



**COMPREHENSIVE PLAN UPDATE  
CITIZENS ADVISORY COMMITTEE  
SUBCOMMITTEE  
NATURAL ENVIRONMENT ELEMENT**

**August 30, 2016**

Downtown Library – Community Meeting Room  
270 Forest Avenue, First Floor  
Palo Alto, CA 94301  
9:00 AM to 12:00 PM

**TITLE:** Natural Environment Element Subcommittee Discussion  
**FROM:** Elena Lee, Interim Planning Manager,  
Planning & Community Environment Department

## **Background**

This will be the first subcommittee meeting on the Natural Environment Element. It is a joint meeting of the Natural Environment and Sustainability subcommittees.

This meeting will identify issues for further discussion at the first meeting of the full CAC on the Natural Environment Element, to be held on September 20, 2016. Following this meeting, City staff and the consultants will prepare a staff report for the September 20 CAC meeting that summarizes the subcommittee discussion and outlines the issues on which the CAC may choose to focus.

You will notice that the attached policy framework already reflects extensive changes. This is due to the fact that in Palo Alto, the Natural Environment Element currently encompasses three of the seven mandatory Comprehensive Plan Elements: Open Space, Conservation, and Safety. These three Elements have been the focus of much of the legislative changes relating to General Plan law over the past ten to fifteen years. To prepare for this subcommittee meeting, staff and consultants have done the following:

- Started from the existing Natural Environment Element.
- Incorporated Council direction from their December 14, 2015 motion on the vision, goals, and organization of this Element, including adding a Goal on Climate Change and Climate Adaption and moving Goals on Natural Hazards (Goal N-2) and Hazardous Waste (Goal N-6) and Solid Waste (Goal N-7) to the Safety Element. The Council motion is Attachment A of this staff report. The division of topics between the Natural Environment Element and the new Safety Element is show in Table 1:

<b>TOPIC</b>	<b>NATURAL ENVIRONMENT</b>	<b>SAFETY</b>
Open Space	X	
Creeks and Riparian Areas	X	
Urban Forest	X	
Water Resources	X	
Air Quality	X	
Hazardous Waste		X
Solid Waste		X
Noise	X	
Energy	X	
Natural Hazards		X
General Safety Measures		X
Seismic and Other Geological Hazards		X
Flood Hazards		X
Fire Hazards		X
Emergency Management		X
Climate Change and Climate Adaptation	X	

- Reviewed and incorporated PTC revisions. In the case of the Natural Environment Element, the PTC made substantial changes to incorporate staff input from the numerous City departments involved in protecting Palo Alto’s natural environment and avoiding or responding to hazards. PTC input also captured a number of changes needed to make the element more current in response to recent legislation, adopted City documents (such as the Urban Forest Master Plan), and emerging planning trends. For these reasons, a greater number of PTC revisions have been brought forward for CAC consideration and discussion than was the case with prior elements.
- Circulated the existing Element to the Public Works, Utilities, and Community Services Departments and incorporated any additional comments or suggested revisions not already captured in the PTC revisions. Staff reviewers included:
  - Public Works
    - Walter Passmore (Urban Forest)
    - Kirsten Struve (Environmental Control Manager – water quality)
    - Karin North (Watershed Protection Manager)
    - Ron Arp (Zero Waste manager)
    - Elizabeth Ames (Senior Project Engineer – Parks Master Plan)
    - Peter Jensen (Landscape Architect – Park Planner)
  - Community Services
    - Daren Anderson (Open Space, Park, & Golf Course Division Manager)
    - Kristen O’Kane (Assistant Director)
  - Utilities
    - Jane Ratchye (Assistant Director – Resource Management)
    - Karla Dailey (Senior Resources Planner)
- Added new policies and programs to reflect the Draft S/CAP. Both the S/CAP and the Natural Environment Element address the following topics:

- Solid Waste
- Water Resources
- Energy and Renewables
- Climate Change
- Climate Adaptation
- Resiliency
- Deleted programs that have been completed and policies that are no longer applicable (e.g. urban forest policies that have been superseded by the adoption of the Urban Forest Master Plan).
- Added EIR mitigation measures, re-worded to be consistent with the tone and level of detail of other Comprehensive Plan policies and programs. Where the EIR identified that specific policies or programs should be included in the Comp Plan, those appear in the attached draft of the Natural Environment Element policy framework. The following EIR sections address Natural Environment Element topics:
  - **Air Quality.** The EIR identified the potential impact of construction associated with the Comprehensive Plan on local air quality. In order to ensure that new construction is consistent with existing regulations, it included mitigation requiring developers to comply with Bay Area Air Quality Management District (BAAQMD) emissions control measures, or mitigate emissions as necessary. The EIR also called for reducing particulate emissions from wood burning stoves, construction and automobiles.
  - **Biological Resources.** The EIR did not add extensive mitigation for biological resources impacts if the Comp Plan includes policies to protect biological resources. The EIR also concluded that development in Palo Alto would be focused in the existing urbanized area, would be consistent with Stanford’s adopted Habitat Conservation Plan (HCP), and would therefore have less-than-significant impacts on biological resources.
  - **GHGs.** The EIR identified measures to achieve various GHG emissions reduction targets and goals, consistent with the Draft S/CAP; participate in regional climate change planning; monitor environmental changes; and adopt an updated climate action plan (the S/CAP).
  - **Noise.** The EIR included measures to ensure a generally noise-compatible environment, including mitigating the noise-related impacts of Palo Alto Airport and railways on new and existing development. Specifically, the EIR prohibits the development of incompatible land uses within the 60 dBA CNEL noise contours of the Airport, and calls for minimizing rail noise and vibration spillover into residential areas.
- Added new policies and programs to reflect State legal requirements for planning for flood hazards, fire hazards, and sea level rise:
  - **Open Space.** According to [Government Code 65560](#), “open space” is defined as any parcel or area of land or water that is essentially unimproved and devoted to either 1) the preservation of natural resources; 2) the managed production of resources (in the case of Palo Alto, this is limited to Williamson Act-contracted lands only) ; 3) outdoor

recreation; 4) public health and safety (to be addressed in the Safety Element); 5) support of the mission of military installations; or 6) the protection of any Native American historic, cultural, burial or sacred site, such as the Muwekma Ohlone Indian Mounds memorialized at the intersection of Middlefield Road and Marion Street.

- **Flood.** [Government Code 65007\(d\)](#) establishes the definition of a “flood hazard zone,” areas to which support policies and FEMA assistance are directed. [Government Code 65302\(d\)](#) states that portions of the conservation element, including flood management, shall be developed in coordination with any countywide water agency and with all district and City agencies. City staff will coordinate accordingly. AB 162 requires the conservation element of the general plan to identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management.
- **Fire.** According to [Government Code 65302\(g\)](#), the Safety Element must address the risk of fire for land classified as state responsibility areas, as defined in [Section 4102 of the Public Resources Code](#), and land classified as very high fire hazard severity zones, as defined in [Section 51177](#). This includes policies and programs to protect the community from the risk of wildfire.
- **Sea Level Rise.** Policy relate to sea level rise must respond to [Senate Bill 379](#), passed in October 2015, which requires climate adaptation and resiliency strategies in the Safety Elements of their general plans, including policies that are based on the most current information available regarding climate change adaptation and resiliency. In addition, according to [Government Code 65302.10\(a\)](#), as of January 1, 2009, cities shall include consideration of the effects of sea level rise when amending the appropriate elements of its general plan.

## What to Expect at the Meeting

At the outset of the meeting, time will be given over to public comment from members of the community. Speakers will be allowed up to three minutes to share their thoughts on issues addressed in the Natural Environment Element. Time limits are necessary to ensure that there is an opportunity for members of the public to express their opinions, while also ensuring that the subcommittee can complete the agenda set out for the meeting.

The Natural Environment Element is extensive and contains a number of topics of great interest to CAC members and the community. At this first meeting on the Element, we suggest that the two subcommittees take advantage of the joint meeting format to review each goal/topic and daylight high-level ideas or areas for further discussion, rather than delving into specific policy or program wording. The Natural Environment subcommittee is scheduled to have two further meetings for more in-depth discussion.

To have adequate time to cover these topics, staff suggests that the subcommittee and the CAC break up the in-depth discussion of the Natural Environment Element at the September and October meetings as follows:

#### **September:**

1. Open Space
2. Creeks and Riparian Areas
3. Urban Forest
4. Noise

#### **October:**

1. Air Quality
2. Water Resources
3. Energy
4. Climate Change and Climate Adaptation

Natural Environment CAC meetings are scheduled for September 20 and October 18. Future Natural Environment subcommittee meeting dates are not yet set but will be held before the full CAC meets.

In addition, based on Council direction in their motion from December 2015, the following topics that are in the current Natural Environment Element will be moved to the Safety Element and discussed by the Safety subcommittee:

1. Solid waste
2. Hazardous Waste
3. Natural Hazards
4. Community Safety and Emergency Management (new topic per City Council motion)

## **Issues for Discussion**

### **Ongoing Plans and Studies**

The policy direction and findings of following plans and studies, either adopted or underway, must be considered in the development of a coordinated, effective Natural Environment Element. Some of these efforts may be more directly relevant to the Safety Element, but are also relevant to Natural Environment and so are explained here. Relevant links are provided in each bullet heading.

- [\*\*Parks, Trails, Open Space and Recreation Facilities Master Plan \(Master Plan\)\*\*](#). The goal of this Master Plan, currently set for adoption in early 2017, is to provide guidance for meeting future recreational, programming, and environmental and maintenance needs, as well as establishing priorities for future park renovations and facility improvements. Policies and programs related to open space and the natural environment should support the implementation of, and achieve consistency with, recommendations established in the Master Plan.
- [\*\*SAFER Bay Levee Improvements\*\*](#). The San Francisquito Creek JPA is currently conducting a levee improvement design project for the Bayfront levees between San Francisquito Creek and

Redwood City. The *Strategy to Advance Flood protection, Ecosystems and Recreation* or “SAFER Bay” will develop a Bayfront levee system design that provides 1% (100-year) protection from tidal flooding, assuming three feet of sea level rise over the next five decades. Sea level rise policies and programs in the Comprehensive Plan will take into account the recommendations and results of the SAFER Bay project.

- **[Local Hazard Mitigations Plan \(LHMP\)](#)**. Palo Alto is currently developing a city-specific version of the County’s LHMP, a plan required by federal Disaster Mitigation Act of 2000. The Plan will build on a comprehensive vulnerability/risk assessment to develop a series of policies and actions to mitigate the city’s top hazards of earthquake, flood, sea-level rise, wildfire, drought and extreme heat. While the focus of LHMP coordination will occur in the Safety Element, policy related to sea-level rise and climate risk in the Natural Environment Element must support, and be supported by, the future LHMP. Assembly Bill 2140 authorizes local governments to integrate their LHMPs into the Safety Elements of their General Plan.
- **[Vulnerability Assessment](#)**. Recent legislation, notably Senate Bill 379 (2015), requires that local climate adaptation and safety policy be based on a formal vulnerability assessment. As noted above, the ongoing LHMP is based on such an assessment. Throughout 2016, the LHMP team has identified and assessed top city hazards, inventoried its major assets and established a community risk profile. The results of this process will inform an effective series of climate-related policies and programs.
- **[Sustainability and Climate Action Plan \(S/CAP\)](#)**. A [Draft S/CAP](#) was released in April; see Greenhouse Gas Emissions, below, for more discussion.
- **[Urban Water Management Plan \(UWMP\)](#)**. As required by the Urban Water Management Planning Act, all cities are required to update their UWMP every five years and submit it to the California Department of Water Resources for review and approval. The 2015 UWMP, adopted by the City Council in May 2016, includes an assessment of the reliability of the City’s water sources, an analysis of water demand and alternative water supply sources, a description of water conservation efforts, and a water shortage contingency plan. Water policy in the Comprehensive Plan must reflect, and coordinate with, findings and policies of the current UWMP.
- **[Water Integrated Resources Plan \(WIRP\)](#)**. Originally adopted in 2003 and updated in 2016, the WIRP discusses the variety of potable water supply resources and planning. It includes an assessment of alternative potable water supplies, and assesses recycled water as a tool to reduce potable water demand. The WIRP contains a series of guidelines for effective water use, such as active participation in regional recycling plans.

## Greenhouse Gas Emissions

As noted above, a series of legislation passed since the time of the last Comprehensive Plan Update seeks to reduce greenhouse gas emissions in California, and the targets/parameters established in this legislation influences local policy. These laws include, but are not limited to:

- **Executive Order S-03-05**. Signed in 2005, this Order sets ambitious GHG reduction targets for the State, including reducing statewide GHG emissions to 1990 levels by 2020.
- **Assembly Bill 32**. This Bill, the Global Warming Solutions Act, was passed in 2006, and follows the 2020 tier of emissions reduction targets established in Executive Order S 3 05.

- **Executive Order B-30-15.** Signed in 2015, this Order sets a goal to reduce GHG emissions within the state to 40 percent of 1990 levels by year 2030, and requires various legislative updates to ensure that climate change is accounted for in state planning and investment decisions.

A major component of climate change- and GHG-related policy in the Natural Environment Element will be achieving internal consistency with Palo Alto's S/CAP, which is currently under development. Building on the 2007 Climate Action Plan, the S/CAP responds to new legislation with a series of policies to reduce the city's greenhouse gas emissions and overall carbon footprint, facilitate the shift away from single-occupant vehicles, and ensure a more resilient community in the face of climate-related risks such as sea-level rise. As noted above, a Draft S/CAP was released in April. At that time, the City Council:

- adopted the S/CAP goal of 80% reduction below 1990 levels by 2030,
- voiced support for the framework and guiding principles of the S/CAP,
- directed staff to develop a process for integrating the S/CAP into the Comp Plan Update. That is being accomplished through the work of the Sustainability subcommittee and participation by Gil Friend, Chief Sustainability Officer and City staff person managing the S/CAP, in CAC and subcommittee meetings.

Currently, S/CAP Action Teams made up of City staff are working on fleshing out the implementation of the strategies in the Draft S/CAP. The work of these Action Teams is tentatively scheduled for public review in fall 2016.

### **Stanford's HCP**

The [Stanford University Habitat Conservation Plan \(HCP\)](#), most recently revised in 2013, addresses the protection and management of federally listed and special-status species, labeled "Covered Species," that occur or potentially occur on Stanford lands. The HCP plan area includes some lands within the Palo Alto city limits, and portions these lands, such as the Lagunitas Reservoir and undeveloped areas west of Foothill Expressway, have been identified as habitats for Covered Species. The Comp Plan Update would substantially affect special-status species if it would allow development in these areas. Due to these overlapping plan areas, the degree to which policies and programs related to foothill and riparian ecosystems should be coordinated to the Stanford HCP remains subject to subcommittee discussion.

### **Airplane Noise**

Aircraft are one of the principal noise sources in Palo Alto. Of particular concern is noise from overflights associated with SFO and how those aircraft operations may have changed over time, resulting in changing/worsening noise effects. Similarly, community concern over noise associated with City-operated Palo Alto Airport has increased since the last Comp Plan Update. Airplane noise-reduction advocacy groups such as Sky Posse Palo Alto have brought attention to the perception that Palo Alto is disproportionately affected by SFO overflight noise, and that the City must take proactive measures toward aircraft noise abatement. The City is participating in a "Select Committee on South Bay Arrivals" formed by the FAA in response to growing concern from South Bay communities. Most of this concern is focused on the FAA's future "NextGEN" Air Transportation System, which will use satellites to facilitate increased and denser air traffic. Palo Alto also commissioned its own [study](#) of aircraft overflight

noise, performed by consulting firm Freytag & Associates Inc. The evaluation found that planes fly lower, faster and more frequently, resulting in increased noise.

The manner and degree to which Comp Plan policy targets airplane noise will be an important topic of discussion by the subcommittee.

The Federal Aviation Administration (FAA) uses three noise metrics to measure the effect of noise on the environment:

1. Single Event: The measure of the highest sound level occurring during an individual aircraft overflight;
2. The maximum level of the single event plus its duration;
3. The cumulative noise levels from multiple flight events.

For more information on the metrics and measurements used by the FAA to monitor aircraft noise, the FAA suggests the Noise Quest website noise modeling information page:

<http://www.noisequest.psu.edu/noisebasics-noisemodels.html>

### **Bird-Friendly Design**

The built environment can pose specific dangers to local bird populations, in the form of increased collisions with windows and other man-made structures. CAC members have suggested policy and/or program language to minimize risk and promote bird-safe design in development projects in both the Land Use and Natural Environment Elements.

### **Next Steps**

The Natural Environment Element policy framework will be revised in response to subcommittee comments and will be brought forward to the full CAC in the packet for the September 20 meeting. The Natural Environment subcommittee will have two further meetings in September and October to review the policy framework in depth before a Draft Element is developed.

#### Attachments

- A: Draft Natural Environment Policy Framework
- B: Formal 12/14/15 City Council Motion on Natural Environment Element
- C: Summary of Council Motion on Natural Environment Element