



DATE: November 14, 2016

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT

Construction & Demolition Debris Recycling Requirements

RECOMMENDATION

That the Committee reviews and comments on this report. In consideration of a possible ordinance update to the City's Construction & Demolition Debris Recycling ordinance, staff recommends that the ordinance: 1) apply to projects as specified by the state building code except that Hayward establish a lower project valuation threshold; and 2) require a recycling rate as specified by the state building code, but that the ordinance also require that 100% of all mixed C&D debris load be taken to a third-party verified recycling facility.

SUMMARY

This report provides an overview of the current City of Hayward Construction and Demolition (C&D) Debris Recycling Ordinance (adopted March 6, 2001) and a summary of the California Green Building Standards Code (CALGreen) as it pertains to debris recycling for construction and demolition projects in California. An updated version of CALGreen will be effective on January 1, 2017, and one of the changes includes a provision on minimum C&D debris recycling requirements that will supersede those of the City's local ordinance. At this juncture, the City has an opportunity to consider its local ordinance requirements and a possible ordinance update.

BACKGROUND

As used in this report, *threshold* refers to the valuation or scope of a construction or demolition project at which point the ordinance applies; *required recycling rate* refers to the minimum rate at which debris must be recycled for all applicable projects.

Current C&D Ordinance

A brief summary of the City's current Construction & Demolition Debris Recycling Ordinance requirements is provided below (full ordinance, adopted March 6, 2001, can be found in Attachment II).

- **Threshold:** The current ordinance applies to projects that have applied for a building permit and are valued in excess of \$75,000 with a provision to adjust thresholds every five years for inflation/deflation beginning in 2006. No threshold changes have been made since Ordinance adoption.
- **Required Recycling Rate:** 100% of asphalt/concrete/similar materials, and 50% of all other C&D debris must be recycled.

CALGreen

The first CALGreen code became effective in California in 2008. The CALGreen Construction Waste Reduction, Disposal, and Recycling Section (5.408) established a statewide C&D debris minimum recycling requirement of 50% effective for all jurisdictions that did not have a more stringent local ordinance. CALGreen is updated on a three-year cycle and the most recent update became effective on January 1, 2014. A summary of the current requirements (Section 5.408) is described below.

- **Current Thresholds:**
 - For nonresidential projects: additions of over 1,000 square feet or permits exceeding \$200,000 valuation, all demolition projects associated with construction permits (does not include demolition-only permits), and all new construction
 - For residential projects: additions or alterations that increases conditioned area/volume/size (conditioned area is defined in the CALGreen code as the space in a building that is either directly conditioned or indirectly conditioned by a heating or cooling system. An increase in conditioned space can be thought of as adding additional living area to the building), which applies only to and or within the specific area of addition or alteration, all demolition projects associated with construction permits, and all new construction
- **Current Required Recycling Rate:** *"recycle and/or salvage for reuse a minimum of 50% of the non-hazardous construction and demolition waste (in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3); or meet a local construction and demolition waste management ordinance, whichever is more stringent."* The City's local C&D Ordinance is currently more stringent than the CALGreen requirements and supersedes CALGreen.

The new CALGreen code will be effective January 1, 2017, and one of the provisions that will be updated is Section 5.408. A summary of the updated requirements is below.

- **Updated Thresholds:**
 - For nonresidential projects: all permitted additions or alterations, newly constructed buildings, all demolition permits associated with construction permits
 - For residential projects: additions or alterations that increase conditioned area/volume/size (applies only to and or within the specific area of addition or alteration), all demolition projects associated with construction permits, and all new construction
- **Updated Required Recycling Rate:** *“recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction and demolition waste (in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3); or meet a local construction and demolition waste management ordinance, whichever is more stringent.”*

As the minimum recycling rate will surpass our local ordinance effective January 1, 2017, we have an opportunity to reconsider our local ordinance in comparison to CALGreen requirements. CALGreen will continue to be updated on a three-year cycle, and will likely enact more stringent C&D requirements with each update, as has been historically the case in past updates.

DISCUSSION

For regional context, there is currently a range of C&D ordinances among the jurisdictions in Alameda County, as shown in the table below. An expanded version of this table of C&D ordinances by jurisdiction can be found at <http://www.stopwaste.org/resource/policies/construction-and-demolition-debris-ordinances-alameda-county-matrix>.

City	Diversion Requirement	Threshold
County of Alameda (unincorporated areas)	75% of inert solids, 50% of remaining debris	All demo projects, residential projects over 1,000 square feet, commercial projects over 3,000 square feet
City of Alameda	50% of debris	Projects valued at \$100,000 or more
City of Albany	100% of asphalt, concrete and similar material, 50%, of remaining debris	Projects valued at \$75,000 or more, \$25,000 for just demolition projects
City of Berkeley	100% of concrete and asphalt, 100% of land clearing waste, and 50% of remaining debris	All new construction, renovation projects valued at \$100,000 or greater, all demolition projects over \$3,000 valuation
City of Dublin	65% of the waste from remodels or tenant improvements, 75% of the waste for new	Projects valued at \$100,000 or more, Projects valued at \$1,000,000 or more require a performance security deposit.

	construction, and 100% of asphalt and concrete	
City of Emeryville	100% of all Portland cement concrete and asphalt concrete, 50% of remaining C&D debris	All new construction & demolition, all commercial remodeling projects greater than \$50,000 or 1,000 square feet, residential remodeling projects over \$50,000 or 1,000 square feet or that increase living area
City of Fremont	100% of concrete and asphalt 50% of remaining waste generated, 100% of plant debris must be composted	Same as CALGreen code
City of Livermore	Same as CALGreen code	Same as CALGreen code
City of Newark	100% asphalt and concrete, 50% of remaining debris	Projects valued at \$100,000 or more, structure demolition projects greater than \$20,000
City of Oakland	100% asphalt and concrete, 65% of remaining waste generated	All demolition, additions and alterations to residential projects that increased conditioned space, additions and alterations to nonresidential projects over 1,000 square feet or \$50,000 in valuation
City of Piedmont	50% of waste generated	Projects valued at \$50,000 or more
City of Pleasanton	90% of Portland Cement, concrete and asphalt concrete, 75% of remaining C&D debris	Same as CALGreen code
City of San Leandro	100% Portland cement, concrete, asphalt concrete, noncontaminated soils, land clearing debris, plant debris, and 50% of remaining debris	All newly constructed commercial buildings, all non-residential projects valued at \$50,000 or more. All demolition projects valued at \$25,000 or more
Oro Loma Sanitary District	100% of asphalt, concrete and similar materials, 50% of remaining waste materials generated	All projects valued at \$100,000 or more.

Staff gathered feedback on possible ordinance updates from a variety of sources, including staff at the California Department of Resources Recycling and Recovery (CalRecycle), StopWaste, and a local C&D debris recycling facility. Their comments are included below in the relevant topic sections.

Staff seeks guidance from the Committee on both the threshold and the minimum recycling rate requirements for consideration in an ordinance update. Possible options are listed below in each section.

Proposed Threshold for Hayward

The threshold of the ordinance determines which projects must comply with the ordinance. Below is a list of possible threshold options the City may consider with an ordinance update. Staff is recommending Option 2.

- **Option 1:** Update Hayward's threshold to match CALGreen requirements. As noted above, the threshold for nonresidential projects would be: all permitted additions or alterations, newly constructed buildings, all demolition permits associated with construction permits. For residential projects: additions or alterations that increases conditioned area/volume/size, all demolition projects associated with construction permits, and all new construction.
 - **Pros:** Consistency with CALGreen and closer alignment with future CALGreen requirements
 - **Cons:** Would not cover demolition-only permits or larger residential remodel projects that do not increased the conditioned area
- **Option 2:** Update Hayward's threshold to match CALGreen requirements, but with two modifications, including a residential monetary threshold of \$75,000 and demolition-only permits. The threshold for nonresidential projects would be: all permitted additions or alterations, newly constructed buildings, and all demolition permits. For residential projects: all additions or alterations that increase conditioned area/volume/size, all demolition projects, all new construction, and all alterations valued at \$75,000 or more.
 - **Pros:** Lowering the monetary threshold for residential projects would continue to capture larger residential remodels that may not increase conditioned area, and including demolition-only permits will capture waste associated with those projects
 - **Cons:** Would not align directly with CALGreen

Staff recommends that the Committee consider Option 2 for setting an updated threshold, which would ensure some consistency with CALGreen moving forward, while including large residential remodels valued above \$75,000 that do not increase the conditioned area of the building, as well as all demolition projects.

Proposed Required Recycling Rate for Hayward

The required recycle rate of a project specifies the percentage of material that must be recycled versus directed to a landfill. Below are three possible recycling rate options the City may consider with an ordinance update. Staff is recommending Option 2.

- **Option 1:** Retain a similar structure to the current ordinance, but update to default to the CALGreen minimum threshold in the current code (i.e. 100% of asphalt/concrete/similar materials, and 65% of all other C&D debris).

- **Pros:** Would minimize the need for future ordinance changes, as the ordinance would refer to whatever the minimum threshold set by CALGreen at the time
- **Cons:** Setting a recycling rate without identifying third-party verified facilities for contractors to take C&D debris to may encourage inaccurate accounting
- **Option 2:** Retain a similar structure to the current ordinance, but update to default to the CALGreen minimum threshold in the current code (i.e. 100% of asphalt/concrete/similar materials, and 65% of all other C&D debris) and require that 100% of all mixed C&D debris loads be taken to a third-party verified recycling facility (described later in this section) with a facility-average recovery rate of 65% or more.
 - **Pros:** Would ensure contractors take mixed C&D debris to facilities that implement best sorting practices and have reliable recycling rates. Any contractor that prefers to take debris to a non-certified facility can source-separate materials and take them to facilities that specialize in recycling that specific material (i.e. only metals, or only concrete). Staff from CalRecycle, StopWaste, and a local C&D recycling facility recommend this option, as described below.
 - **Cons:** Would limit the number of facilities that process mixed C&D debris that contractors can use
- **Option 3:** Retain a similar structure to the current ordinance, but update to exceed CALGreen minimum threshold, (i.e. 100% of asphalt/concrete/similar materials, and 75% of all other C&D debris)
 - **Pros:** Exceeding the current CALGreen rate could position the City as ahead of other jurisdictions in terms of minimum requirements and may allow the City to stay ahead of future CALGreen code updates.
 - **Cons:** StopWaste staff and CalRecycle staff recommend otherwise, as described below.

Staff recommends Option 2 for setting an updated required recycling rate. An insight gained from speaking with staff at StopWaste, CalRecycle, and a local C&D recycling facility was the importance of taking mixed C&D debris to a recycling facility that has third-party verified recycling rates. Local facilities such as Waste Management's Davis Street Transfer Station and Zanker Recycling are certified through the Recycling Certification Institute (RCI), a national non-profit organization. Approximately 75% of all C&D debris originating in Hayward is taken to these two facilities. While regional efforts have been made to promote the use of RCI, consensus has not yet been reached to utilize the methodology of RCI for verifying all regional facilities. Staff recommends incorporating a requirement for the use of third-party certified recycling facilities into the ordinance to ensure that materials are sorted and diverted from the landfill to the maximum extent practicable.

The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program currently offers credit for projects that take C&D debris to third-party verified facilities. The LEED language used to define a third-party verified facility is described at the following link: <http://www.usgbc.org/credits/new-construction-core-and-shell-schools-new-construction-retail-new-construction-healthca-49>. RCI's third-party verification methodology meets the requirements of the LEED definition.

Furthermore, the updated CALGreen code effective January 1, 2017 identifies a voluntary measure for third-party certified diversion rates, an excerpt of which is provided below:

"Any mixed recyclables that are sent to mixed-waste recycling facilities shall include a qualified third party verified facility average diversion rate. Verification of diversion rates shall meet minimum certification eligibility guidelines, acceptable to the local enforcing agency."

Staff recommends that similar language requiring the use of third-party verified facilities be incorporated into the City's ordinance.

StopWaste, CalRecycle, and C&D recycling facility staff indicated that raising the recycling rate to a higher threshold than the CALGreen minimum threshold of 65% may not be feasible for many projects, even if they are following recycling best practices. Some recycling markets are faltering, causing recycling rates at C&D facilities to decline. Local experts anticipate that recycling rates may decline by as much as 5-15% in the next few years. Staff at a local C&D recycling facility indicated that achieving a recycling rate of more than 75% can only be achieved with the highest quality C&D debris loads, and usually only when asphalt and concrete are included. By requiring 100% of asphalt, concrete, & related materials and 65% minimum recycling rate for all other C&D debris, in effect, many projects will exceed 75% recycling for total debris if the project includes asphalt, concrete and related materials debris.

Furthermore, accounting and reporting of accurate recycling rates has been acknowledged by CALGreen and other parties as inconsistent and possibly inaccurate across the state. StopWaste, CalRecycle, and C&D recycling facility staff made an informal recommendation to City staff to adopt a 65% minimum recycling rate and encourage more source-separated recycling. Source separated recycling means that contractors would sort different debris types (i.e. concrete, wood, metal) into different containers at the project site and separately take each material type to a facility that specializes in recycling that material stream.

A summary table of the updated CALGreen code effective January 1, 2017 compared to the proposed updated Hayward C&D ordinance, with staff recommendations incorporated, is provided on the following page.

		Updated CALGreen Code Effective 1/1/2017	Proposed Updated Hayward C&D Ordinance
Nonresidential Projects			
Required Recycling Rate		≥ 65% of C&D waste	100% of asphalt, concrete, and similar material, ≥ 65% of remaining C&D waste, mixed C&D debris must be processed by a third-party verified recycling facility
Thresholds	New Construction	Permitted structures	Permitted structures
	Demolition	Only demolition projects associated with a construction permit (demolition-only permits are outside CALGreen scope)	All permitted demolition projects (including demolition-only permits)
	Additions or Alterations	Permitted structures	Permitted structures
Residential Projects			
Required Recycling Rate		≥ 65% of C&D waste	100% of asphalt, concrete, and similar material, ≥ 65% of remaining C&D waste, mixed C&D debris must be processed by a third-party verified recycling facility
Thresholds	New Construction	Permitted structures	Permitted structures
	Demolition	Only demolition projects associated with a construction permit (demolition-only permits are outside CALGreen scope)	All permitted demolition projects (including demolition-only permits)
	Additions or Alterations	Additions or alterations that increase the structure's conditioned area, volume, or size	Additions or alterations that increase the structure's conditioned area, volume, or size, or alterations valued ≥ \$75,000

ECONOMIC IMPACT

Depending on how Hayward's C&D ordinance is amended, increasing the C&D debris recycling rate requirement may result in a change to the debris recycling procedures by contractors working within the City. These changes may have some nominal cost implications as contractors are required to implement better sorting procedures for C&D debris or establishing other means of ensuring a higher recycling rate.

FISCAL IMPACT

Amendments to the ordinance are anticipated to have a minimal impact on staff time. Any additional review time associated with the ordinance amendments would be covered by development review fees already collected as part of the permit review process.

SUSTAINABILITY FEATURES

A C&D ordinance update would be directly in line with General Plan Policy PFS-7.12, Construction and Demolition Waste Recycling, which states,

The City shall require demolition, remodeling and major new development projects to salvage or recycle asphalt and concrete and all other nonhazardous construction and demolition materials to the maximum extent practicable.

PUBLIC CONTACT

Staff has not yet directly engaged with the community or impacted parties. If directed to pursue changes to the C&D ordinance, staff will engage with the community, including professional stakeholders, to gather input.

NEXT STEPS

Staff seeks policy direction from the Committee on a possible ordinance update. If appropriate, an ordinance update can be brought to the full Council in early 2017.

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Recommended by: Alex Ameri, Director of Utilities & Environmental Services

Approved by:



Kelly McAdoo, City Manager