

Ordinance No. 5220
Ordinance of the Council of the City of Palo Alto Adopting a New
Chapter 16.14 of the Palo Alto Municipal Code, California Green
Building Standards Code 2013 Edition, and Local Amendments and
Related Findings

The Council of the City of Palo Alto does ORDAIN as follows:

SECTION 1. Chapter 16.14 of the Palo Alto Municipal Code is hereby amended by repealing in its entirety Chapter 16.14 and adopting a new Chapter 16.14 to read as follows:

16.14.010 2013 California Green Building Standards Code adopted.

The California Green Building Standards Code, 2013 Edition, Title 24, Part 11 of the California Code of Regulations, together with those omissions, amendments, exceptions and additions thereto, is adopted and hereby incorporated in this Chapter by reference and made a part hereof the same as if fully set forth herein.

Unless superseded and expressly repealed, references in City of Palo Alto forms, documents and regulations to the chapters and sections of the former California Code of Regulations, Title 24, 2010, shall be construed to apply to the corresponding provisions contained within the California Code of Regulations, Title 24, 2013. Ordinance No. 5107 of the City of Palo Alto and all other ordinances or parts of ordinances in conflict herewith are hereby suspended and expressly repealed.

Wherever the phrases "California Green Building Standards Code" or "Cal Green" are used in this code or any ordinance of the City, such phrases shall be deemed and construed to refer and apply to the California Green Building Standards Code, 2013 Edition, as adopted by this chapter.

One copy of the California Green Building Standards Code, 2013 Edition, has been filed for use and examination of the public in the Office of the Building Official of the City of Palo Alto.

16.14.020 2013 California Green Building Standards Code Appendix Chapters adopted.

The following Appendix Chapters of the California Green Building Standards Code, 2013 Edition, are adopted and hereby incorporated in this Chapter by reference and made a part hereof the same as if fully set forth herein:

- A. Appendix A4 - Residential Voluntary Measures (Sections A4.105 and A4.408 only)
- B. Appendix A5 – Nonresidential Voluntary Measures (Tier 1 and Tier 2)

16.14.030 Cross - References to California Green Building Standards Code.

The provisions of this Chapter contain cross-references to the provisions of the California Green Building Standards Code, 2013 Edition, in order to facilitate reference and comparison to those provisions.

16.14.040 Build It Green

Build It Green is a professional non-profit membership organization whose mission is to promote healthy, energy and resource-efficient buildings in California. A Green Point Rated home must meet certain pre-requisites and earn a minimum point requirement in each of the five environmental categories. The points must be verified by a third-party independent Green Point Rater.

The most current version of the following checklists are adopted by reference and made a part hereof the same as if fully set forth herein: Green Point Rated New Homes Single Family, Green Point Rated New Homes Multi Family, Green Point Rated Existing Homes Single Family, and Green Point Rated Existing Homes Multi Family, and the rating manuals from which the checklists are derived.

16.14.050 Violations -- Penalties.

Any person, firm or corporation violating any provision of this chapter is guilty of a misdemeanor and upon conviction thereof shall be punished as provided in subsection (a) of Section 1.08.010 of this code. Each separate day or any portion thereof during which any violation of this chapter occurs or continues shall be deemed to constitute a separate offense, and upon conviction thereof shall be punishable as provided in this section.

16.14.060 Enforcement -- Citation authority.

The employee positions designated in this section may enforce the provisions of this chapter by the issuance of citations; persons employed in such positions are authorized to exercise the authority provided in Penal Code section 836.5 and are authorized to issue citations for violations of this chapter. The designated employee positions are: (1) chief building official; (2) building inspection supervisor; (3) Director of Development Services, and (4) Code enforcement officer.

16.14.070 Local Amendments.

The provisions of this Chapter shall constitute local amendments to the cross-referenced provisions of the California Green Building Standards Code, 2013 Edition, and shall be deemed to replace the cross-referenced sections of said Code with the respective provisions set forth in this Chapter.

16.14.080 Section 202 amended – Definitions added.

Section 202 of the California Green Building Standards Code is amended to include the following definitions:

BUILD IT GREEN, GREENPOINT RATED. Build It Green is a non-profit organization that administers the Green Point Rated program for the design and construction of environmentally responsive and healthy homes. The program includes a rating system that is third-party verified and includes recognition.

DEDICATED IRRIGATION METER. A dedicated irrigation meter is a water meter that exclusively meters water used for outdoor watering and irrigation, and is completely independent from the meter used for indoor water use.

HERS II. HERS shall mean the California Home Energy Rating System, a statewide program for residential dwellings administered by the California Energy Commission and defined in the 2008 California Building Energy Efficiency Standards. HERS Phase I provides field verification and diagnostic testing to show compliance with Title 24, Part 6, of the 2008 California Building Energy Efficiency Standards. HERS Phase II includes whole-house home energy efficiency ratings for existing and newly constructed homes. Applicants are not required to achieve a set rating.

INVASIVE PLANTS. Invasive plants are both indigenous and non-indigenous species with growth habits that are characteristically aggressive. Invasive plants that are of concern and may be prohibited by this code are defined as such in the "Water Use Classification of Landscape Species (WUCOLS), A Guide to the Water Needs of Landscape Plants," from the University of California Cooperative Extension.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE. The California ordinance regulating new construction and rehabilitated landscape project design, installation and maintenance. The Model Ordinance assigns a Maximum Applied Water Allowance (MAWA) based on landscaped area and climatological parameters. The City of Palo Alto has adopted more stringent compliance regulations in this code than the Model Ordinance; however, the Model Ordinance is referenced as the guiding document for water use calculations, irrigation system design, and water waste prevention.

PROCESS WATER. Process water means untreated wastewater, uncontaminated by toilet discharge or an unhealthy bodily waste, which is not a threat from unhealthful processing, manufacturing or operating wastes.

SALVAGE. Salvage means the controlled removal of construction or demolition debris/material from a building, construction, or demolition site for the purpose of on- or off-site reuse, or storage for later reuse. Examples include air conditioning and heating systems, columns, balustrades, fountains, gazebos, molding, mantels, pavers, planters, quoins, stair treads, trim, wall caps, bath tubs, bricks, cabinetry, carpet, doors, ceiling fans, lighting fixtures, electrical panel boxes, fencing, fireplaces, flooring materials of wood, marble, stone or tile, furnaces, plate glass, wall mirrors, door knobs, door brackets, door hinges, marble, iron work, metal balconies, structural steel, plumbing

fixtures, refrigerators, rock, roofing materials, siding materials, sinks, stairs, stone, stoves, toilets, windows, wood fencing, lumber and plywood.

SQUARE FOOTAGE. For application of green building requirements, square footage means all new and replacement square footage, including basement areas (7 feet or greater in height) and garages, except that unconditioned garage space shall only count as 50% . Areas demolished shall not be deducted from the total new construction square footage. Square footage may also apply to landscapes, in which case it is the total surface area of the site not covered by impervious surfaces.

16.14.090 Section 303.1.2 Cumulative construction. Section 303.1.2 is added to the California Green Building Standards Code to read:

303.1.2 Cumulative construction. Cumulative construction over any two-year period, or a project completed in phases, shall be considered as a single project, subject to the highest level of green building requirements for that project, unless exempted by the Director of Development Services as impractical for compliance. If a project is developed in phases, such as a core and shell development following by a tenant improvement, regardless of ownership each phase will be subject to the green building requirements which apply to the scope of work constructed as part of that phase.

16.14.100 Chapter 4 Preface: Green building requirements for project type and scope. A preface is added to Chapter 4 of the California Green Building Standards Code to read:

Preface – Green Building Requirements for Project Type and Scope For design and construction of residential projects, the City requires use of the Build It Green (BIG), Green Point Rated (GPR) program to comply with the mandatory measures of Chapter 4.

16.14.110 All Residential Building additions and alterations exceeding 1250 square feet must meet Build It Green, Green Point Rated (BIG GPR) minimum requirements and achieve 50 points.

16.14.120 All newly constructed Residential Buildings must achieve BIG GPR minimum requirements and achieve 70 points + 1 point per additional 70 square feet over 2500 square feet. Projects with landscape area greater than 5,000 square feet must claim a minimum of 15 points in water efficiency from the Landscape section of the BIG GPR or show compliance with the Model Water Efficient Landscape Ordinance.

16.14.130 At the completion of construction, a Green Point Rated Certificate of Evaluation must be filed with the City of Palo Alto for all projects requiring Build It Green, Green Point Rating.

16.14.140 Section A4.105.1 and A4.105.2 Reuse of Materials are adopted and apply to demolition of all Residential Projects.

16.14.150 Section A5.305.2 Recycled water infrastructure for irrigation systems is adopted and applies to all projects other than single-family homes in geographic areas within the boundaries of a recycled water project area. All projects other than single-family homes not within the boundaries of a recycled water project area must install recycled water infrastructure for irrigation when the landscape area exceeds 1,000 square feet. Dedicated irrigation meters are to be installed in all new construction and rehabilitated landscapes when the landscape is greater than 1,000 square feet.

16.14.160 Section A4.408.1 Enhanced Construction Waste Reduction is adopted at Tier 2 (75% construction waste reduction), and applies to all Residential Projects.

16.14.170 Chapter 5 Preface Green Building Requirements for Project Type and Scope. A Preface is added to Chapter 5 of the California Green Building Standards Code to read:

Preface – Green Building Requirements for Project Type and Scope. For design and construction of non-residential projects, the City requires compliance with the mandatory measures of Chapter 5, in addition to use of the Voluntary Tiers.

16.14.180 All new nonresidential construction and additions of 1000 square feet or greater must comply with California Green Building Standards Code Mandatory plus Tier 2 requirements, as applicable to the scope of work.

16.14.190 Section A5.303.5 Dual Plumbing and use of recycled water for toilet and urinal flushing is required for all building projects in geographic areas within the boundaries of a recycled water project area when the building area is greater than 10,000 square feet or where installation of 25 or more toilets and urinals is proposed. All projects not within the boundaries of a recycled water project area must install dual plumbing for use of recycled water for toilet and urinal flushing when the building area exceeds 100,000 square feet or where installation of 100 or more toilets and urinals is proposed.

16.14.200 Tenant improvements, renovations, or alterations of 5,000 square feet that include replacement or alteration of at least two of the following: HVAC system, building envelope, hot water system, or lighting system must comply with Mandatory California Green Building Standards Code plus Tier 1 requirements, as applicable to the scope of work.

16.14.210 Section A5.304.4.1 Potable Water Reduction Tier 1 is adopted and applies to all nonresidential and multi-family residential tenant improvement and renovation construction projects when a landscape area greater than 1,000 square feet is included in the project scope. Documentation is required to demonstrate the Estimated Total Water Use (ETWU) falls within a Maximum Applied Water Allowance (MAWA) using the appropriate evapotranspiration adjustment factor (ETAF) designated by the prescribed potable water reduction tier.

16.14.220 Section A5.304.4.2 Potable Water Reduction Tier 2 is adopted and applies to all nonresidential and multi-family residential new construction projects when a landscape of any size is included in the project scope. Documentation is required to demonstrate the Estimated Total Water Use (ETWU) falls within a Maximum Applied Water Allowance (MAWA) using the appropriate evapotranspiration adjustment factor (ETAF) designated by the prescribed potable water reduction tier.

16.14.230 Section A5.305.2 Recycled water infrastructure for irrigation systems is adopted and applies to all projects in geographic areas within the boundaries of a recycled water project area. All projects not within the boundaries of a recycled water project area must install recycled water infrastructure for irrigation when the landscape area exceeds 1,000 square feet. Dedicated irrigation meters are to be installed in all new construction and rehabilitated landscapes when the landscape is greater than 1,000 square feet.

16.14.240 Section A5.408.3.1.1 Enhanced Construction Waste Reduction - Tier 2 is adopted and applies to all nonresidential construction, including both renovations and new construction, as long as the construction has a valuation exceeding \$25,000.

16.14.250 All nonresidential projects exceeding \$100,000 valuation must acquire an Energy STAR Portfolio Manager Rating and submit the rating to the City of Palo Alto once the project has been occupied after 12 months.

16.14.260 Section A5.105.1.3 Salvage is adopted and applies to demolition of all nonresidential projects.

16.14.270 Section A5.408.3.1.1 Enhanced Construction Waste Reduction - Tier 2 is adopted and applies to all nonresidential demolition.

16.14.280 Section 5.106.2 Local storm water pollution prevention. Section 5.106.2 is added to the California Green Building Standards Code to read:

Section 5.106.2 Local storm water pollution prevention. Comply with additional storm water pollution prevention measures as applicable. (See Chapter 16.11, Storm water Pollution Prevention, of the Palo Alto Municipal Code.)

16.14.290 Section 5.304.3.2 Irrigation efficiency; Sections 5.304.3.2 is added to the California Green Building Standards Code to read:

5.304.3.2 Irrigation efficiency. The irrigation system must meet an efficiency level of 71%, and subsurface and/or low volume irrigation must be used in all areas that exhibit any of these characteristics: less than 8 feet in width, with a slope greater than 25%, setback area within 24 inches of a non-permeable surface.

16.14.300 Section 5.304.3.3 Water waste; Sections 5.304.3.2 is added to the California Green Building Standards Code to read:

5.304.3.3 Water waste. The irrigation system must be designed and installed to prevent water waste due to overspray, low head drainage, or other conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures.

16.14.310 Irrigation scheduling. Overhead irrigation shall be scheduled between 8:00 p.m. and 10:00 a.m. unless weather conditions prevent it. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance. Total annual applied water shall be less than or equal to Maximum Applied Water Allowance (MAWA) as calculated per the potable water use reduction tier.

16.14.320 Section A5.105.1.3 Salvage. Section A5.105.1.3 of the California Green Building Standards Code is amended to read:

A5.105.1.3 Salvage. Salvage structural and non-structural items in good condition such as wood, light fixtures, plumbing fixtures, and doors as follows. Document the weight and number of the items salvaged.

1. Salvage for reuse on the project items that conform to other provisions of Title 24 in an onsite storage area.

2. Nonconforming items may be salvaged in dedicated collection bins for exempt projects or other uses.

16.14.330 Section A5.304.4 Potable water reduction. Section A5.304.4 of the California Green Building Standards Code is amended to read:

A5.304.4 Potable water reduction. Provide water efficient landscape irrigation design that reduces the use of potable water beyond the initial requirements for plant installation and establishment in accordance with Section A5.304.4.1 or A5.304.4.2. Calculations for the reduction shall be based on the water budget developed pursuant to section 5.304.1.

A5.304.4.1 Do not install invasive plant species.

16.14.340 Section A5.601.3.4 Voluntary measures for California Green Building Standards Code Tier 2. Sub-section 4 of Section A5.601.3.4 of the California Green Building Standards Code is amended to read:

4. From Division A5.5,

c) Comply with four elective measures selected from this division.

16.14.350 Performance Reviews -- Energy

All projects over 10,000 square feet. The City reserves the right to conduct a performance review, no more frequently than once every five years unless a project fails review, to evaluate

the building's energy use to ensure that resources used at the building and/or site do not exceed the maximum allowance set forth in the rehabilitation or new construction design. Energy use reviews may be initiated by the Building Division or as a coordinated effort between the City's Utilities Department and/or its designated contractors. Following the findings and recommendations of the review, the City may require adjustments to the energy usage or energy-using equipment or systems if the building is no longer compliant with the original design. Renovation or rehabilitation resulting from such audit activity shall be considered a project, and shall be subject to applicable documentation submittal requirements of the City. This section is effective only for those projects for which a building permit was issued after 01/01/2009.

16.14.360 Performance Reviews -- Water Use

All sites greater than one acre. The City reserves the right to conduct performance reviews, no more frequently than once every five years unless a project fails review, to evaluate water use to ensure that resources used at the building and/or site do not exceed a maximum allowance set forth in the rehabilitation or new construction design. Water use reviews may be initiated by the Building Division, or as a coordinated effort between the City's Utilities Department and the Santa Clara Valley Water District (SCVWD), or as part of SCVWD's established water conservation programs. Following the findings and recommendations of the review, the City may require adjustments to irrigation usage, irrigation hardware, and/or landscape materials to reduce consumption and improve efficiency. Renovation or rehabilitation resulting from such audit activity shall be considered a project, and shall be subject to applicable documentation submittal requirements of the City.

SECTION 2. The Council adopts the findings for local amendments to the California Green Building Standards Code, 2010 Edition, attached hereto as Exhibit "A" and incorporated herein by reference.

SECTION 3. The Council finds that this project is exempt from the provisions of the California Environmental Quality Act ("CEQA"), pursuant to Section 15061 of the CEQA Guidelines, because it can be seen with certainty that there is no possibility that the amendments herein adopted will have a significant effect on the environment.

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SECTION 4. This ordinance shall be effective on the thirty-first day after the date of its adoption.

INTRODUCED: October 21, 2013

PASSED: November 18, 2013

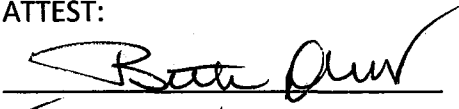
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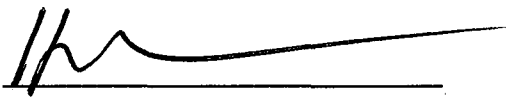
ABSENT:

ABSTENTIONS:

ATTEST:

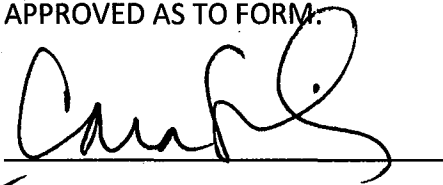
for 

City Clerk



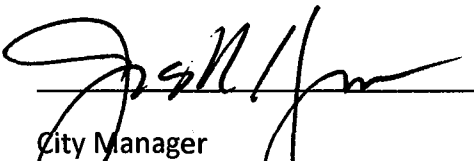
Mayor

APPROVED AS TO FORM:

For 

City Attorney

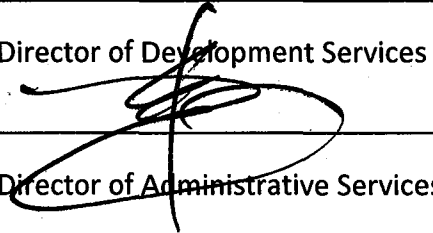
APPROVED:



City Manager



Director of Development Services



Director of Administrative Services

Exhibit A

**FINDINGS FOR LOCAL AMENDMENTS TO
CALIFORNIA GREEN BUILDING STANDARD CODE, 2010 EDITION**

Section 17958 of the California Health and Safety Code provides that the City may make changes to the provisions in the uniform codes that are published in the California Building Standards Code. Sections 17958.5 and 17958.7 of the Health and Safety Code require that for each proposed local change to those provisions in the uniform codes and published in the California Building Standards Code which regulate buildings used for human habitation, the City Council must make findings supporting its determination that each such local change is reasonably necessary because of local climatic, geological, or topographical conditions.

Local building regulations having the effect of amending the uniform codes, which were adopted by the City prior to November 23, 1970, were unaffected by the regulations of Sections 17958, 17958.5 and 17958.7 of the Health and Safety Code. Therefore, amendments to the uniform codes which were adopted by the City Council prior to November 23, 1970, and have been carried through from year to year without significant change, need no required findings. Also, amendments to provisions not regulating buildings used for human habitation, including amendments made only for administrative consistency, do not require findings.

Code: Cal Green					
Section	Title	Add	Deleted	Amended	Justification (See below for keys)
303.1.2	Cumulative Construction	✓			C & E
5.106.2	Local Storm Water Pollution Prevention	✓			C
5.304.3.2	Irrigation Efficiency	✓			C
5.304.3.3	Water Waste	✓			C
A4.105	Deconstruction and Reuse of Existing Materials	✓			C & E
A4.408	Construction Waste Reduction, Disposal and Recycling.	✓			E
Appendix 5	Non-Residential Voluntary Measures	✓		✓	C & E

Key to Justification for Amendments to Title 24 of the California Code of Regulations

- C** This amendment is justified on the basis of a local climatic condition. The seasonal climatic conditions during the late summer and fall create severe fire hazards to the public health and welfare in the City. The hot, dry weather frequently results in wild land fires on the brush covered slopes west of Interstate 280. The aforementioned conditions combined with the geological characteristics of the hills within the City create hazardous conditions for which departure from California Building Standards Code is required. Failure to address and significantly reduce greenhouse gas (GHG) emissions could result in rises in sea level, including in San Francisco Bay, that could put at risk Palo Alto homes and businesses, public facilities, and Highway 101 (Bayshore Freeway), particularly the mapped Flood Hazard areas of the City. Energy efficiency is a key component in reducing GHG emissions, and construction of more energy efficient buildings can help Palo Alto reduce its share of the GHG emissions that contribute to climate change. The burning of fossil fuels used in the generation of electric power and heating of buildings contributes to climate change, which could result in rises in sea level, including in San Francisco Bay, that could put at risk Palo Alto homes and businesses 1 public facilities, and Highway 101. Due to decrease in annual rain fall, Palo Alto experiences the effect of drought and water saving more than some other communities in California.
- E** Green building enhances the public health and welfare by promoting the environmental and economic health of the City through the design, construction, maintenance, operation and deconstruction of buildings and sites by incorporating green practices into all development. The green provisions in this Chapter are designed to achieve the following goals:
- (a) Increase energy efficiency in buildings;
 - (b) Increase water and resource conservation;
 - (c) Reduce waste generated by construction and demolition projects;
 - (d) Provide durable buildings that are efficient and economical to own and operate;
 - (e) Promote the health and productivity of residents, workers, and visitors to the city;
 - (f) Recognize and conserve the energy embodied in existing buildings;
 - (g) Encourage alternative transportation; and
 - (h) Reduce disturbance of natural ecosystems.
- G** This amendment is justified on the basis of a local geological condition. The City of Palo Alto is subject to earthquake hazard caused by its proximity to San Andreas fault. This fault runs from Hollister, through the Santa Cruz Mountains, epicenter of the 1989 Loma Prieta earthquake, then on up the San Francisco Peninsula, then offshore at Daly City near Mussel Rock. This is the approximate location of the epicenter of the 1906 San Francisco earthquake. The other fault is Hayward Fault. This fault is about 74 mi long, situated mainly along the western base of the hills on the east side of San Francisco Bay. Both of these faults are considered major Northern California earthquake faults which may experience rupture at any time. Thus, because the City is within a seismic area which includes these earthquake faults, the modifications and changes cited herein are designed to better limit property damage as a result of seismic activity and to establish criteria for repair of damaged properties following a local emergency.
- T** The City of Palo Alto topography includes hillsides with narrow and winding access, which makes timely response by fire suppression vehicles difficult. Palo Alto is contiguous with the San Francisco Bay, resulting in a natural receptor for storm and waste water run-off. Also the

City of Palo Alto is located in an area that is potentially susceptible to liquefaction during a major earthquake. The surface condition consists mostly of stiff to dense sandy clay, which is highly plastic and expansive in nature. The aforementioned conditions within the City create hazardous conditions for which departure from California Building Standards Code is warranted.