse gases trap heat in the atmosphere, resulting in warming over time. This atmospheric warming leads to other changes in the earth systems, including changing patterns of rainfall and snow, melting of glaciers and ice, and warming of oceans. Human-induced climate change is already affecting many weather and climate extremes in every region across the globe. Evidence of observed changes includes heatwaves, heavy precipitation, droughts, and hurricanes.¹

Likewise, California and Portola Valley are already experiencing the effects of a changing climate. Both gradual climate change (e.g., sea level rise) and climate hazard events (e.g., extreme heat days) expose people, infrastructure, buildings and properties, and ecosystems to a wide range of stress-inducing and hazardous situations. These hazards and their impacts disproportionately

¹ Intergovernmental Panel on Climate Change 2021. Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press. In Press.

affect the most vulnerable populations, including children and elderly adults, low-income populations, renters, immigrants, and BIPOC residents, among others.

INCREASING TEMPERATURE

During the last century, average surface temperatures in California and the Bay Area rose steadily. Average minimum and maximum temperatures in San Mateo County rose faster than California. Between 1970 and 2006, the average minimum temperature rose by 1.2°F per decade and the average maximum temperature increased by 0.7°F per decade across the region.² Several of the warmest years on record, in terms of annual average temperature, have all occurred since 2000, including 2020, 2018, 2015, 2014, and 2009. In Portola Valley, average January temperatures are a maximum of 60°F and a minimum of 37°F. Average July temperatures are a maximum of 88°F and a minimum of 51°F.

Climate change models indicate that temperatures will continue to rise in Portola Valley. Annual average maximum temperatures are projected to increase between 3.2 and 4.0°F by mid-century (2035-2064) and between 4.2°F and 7.1°F by end of century (2070-2099). The lower temperature bound assumes that greenhouse gas emissions peak by 2040 and decline (medium emissions scenario); the higher temperature bound assumes that global greenhouse gas emissions continue to rise through the 21st century (high emissions scenario).³

With climate change, extreme heat events in California and Portola Valley are becoming more frequent, more intense, and longer lasting. Historically (1961-1990), Portola Valley averaged five extreme heat days. The number of extreme heat days is anticipated to increase significantly across the Bay Area region during the next century, but more so for inland areas than coastal cities. In Portola Valley, an extreme heat day is considered a day where the temperature exceeds 90.7°F. By mid-century (2035-2064), the town is expected to have, on average, between 10 to 12 extreme heat days per year, increasing to an average of 13 to 23 extreme heat days per year by the end of century (2070-2099).⁴

In addition to extreme heat days, warm nights are also a concern. Historically (from 1961-1990) Portola Valley has experienced approximately four warm nights where the temperature exceeds 55.1°F. According to Cal-Adapt, by mid-century Portola Valley is projected to experience 35-46 warm nights and 49-89 warm nights by the end of century. Increases in warm nights may exert greater strain on electrical infrastructure and older air conditioning units on homes.

Extreme heat days and heat waves can negatively impact human health. While the human body has cooling mechanisms that help auto-regulate body temperature within one or two degrees of 98.6

² Cordero, E. C., W. Kessomkiat, J. Abatzoglou, and S. A. Mauget. 2011. The identification of distinct patterns in California temperature trends. *Climatic change* 108:357–382.

³ Cal-Adapt. 2018. Local Climate Change Snapshot for Portola Valley. Retrieved from <https://cal-adapt.org/tools/local-climate-change-snapshot>.

⁴ Cal-Adapt. 2018. Extreme Heat Days & Warm Nights. Retrieved from: <https://cal-adapt.org/tools/extreme-heat/>

degrees, heat stress can cause fatigue, headaches, dizziness, nausea, and confusion. The combination of heat and high humidity is particularly lethal; it can result in heat stroke, which can lead to death, even among healthy people.⁵

CHANGING PRECIPITATION PATTERNS

Dry, mild summers and moist, cool winters characterize San Mateo County's overall climate. Temperatures are strongly influenced by large saltwater bodies on the east (San Francisco Bay) and west (Pacific Ocean) and the Santa Cruz Mountains. This combination of features has resulted in a variety of microclimates throughout the County with hill and ridgetop areas, valley floors and coastal areas each experiencing different temperatures and precipitation patterns.

The Coastside area experiences a marine climate, characterized by cool, foggy summers and relatively wet winters. Fog, the result of condensation over the ocean near the coast, provides moisture and cool air for the coastal terraces. These elements are largely responsible for the emergence of the Coastside region as an agricultural area, featuring several specialty crops. Bayside climates are generally warm and sunny, particularly in the summer months when hot air from the valleys moving to the east warms the prevailing cool ocean breezes.

The majority of annual precipitation in San Mateo County occurs from December through March. During this wet season, precipitation levels average from 3.00 to 4.5 inches per month. One of the key influences upon precipitation is elevation. The Bayside generally receives less precipitation than the same elevation on the Coastside, because the Santa Cruz Mountain Range acts as a rain shield causing moisture-laden air moving in from the Coastside to condense and deposit much of its moisture in the form of rain or fog as it reaches the higher, colder mountains.⁶

Weather in Portola Valley is usually mild during most of the year. Summers are dry and can be hot; winter temperatures rarely dip much below freezing. Based on Cal-Adapt, the average annual observed 30-year average precipitation is 32.9 inches.⁷ Portola Valley currently experiences average annual precipitation between 30 and 32 inches, based on the historic record from 1961-1990. Based on Cal-Adapt projections are anticipated to slightly increase to 33.0 – 33.7 inches by midcentury, and 33.8 – 34.9 inches by the end of the century.

Cal-Adapt provides maximum daily precipitation projections, which based on the observed historical 30-year average, Portola can expect rain events that produce up to 2.29 inches. By mid-century, this projection is anticipated to increase by 2.47 – 2.51 inches and 2.54 – 2.76 inches by the

⁵ 2. Brink, S. 2013. How 100 Degrees Does a Number on You." National Geographic. Retrieved from <https://news.nationalgeographic.com/news/2013/07/130716-heat-wave-dehydration-stroke-summer-sweat/>

⁶ San Mateo County Multijurisdictional Local Hazard Mitigation Plan. 2021.

⁷ Annual Averages for Portola Valley. Retrieved from <https://cal-adapt.org/tools/annual-averages/#lat=37.3702&lng=-122.2218&boundary=place&climvar=Temperature>

end of the century. This increase in the maximum daily precipitation amount may be due to more intense rainstorms resulting from climate change.⁸

DROUGHT

Another method of understanding anticipated drought patterns is the Standardized Precipitation-Evapotranspiration Index (SPEI). SPEI is a multi-scalar drought index that can be used to detect, monitor, and analyze droughts. The tool measures drought severity according to its intensity and duration and can identify the onset and end of drought episodes. A value equaling (-1) implies the drought is at least moderate in intensity, with more negative values representing more severe droughts. The data is represented as days where this threshold of (-1) is met or surpassed and indicates that there is a water deficit. According to Cal Adapt, the observed historical 30-year average SPEI for Portola Valley is 0.2 months annually. This number is expected to increase to between 2.2 – 2.8 months by midcentury, and as high as 3.0 – 5.5 months by the end of the century. Longer durations of time with the SPEI below -1 can lead to drier soils and vegetation/fuels, which increases the potential for wildfire hazards. For additional details regarding wildfire and drought relationships see the Wildfire Hazards memo.

RISING SEA LEVELS

In the last 100 years, sea level in the Bay Area has risen over 8 inches. Sea levels are rising around the world and are expected to accelerate in the coming decades as oceans continue to warm and glaciers and ice sheets continue to melt.

The 2021 Multijurisdictional Local Hazard Mitigation Plan (LHMP) identifies sea level rise hazards across San Mateo County. The LHMP maps sea level rise inundation data from the Our Coast, Our Future tool developed by the U.S. Geological Survey and Point Blue, as well as Adapting to Rising Tides, a cross-jurisdictional project with programs across the San Francisco Bay Area. While Portola Valley is located inland, and the LHMP does not identify the town as at-risk of sea level rise inundation; Portola Valley can minimize the impact of the impacts of sea level rise events near the Bay by managing its stormwater and waste water.

CLIMATE CHANGE ADAPTATION AND RESILIENCE DRAFT POLICIES AND IMPLEMENTATION ACTIONS

Based on the existing and predicted conditions outlined above, the following policies and implementation actions are proposed for review and input from the Sustainability Committee.

P-1 Prioritize the needs of vulnerable populations affected disproportionately by hazards and disasters.

⁸ Local Climate Change Snapshot for Portola Valley, 2021. Retrieved from <https://cal-adapt.org/tools/local-climate-change-snapshot>

P-2 Engage vulnerable populations in identifying potential hazards and program responses and priorities.

A-2-1 Use Community Emergency Response Team (CERT) resources to assist with identification, outreach and engagement of vulnerable populations.

P-3 Collaborate with local and regional agencies on hazard mitigation and emergency management projects and programs.

P-4 Ensure infrastructure can accommodate changing conditions and effects associated with climate changes.

A-4-1 Look to Best Practices to develop and maintain resilient infrastructure standards.

P-5 Require capital projects in high hazard areas to adhere to higher standards to reduce future potential hazard vulnerability.

A-5-1 Develop risk assessment guidance and resilience strategies.

A-5-2 As part of the capital planning and budgeting process, require all projects located within high hazard areas to adhere to risk assessment guidance and identify appropriate resilience strategies.

P-6 Strengthen emergency management capacity and coordination with the San Mateo County Department of Emergency Management and the Woodside Fire Protection District.

A-6-1 Regularly assess emergency management needs and identify resources to prepare for current and future hazard events.

A-6-2 Incorporate the likelihood of climate change impacts into Town emergency response planning and training.

A-6-3 Incorporate locations and operations responsibility for establishing cooling centers for extreme heat events as part of the next update of the Town's Emergency Operations Plan.

A-6-4 Incorporate the projected impacts of climate change, including extreme heat, drought, flooding, wildfire, and storm events, in the Multijurisdictional Local Hazard Mitigation Plan, the Housing Element, Emergency Operations Plan, and other comprehensive planning efforts.

P-7 Continue to promote the Community Emergency Response Team (CERT) program to strengthen community cohesion and emergency preparedness through community engagement efforts.

P-8 Ensure the city is ready for post-disaster recovery through proactive planning.

A-8-1 Develop a post disaster recovery framework.

P-9 Require floodproofing for new development in flood hazard zones.

A-9-1 Identify areas of a parcel subject to flooding by type of flooding, including inundation, creek, and groundwater and by the potential depth of flooding.

A-9-2 Raise base flood elevation above the FEMA 500-year base flood elevation.

A-9-3 Locate mechanical equipment, such as boilers, chillers, and air handlers for ventilation in appropriate locations to ensure operation during flooding.

P-10 Continue to work with San Mateo County Flood and Sea Level Rise Resiliency District on developing and implementing adaptation options for San Francisquito Creek.

A-10-1 Restore creek ecologies and create transitional habitat zones to build resilience and ecosystem services.

P-11 Address climate change impacts and develop adaptation strategies that focus on fire prevention and protection, flooding and severe storms, extreme heat events, public health, and the health and adaptability of natural systems.

A-11-1 Monitor drought conditions and enact appropriate measure to reduce water demand in coordination with local and regional water providers.

P-12 Ensure that the community can respond to future extreme heat events.

A-12-1 Develop an extreme heat annex for the Emergency Operations Plan that identifies key cooling center locations.

A-12-2 Explore upgrades to electrical and HVAC equipment within Town facilities to ensure greater resilience during extreme heat and public safety power shutoff events.