This is an informational report and no Council action is required.

The California Environmental Quality Act (CEQA) and its implementing regulations (“the Guidelines”) give local agencies considerable power to set their own significance criteria when evaluating the environmental effects of proposed projects. Determining the significance of environmental impacts is critical because a determination of significant impact requires (1) that the project be altered; (2) that mitigation measures be employed to avoid the impact or reduce it below the level of significance; or (3) that an environmental impact report be prepared. It can be controversial because there is some local discretion, and because some of the standards are necessarily qualitative.

The Guidelines define the term “significant impact on the environment” as a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project. Guideline 15064, “Determining the Significance of the Environmental Effects Caused by a Project,” says identifying a significant adverse effect on the environment “calls for careful judgment on the part of the [city], based to the extent possible on scientific and factual data. An iron clad definition of significant effect is not always possible because the significance of an activity may vary with the setting.”

Thresholds of significance are principally used to determine whether a project may have a significant environmental effect. Although they should be consistent with the City’s policies, they are only one part of those policies. For example, the City may elect to set a higher standard for project approval than for determination of significant impact. Thresholds are an analytical tool for judging significance. There are three types of thresholds that may be utilized by the lead agency: (1) environmental standards of general application formally adopted by the City after a public review process; (2)
environmental standards of general application adopted by federal, state or regional agencies; or (3) in-house criteria not formally adopted. In all cases, the criteria used for significance determination for an individual project must be identified in the environmental document.

The “threshold of significance” for a given environmental effect is simply that level at which the City finds the effects of the project to be significant. A threshold may be based on standards such as:

- Health
- Service
- Ecological
- Cultural resource
- Other standards related to environmental quality issues

Thresholds of environmental significance are measures of environmental change that are quantitative for subjects like noise, air quality, and traffic and qualitative for subjects like aesthetics, land-use compatibility and biology.

A threshold provides a rational basis for significance determinations and complies with the CEQA Guidelines’ requirement that a determination of significance be based to the extent possible on scientific and factual data. Even when scientific data may not be useful, the finding of a significant impact must still be based on substantial evidence.

**DISCUSSION**

Only a few agencies in the state have formally adopted a comprehensive set of significance thresholds in a single document. Most, like Palo Alto, employ in-house criteria that have not been adopted by the governing body but are as comprehensive as formally adopted criteria. For many jurisdictions, such as Palo Alto, criteria are primarily based upon the significant effects identified in Appendix G of the CEQA Guidelines. Palo Alto also relies upon its Comprehensive Plan as a source of environmental standards. For instance, the noise element provides noise exposure standards, and the circulation element establishes level of service standards for roads. The following is a comprehensive list of the environmental criteria used by the City of Palo Alto staff to evaluate the significance of impacts resulting from a project.

**Aesthetics (Visual Resources)**

A visual impact is considered significant if the project will:

- Substantially alter existing views of scenic vistas or resources; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area; or
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
• Significantly alter public views or view corridors; or
• Require substantial terrain modifications that degrade the visual character of the site.

Air Quality
An air quality impact is considered significant if the project will:
• Violate an ambient air quality standard or contribute substantially to an existing or projected air quality violation; or
• Result in substantial emissions or deterioration of ambient air quality (the significance thresholds recommended by the Bay Area Air Quality Management District (BAAQMD) for criteria air pollutants are considered to represent “substantial” emissions -- for mobile sources, these thresholds are 80 pounds per day and/or 15 tons per year for nitrogen oxides, reactive organic gases, and fine particulate matter of less than 10 microns in diameter; or
• Result in carbon monoxide emissions of 550 pounds per day or 100 tons or more on an annual basis; or
• Contribute to carbon monoxide (CO) concentrations exceeding the State Ambient Air Quality Standard of nine parts per million (ppm) averaged over eight hours of 20 ppm for one hour; or
• Create objectionable odors; or
• Expose sensitive receptors or the general public to substantial levels of toxic air contaminants.

Biological Resources
A biological resources impact is considered significant if the project will:
• Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations; or
• Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations; or
• Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means; or
• Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
• Conflict with any local ordinances protecting biological resources, such as a tree preservation ordinance; or
• Conflict with any applicable habitat conservation plan or natural community plan.
Cultural Resources
A cultural resources impact is considered significant if the project will:

- Adversely affect a historic resource listed or eligible for listing on the National and/or California Register, or listed on the City’s Historic Inventory; or
- Cause damage to an important archaeological resource; or
- Result in the removal of a tree designated as a City Heritage Tree; or
- Eliminate important examples of major periods of California history or prehistory; or
- Cause damage to an important archaeological resource as defined in §15064.5 of the CEQA Guidelines; or
- Disturb any human remains, including those interred outside of formal cemeteries; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Energy
Pursuant to CEQA Guidelines §15126.4(a) and Appendix F (Energy Conservation), EIRs must include a discussion of the potential energy impacts of proposed projects with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. Impacts are assessed based on an evaluation of consumption of energy by the project. Development generally results in the consumption of energy in three forms: 1) the fuel energy consumed by construction vehicles; 2) bound energy in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as milled lumber and glass; and 3) operational use of energy by future businesses for transportation, equipment operation, and cooling of buildings. Construction materials and the operational use of energy should be addressed.

Geology, Soils and Seismicity
A geologic or seismic impact is considered significant if the project will:

- Expose people or structures to substantial adverse effects including the risk of loss, injury or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic related ground failure (including liquefaction), landslides, or expansive soil; or
- Expose people or property to major geologic hazards that cannot be mitigated through the use of standard engineering design and seismic safety techniques; or
- Cause substantial erosion or siltation.

Hazardous Materials
Note: Some of the thresholds below can also be dealt with under a topic heading of Public Health And Safety if the primary issues are related to a subject other than hazardous material use.
A hazardous materials impact is considered significant if the project will:

• Create a significant hazard to the public or the environment as a result of the routine transport, use or disposal of hazardous materials; or
• Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; or
• Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school; or
• Construct a school on a property that is subject to hazards from hazardous materials contamination, emissions or accidental release; or
• Create a significant hazard to the public or the environment from existing hazardous materials contamination by exposing future occupants or users of the site to contamination in excess of soil and ground water cleanup goals developed for the site; or
• Expose people or structures to a significant risk of loss, injury or death involving wildland fires; or
• For a project located within an airport land use plan, would result in a safety hazard for people residing or working in the project area; or
• Impair implementation of or physically interfere with an adopted emergency response or evacuation plan.

Hydrology
A drainage and water quality impact is considered significant if the project will:

• Increase the risk of flood-related property loss or hazard to human life from the 100-year flood or from levee or dam failure; or
• Substantially impede or redirect flood flows; or
• Substantially degrade or deplete ground water resources or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level; or
• Substantially alter the existing drainage pattern or the site or area, including altering the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site; or
• Significantly increase peak storm water runoff in a manner which would result in flooding on-or off-site or substantially exceed the capacity of existing or planned storm water drainage systems; or
• Provide substantial additional sources of polluted runoff or otherwise substantially degrade surface or ground water quality; or
• Violate any water quality standards or waste discharge requirements.

Land Use
A land use impact is considered significant if the project will:
- Substantially adversely change the type or intensity of existing or planned land use in the area; or
- Be incompatible with adjacent land uses or with the general character of the surrounding area, including density and building height; or
- Conflict with established residential, recreational, educational, religious, or scientific uses of an area; or
- Convert prime farmland, unique farmland, or farmland of statewide importance (farmland) to non-agricultural use; or
- Conflict with any applicable City land use plan, policy or regulation (including, but not limited to the comprehensive plan, coordinated area plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Expose people or structures to a significant risk or loss, injury or death involving flooding by placing housing within a 100-year flood hazard area; or
- Physically divide an established community [for example road projects]; or
- Substantially shadow private or public open space (other than public streets and adjacent sidewalks) between 9:00 a.m. and 3:00 p.m. from September 21 to March 21.

Noise
A noise impact is considered significant if the project will:
- Cause the average 24 hour noise level (Ldn) to increase by 5.0 decibels (dB) or more in an existing residential area, even if the Ldn would remain below 60 dB; or
- Cause the Ldn to increase by 3.0 dB or more in an existing residential area, thereby causing the Ldn in the area to exceed 60 dB; or
- Cause an increase of 3.0 dB or more in an existing residential area where the Ldn currently exceeds 60 dB; or
- Result in indoor noise levels for residential development to exceed an Ldn of 45 dB; or
- Result in instantaneous noise levels of greater than 50 dB in bedrooms or 55 dB in other rooms in areas with an exterior Ldn of 60 dB or greater; or
- Expose persons to or generate excessive groundborne vibrations or groundborne noise levels; or
- Expose people to noise levels in excess of established City or state standards; or
- Expose people to a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Population and Housing
Population and housing impacts are considered significant if the project will:
- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure; or
• Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
• Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere; or
• Create a substantial imbalance between employed residents and jobs; or
• Cumulatively exceed regional or local population projections.

Transportation
For the purposes of this project, a traffic impact is considered significant if the project would:
  • Cause a local (City of Palo Alto) intersection to deteriorate below Level of Service (LOS) D and cause an increase in the average stopped delay for the critical movements by four seconds or more and the critical volume/capacity ratio (V/C) value to increase by 0.01 or more; or
  • Cause a local intersection already operating at LOS E or F to deteriorate in the average stopped delay for the critical movements by four seconds or more; or
  • Cause a regional intersection to deteriorate from an LOS E or better to LOS F or cause critical movement delay at such an intersection already operating at LOS F to increase by four seconds or more and the critical V/C value to increase by 0.01 or more; or
  • Cause a freeway segment to operate at LOS F or contribute traffic in excess of 1% of segment capacity to a freeway segment already operating at LOS F; or
  • Impede the development or function of planned pedestrian or bicycle facilities; or
  • Substantially impede the operation of a transit system as a result of congestion; or
  • Create an operational safety hazard; or
  • Cause any change in traffic that would increase the Traffic Infusion on Residential Environment (TIRE) index by 0.1 or more; or
  • Result in inadequate parking capacity; or
  • Result in inadequate emergency access.

Utilities and Service Systems
A utility impact is considered significant if the project will:
  • Require or result in the construction of new storm water or wastewater facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
  • Result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments; or
  • Need new or expanded entitlements for water supplies; or
  • Be served by a landfill with insufficient permitted capacity; or
  • Result in adverse physical impacts from new or expanded public facilities required to provide service as a result of the project; or
• Result in a substantial physical deterioration of a public facility due to increased use as a result of the project.

PREPARED BY: _____________________________________________
   Julie Caporgno, Advance Planning Manager

DEPARTMENT HEAD REVIEW: _____________________________________________
   STEVE EMLIE
   Director of Planning and Community Environment

CITY MANAGER APPROVAL: _____________________________________________
   EMILY HARRISON
   Assistant City Manager