The Monthly Dirt

A monthly newsletter on the California Construction General Permit

Remove storm water quality from the demolition list

Out with the old, in with the new! While this may be true for whatever you are demo-ing and building, it's not necessarily true for storm water regulations. Demolition has its own very specific regulations that must be followed for the protection of water quality and compliance with the landfill diversion mandate. In this month's edition of **The Monthly Dirt**, we're going to take a swing at demolition, deconstruction, diversions, and what the Permit says in Attachment D. So, remove storm water from the list of items needing to be demoed, because we want to very much keep that intact and healthy.

Did you know that it is estimated, in the United States, that 200,000 to 300,000 homes are demolished every year?[1] That's a lot of buildings being knocked down, and not only that, but a lot of waste and pollutants being generated. According to a study conducted several years ago, "Construction and demolition waste accounts for upwards of 40% of the US waste stream. In 2018 alone, the US generated 600 million tons of construction and demolition debris. Of that, 90% was from demolition with the remaining 10% coming from construction."[2] This amount of waste generated from demolition activities has been the catalyst for putting in place recycling requirements which in turn brought about two different terms in the knocking-buildings-down field that we need to define – *demolition* and *deconstruction*.

At first glance, these words seem to convey the same meaning – tearing down a building to make room for something new. And while yes, at the end of the day that's the same outcome, the means to the end are slightly different. To help bring clarity, CalRecycle offers two definitions for these terms:

Demolition: "The decimating, razing, ruining, tearing down or wrecking of any facility, structure, pavement or building, (wall, fence) whether in whole or in part, whether interior or exterior."

Deconstruction: "The careful and systematic dismantling of buildings and structures in order to salvage materials for diversion."

So, while deconstruction is done in such a way as to salvage and divert materials from the general waste stream, demolition is a complete wreckage of the building with no intention of salvaging and diverting materials.

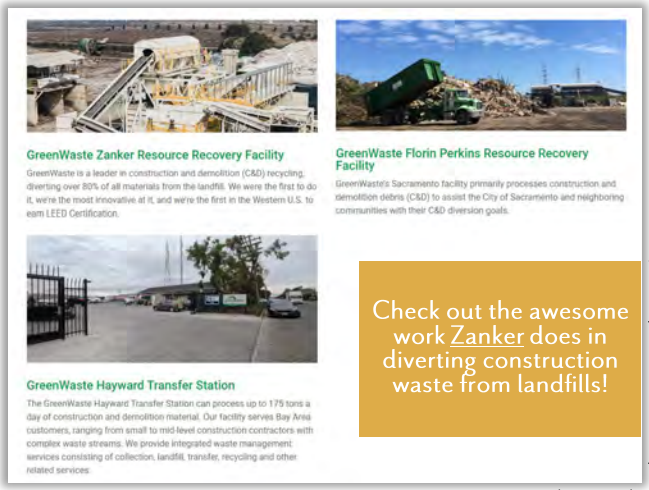
Diversion Requirements

"CALGreen mandates locally permitted new residential and non-residential building construction, demolition and certain additions and alteration projects to recycle and/or salvage for reuse a minimum 65 percent of the nonhazardous C&D debris generated during the project (CALGreen sections 4.408, 5.408, 301.1.1 and 301.3)."[3]

Yes, 65% of construction and demolition debris needs to be diverted and recycled – which includes materials like lumber, drywall, metals, masonry (brick, concrete, etc.), carpet, plastic, pipes, cardboard, and green waste related to land development.

How is it possible to sort and divert that high of a percentage of C&D material? Well, there are a couple options. The first option you can choose is to develop and submit a waste management plan to the project's city or county enforcement office which identifies the materials that will be recycled, which disposal facilities will be used, and provides documentation of materials that were diverted to show compliance with the regulation. "If the waste management plan option is used, the plan should be developed before construction begins, and project managers should use the project's planning phase to estimate materials that will be generated and identify diversion strategies for those materials. The code provides for exceptions and the project's planning phase would be an appropriate time to work with the jurisdiction's enforcement agency and recycling coordinator to establish the best route to compliance or to determine if an exception is warranted. All covered projects should be able to divert 65 percent non-hazardous waste."[4]

Waste Management Plans are simply a document which proves a construction site is



Check out the awesome work Zanker does in diverting construction waste from landfills!

opting to comply with the State and local jurisdiction's waste reduction requirements and that the site has measures in place to meet the 65% diversion rates. For a lot of cities or counties, this waste management plan is a simple one-page form that a discharger will need to fill out and file prior to the start of demolition activities. Check with your local jurisdiction to see what is required for the area, because diversion rates can fluctuate between 50% – 75% depending on the location. Most jurisdictions are encouraged to have similar requirements to reduce confusion between regions and "even the playing field" for what is required for construction and demolition activities.

Next, a project can opt to use a waste management company who will take on the responsibility of documenting that the site reached the 65% diversion requirement. There are waste disposal facilities that specialize in diverting and recycling C&D waste. GreenWaste Zanker is a group of facilities which have earned recognition for their work in diverting 80% of construction and demolition waste and recycling it.


Form #172

CONSTRUCTION WASTE MANAGEMENT PLAN

BERKELEY

Building and Safety Permit Service Center

Project Information Permit Number:

Project Address:

Construction Methods

Waste generated during construction will be minimized through a combination of efficient design, careful and accurate material ordering, handling and storage, panelized or prefabricated construction, reuse, and/or salvage.

Universal and Hazardous Waste

Disposal of asbestos-containing materials, batteries, electronic waste, fluorescent bulbs, lead based paints, mercury containing equipment and refrigerants, require special processing prior to commencement of construction or demolition activities. Additional information can be found at the Bay Area Air Quality Management District, Alameda County Healthy Homes Department, and the City of Berkeley Toxics Management Division. Please select the option that is applicable to your project.

This project does not involve disposal of universal or hazardous waste

This project includes disposal of universal or hazardous waste in a responsible, safe and verifiable manner

Diversion Documentation

Green Halo tracking is required for all projects generating 100 pounds (or 55 gallons) of waste or more. Please select the option that is applicable to your project

A Construction Waste Management Plan has been submitted via Green Halo at www.berkeley.wastetracking.com. Prior to permit final, weight tickets for all materials disposed and recycled must be uploaded. Photos are acceptable for salvaged/reused materials.

Green Halo Tracking Number:

A letter will be provided to the Building Inspector at the time of final inspection affirming that this project has produced less than 100 pounds (or 55 gallons) of waste, all waste was site-sorted, and any waste that could be recycled was recycled properly through a waste disposal service provider, either on-site or at the contractor's office/shop. (This option is subject to approval for the duration of the project.)

Acknowledgment

I understand the waste diversion requirements of Berkeley Municipal Code 19.37 and submit this Construction Waste Management Plan pursuant to California Green Building Standards Code 4.408.2 or 5.408.1.1.

Name Signature Date

Last Revised 06/12/23

Building and Safety
1947 Center St. 3rd floor
Berkeley, CA 94704
510-981-7440 TTY 6903
buildingandsafety@cityofberkeley.info

The City of Berkley's Waste Management Plan for construction sites.

And finally the site can use the disposal reduction alternative if it fits the project type - "the combined weight of new construction disposal that does not exceed 2 pounds per square foot of building area may be deemed to meet the 65-percent minimum requirement, as approved by the enforcing agency." *(CALGreen Code Section 5.408.1.3)*

What does the Permit say?

We've addressed the requirements of diverting demolition and construction waste, but what is required of sites by the Construction General Permit for demolition activities? According to Attachment D of the 2022 CGP, *"Dischargers shall prevent exposing demolition materials to precipitation. Demolition materials should be covered with an impermeable barrier such as, but not limited to, plastic sheeting prior to precipitation to prevent known contaminants from being mobilized. Dischargers unable to cover demolished material that were not previously investigated or found to be absent of applicable pollutants in reportable quantities shall sample for any non-visible pollutants that may be in stormwater discharges such as, but not limited to, asbestos, leaded paint, or Poly Chlorinated Biphenyls (PCBs)."* Demolition activities generate a lot of fine particulate matter which can easily be picked up by storm water or wind erosion and cause pollution. At first glance it may see that all demolition materials need to be covered. But on a closer evaluation of the Permit, it actually says that covering is only mandatory *if investigation and testing for non-visible pollutants has not occurred.* Investigation of the structure to be demolished for asbestos, lead, and PCBs is a fairly common practice. And if it appears that these pollutants could be present, non-visible pollutant storm water sampling will need to be conducted. If testing is not performed, the demolition waste must be covered. If no pollutants are found, a covering is not required. While environmental site assessments (investigations) are usually conducted, sometimes they are opted out of because pollutants are not anticipated to be present or the investigation is not required by the permitting agency (municipality and/or air quality management district). However, in the case of not doing an investigation, demolition materials will need to be covered since they cannot be proven to not contain the pollutants.

It's also interesting that the Permit calls out plastic sheeting as the resource for covering this waste stream, because earlier in Attachment D, the Permit says for Good Housekeeping a site should attempt to "implement BMPs to control the discharge of plastic materials and limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Dischargers shall consider the use of plastic materials resistant to solar degradation where plastic materials are deemed necessary." Don't forget that plastic is also one of the diversion products which needs to recycled. So, consider what other acceptable cover options may be available and how you could reuse them as you move on to the next demolition project. That way you can try to meet both requirements of covering with plastic and also reducing plastic consumption on the site. *Reduce, Reuse, and Recycle at its finest!*

[1]https://www.sciencedirect.com/topics/earth-and-planetary-sciences/demolition-waste#:~:text=Although%2C%20there%20is%20no%20typical,floor%20area%20of%20the%20structure.

[2]https://sustainable-earth.org/demolition-vs-deconstruction/

[3]https://calrecycle.ca.gov/LGCentral/Library/CandDModel/

[4]https://www2.calrecycle.ca.gov/Docs/Web/126534

Please contact us if you have any questions ...

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QSP/QSD TRAINING

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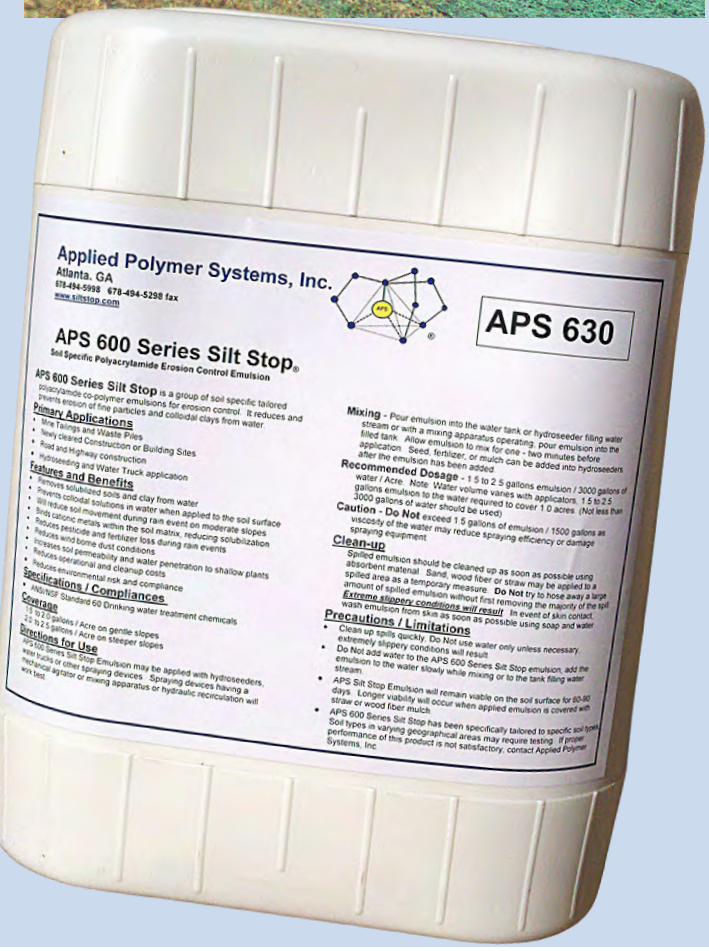

700 Series Silt Stop® emulsions are a group of soil specific, tailored anionic polyacrylamide co-polymer emulsions for erosion control, soil stabilization, dust control, and enhanced vegetation establishment. Silt Stop prevents erosion of fine particles and colloidal clays, decreases stormwater turbidity, improves soil structure, and increases water infiltration into the soil surface.

PRIMARY APPLICATIONS

- Soil stabilization and dust control
- Seeding and mulching enhancement
- Newly cleared construction and building sites
- Mine tailings and waste piles
- Road and highway construction
- Hydroseeding and water truck application

FEATURES AND BENEFITS

- Holds soil, seed, and fertilizer in place during rain events
- Prevents colloidal clay suspension in stormwater
- Decreases soil movement during rain events
- Binds metals and phosphorus within soil, preventing mobilization
- Decreases pesticide and fertilizer loss
- Decreases wind borne dust (fields, haul road, etc.)
- Improves water infiltration into soil surface and aids in vegetative establishment
- Reduces operational and cleanup costs
- Helps meet regulations, environmental friendly

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DIRECTIONS FOR USE

- Shake well before opening as separation may have occurred.
- APS 600 Series Silt Stop® Emulsions may be applied with hydroseeders, water trucks or other spraying devices. **Spraying devices having a mechanical agitator or mixing apparatus or hydraulic recirculation will work best.**
- Pour emulsion into the water tank or hydroseeder filling water stream or with a mixing apparatus operating, and pour emulsion into the filled tank. Allow emulsion to mix for five minutes before application. Seed, fertilizer, and mulch should be added into hydroseeders before the emulsion has been added.
- APS 600 Series Silt Stop® Emulsion must be added at the end of the final mix and sprayed immediately. With the emulsion you must have 100% coverage.
- **Caution – Do not exceed 1.5 gallons of emulsion / 1500 gallons as viscosity of the water may reduce spraying efficiency or damage spraying equipment.**



APPLICATION RATES

- Hydroseeding application rate (per acre coverage): varies by soil content and grade of slope
- Gentle to Moderate slopes (0-4:1)
  - High Clay Content = 1-2 gallons 600 Series Silt Stop per acre
  - High Sand Content = 2-3 gallons 600 Series Silt Stop per acre
- Steep Slopes (3:1 to 1:1)
  - High Clay Content = 1-2.5 gallons 600 Series Silt Stop per acre
  - High Sand Content = 2.5-3 gallon 600 Series Silt Stop per acre

PRECAUTIONS/ LIMITATIONS

- **Use only as directed - exceeding suggested application rates will not improve performance.**
- Formulations are soil specific, sample analysis must be performed prior to application
- Do not ingest. Avoid contact with eyes, may cause irritation. Use gloves when handling Silt Stop®.
- Clean up spills quickly. Do not use water unless necessary, extremely slippery conditions will result.
- Consult manufacturer (Applied Polymer Systems) or authorized distributor to confirm proper site specific

GET IN TOUCH

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info@siltstop.com

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