**Bay Area Deconstruction Policy Workgroup Meeting Notes**October 3, 2018

**Welcome –** Timonie Hood, EPA Region 9

• First meeting in December Shawn Wood shared inspiring success of Portland Mandatory

Deconstruction Ordinance because Nicole Tai was inspired by his Building Materials Reuse Association Conference presentation and wanted to spark activity in the Bay Area – thank you Nicole and Shawn!!!

• Second meeting focused on Bay Area deconstruction and reuse businesses and organizations.

• This meeting brings together input from government agencies at the federal, state, regional, and local levels.

**Thanks to StopWaste we now have a Bay Area Deconstruction Workgroup website with all of our past meeting notes!** <http://www.stopwaste.org/recycling/deconstruction-workgroup>

Contact Nicole and Timonie with content suggestions or ideas on a short, catchy website alias. [ntai@greenlynx.net](mailto:ntai@greenlynx.net), [hood.timonie@epa.gov](mailto:hood.timonie@epa.gov)

**Presentations**

Wonderful presentations were given by:

* Shoshana Micon, San Francisco Department of the Environment
* Dave Seabury, Presido Trust
* Kenneth Yee & Chris Bria, CalRecycle
* Chad White, Bay Area Air Quality Management District

Many thanks to all our speakers!

**Shoshana Micon, SF Environment**

* San Francisco’s C&D Ordinance took effect in July 2006 requiring all full demolitions in SF to submit Demolition Debris Recovery Plan. <https://sfenvironment.org/construction-demolition-requirements>
* Analyzed C&D diversion data submitted and found:

**Site Separated for Salvage & Reuse Reported**

Concrete 65.4%

Rock/Dirt/Soil 16.2%

Brick/Masonry/Tile 12.2%

**Total for Top 3 93.8% Inerts**

**Wood: Less than 1% site separated** (pallets, lumber, cabinets, fixtures, doors, windows, and equipment)

**C&D Recycling Reported**

Concrete 88.9%

Metal 6.7%

Asphalt 2.3%

**Wood: 0.4%**

* SF – Biomass markets for wood sharply declining as biomass plants shut down / due to and expiring Renewable Energy Power Purchase Agreements with utilities and fines.
* Primary outlets for C&D wood have been – biomass & mulch, but mulch markets are saturated so some of the mulch is being stockpiled at facilities.
* 2016 San Francisco Building Permits
  + 93 full demolition permits (34% 1-2 Family Dwellings, 18% Garage/Auto-Related, 16% Industrial/Warehouse, 15% Services, 11% Office)
  + 224 New Construction
  + 1,600 Alteration (short of full demolition – about 400 residential alteration +$250K and 1,200 other building type alteration +$250K)
* SF’s program is currently compliant with CalGreen’s 65% diversion requirement (for projects) by requiring that all permitted projects utilize a facility that has a recovery rate equal to, or greater than, 65% (verified by SF staff). SF projects that are required to submit debris recovery plans have an average recovery rate of 85%, but this is not resulting in strong wood recovery.
  + San Francisco has been tracking debris recovery from projects that quality as a full structural demolition.
  + These projects average an overall recovery rate of >85% which is primarily the result of economics – concrete and metal are heavy and thus drive up the cost of debris recycling efforts that rely exclusively on mixed C&D debris processing facilities to sort out the recoverable materials.
  + The heavy materials (e.g., concrete and metal) with reliable regional markets are source separated on the project site (ultimately lowering the costs associated with processing the rest of the materials at a mixed debris recovery facility).
  + Wood debris resulting from a full demolition is typically commingled with other materials (not concrete or metal which have been source separated) and brought to a mixed debris processing facility.
  + The mixed debris processors have relied almost exclusively on biomass conversion facilities for the end-market “recovery” of clean dry wood that was in a mixed/commingled load.
  + With more and more biomass plants shutting down each year, mixed debris processors have been forced to develop new end markets, such as mulch, or landfill the wood as an unrecoverable residual (“unrecoverable” due to market collapse), and/or ADC.
* Unclear how much wood is not going to Alternative Daily Cover (ADC) used on the surface of the active face of a landfill to control odors, vectors, litter, etc.
* Question: How will California Assembly Bill 901 track wood through the supply chain? <https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB901>

(Need to look into this further.)

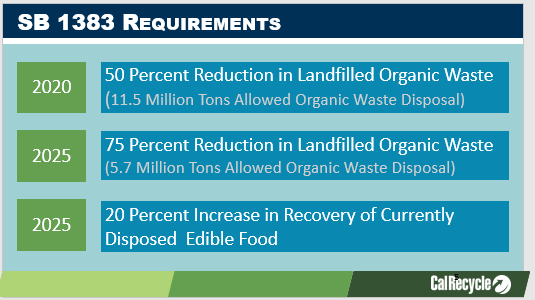
**Dave Seabury, Presidio Trust**

* The Presidio Trust is a now a National Park and is the oldest military base on the West Coast.
* Dave has been the Salvage Supervisor since 1999.
* Dave shared information and images from a huge project involving 25 agencies, 15 buildings (including 3 historic buildings) to redo the approach to the Golden Gate Bridge. (see Project Summary/Photos)
  + The deconstruction started in 2012 and took about a year
  + The project moved a 1890s and restored it
  + Project hired deconstruction contractors – the key was using a big construction firm. They were not experienced in deconstruction, but did a great job, and the crew really enjoyed the salvage work.
  + Most useful – took out and bundled joists and girders.
  + Douglas Fir 3 x 13 dimensional lumber – can’t get it anymore – built in the 1890s
  + Some gigantic pieces sold through GSA government auctions
  + Deconstruction did cost more than disposal for this project

**Kenneth Yee & Chris Bria, CalRecycle**

* Shared background on California’s Climate Blueprint and how Senate Bill 1383 - Short-lived climate pollutants: methane emissions: dairy and livestock: organic waste: landfills and the Short Lived-Climate Pollutants Strategy fit into that blueprint.
* California has an integrated climate change strategy that is formally envisioned in the AB 32 Scoping Plan and the State’s Climate Pillars.
* The Scoping Plan and state law require California to reduce Greenhouse Gas Emissions 40% below 1990 levels by 2030.
* California has identified a series of successive steps that are critical to achieving the ultimate 2030 targets.

* The success of the SLCP Strategy depends on reducing methane emissions from the waste sector.
* To reduce methane emissions the state must reduce the landfill disposal of organic waste, recover edible food and reduce methane emissions.   
  + First and foremost, it is essential to achieving the SLCP
  + It can also contribute to 50% Renewable Energy, reducing petroleum use in vehicles, carbon sequestration], and all of this helps safeguard California.



* SB 1383 targets are tied to 2014 when 23 million tons of organics were disposed. These are statewide targets – there are no jurisdiction numeric targets.
* These disposal reductions will reduce at least 4 million metric tons of greenhouse gas emissions annually by 2030.
* **In 2025 CA needs to reduce, or recover approximately 20 million tons of organic waste** – for context total disposal in CA in 2017 was 38 million tons.
* Definition of organics in 1383 includes but is not limited to: green material, food material, landscape and pruning waste, **wood waste**, fiber (paper and cardboard), sludge, biosolids, manure, digestate, organic textiles and carpets.
* SB 1383 Timeline
  + 2018 concluding informal rulemaking
  + **Formal rulemaking –** Open for comment through February 4, 2019 / Public Hearing March 12, 2019 https://www.calrecycle.ca.gov/laws/rulemaking/slcp
  + First target of 50% in 2010
  + Regulations become enforceable in 2022 [1383 authorizes penalties on entities other than jurisdictions of up to $10,000/day, delayed implementation for rural counties, and exemptions for low population areas]
  + 2025 75% organics diversion AND 20% edible food recovery
* SB 1383 - Jurisdictions (or their designee) need to –
  + Provide organic waste collection service to generators
  + Annually educate all generators
  + 2022-2024 – inform businesses of their obligation to recycle and follow up
  + 2024 – take progressive enforcement against generators still not in compliance
* Pilot Reuse Grant Program
  + CalRecycle Workshop – Nov. 14, 2018
  + Proposed for 2019-2020 contingent upon California Climate Investments funding.
    - $1 million pilot proposed (contingent on funding availability)
    - $100k to $500k per project
  + Details and CalRecycle presentation at: <https://www2.calrecycle.ca.gov/PublicNotices/Details/2506>

**Post Meeting Note:** Salvage and Deconstruction were included in the CalRecycle Workshop presentation and several Bay Area Deconstruction Workgroup members attended and provided valuable input.

Questions (CalRecycle followed up after the meeting)

* How does SB 1383 relate to C&D wood diversion?
* If the state building code CalGreen’s 65% diversion requirement is the driver for keeping C&D wood out of landfills, San Francisco’s data indicates that jurisdictions can far suprass CalGreen (SF has around 85% C&D diversion) and still divert very little wood.
* Standing piles of mulch may be considered landfill diversion by CalRecycle, but what does the California Air Resources Board think about anaerobic piles of mulch/methane emissions?
* How much of ADC is organic materials? C&D wood? Has the amount been increasing with biomass plant closures?
* Could the state’s procurement requirements apply to reclaimed wood?

**Chad White, Bay Area Air Quality Management District**

* BAAQMD is planning to facilitate organics diversion/AB 1383 in work on climate pollutants/methane and is in the early stages / looking for input.
* BAAQMD role in this area is limited to regulating facilities and regional GHG planning.
  + Hosted event for input in June – mostly thinking about keeping food waste, green waste/landscaping out of landfills.
  + Need holistic visualization – does not want to transfer problems.
  + Working with cities and counties on this to avoid inadvertent greenhouse gas emissions.
  + Anticipate need for 50% increase in organics diversion infrastructure.
  + Rules beginning in fall/spring next year. Part will be materials tracking rule. Don’t know if wood is on the radar.
* Shared early BAAQMD draft diagrams for feedback – intent design facilities well that function properly to reduce GHG emissions.
* Input – There are significant opportunities to look upstream to not create discards, for example not planting reduces yard waste. (Meri Soll, StopWaste)

**Open Discussion**

* What kinds of methane emissions are associated with lumber in landfills? It would be helpful to have the numbers. (Max Weshsler, Urban Ore)
  + BAAQMD has emissions group – never really got highly accurate information from landfills. Has not been considering reuse / upstream possibilities.
  + U.S. EPA has WARM Model that includes source reduction numbers for wood. Many assumptions and critiques. <http://www/epa/gov/warm>
  + Old bottom up emissions factors found estimates were sometimes off 60 – 150%. Moving to top down approach with curtain plan that flies over areas and develops 3D emissions models.
  + ICLEI Community Protocol <http://icleiusa.org/ghg-protocols/>
* Sharing on wood recovery efforts (Nicole Tai, GreenLynx)
  + Marin Sanitary: Receives recyclable wood from mixed drop-offs and mixed debris boxes, as well as a source separated load from Redwood Landfill. This then gets sent to biomass - but need to confirm with Marin Sanitary that this is still happening. Biomass plants were reportedly not taking materials from the Bay Area. Nicole is seeking data from transfer stations on this issue.
  + Redwood Landfill in Novato: Receives loads either for landfill price or recycling price and sorts lumber based on those loads. They are currently grinding landfill price loads into ADC. Recycling loads are sorted and wood gets reloaded into containers and trucked to Marin Sanitary for recycling.
* A lot of material in the Bay Area moves across jurisdictions – regional approach needed to move the whole region forward (James Slattery, SF Environment)
* BAAQMD J Number – BAAQMD Bay Area-wide regulations. To pull a demolition permit, need a J number for asbestos and lead inspection before demolition. Does not apply if not full demolition/1 wall remaining.
  + Deconstruction provides good opportunity to find additional asbestos under cabinets, behind sheet rock, etc.
  + Sometimes J number permits take months, and this impacts deconstruction opportunities – BAAQMD is looking onto this issue with SF Environment
* Oregon State University planning **OSU REClaiming Wood: Deconstruction Initiatives, Upcycling into Cross-Laminated Timber and More Symposium** on research in the U.S. and European Union on wood reuse. (Evan Schmidt, OSU)
  + TallWood Design Institute – collaboration between OSU’s Colleges of Forestry, Engineering & Design focused on advancement of structural wood products and mass timber design. <http://tallwoodinstitute.org/>
* Sign up for the Tallwood Institute Newsletter to follow CLT issues at: <http://tallwoodinstitute.org/news> (scroll to button on bottom)
  + Research on Cross Laminated Timber – glue laminated beams and panels made by gluing together lumber – potential to research opportunities to use deconstructed lumber.
  + Symposium featured OSU reclaimed wood research, U.S. deconstruction data, EU wood recovery screening and research, and tour of OSU CLT building projects.
  + Symposium Recorded Presentations

Panel 1 [(recordings can be viewed here)](https://media.oregonstate.edu/media/t/0_3fl03jv8) (<https://media.oregonstate.edu/media/t/0_3fl03jv8>)  
  
**Bradley Guy -**Catholic University of America  
**Shawn Wood -**City of Portland  
**Christa McDermott -**Portland State University  
**Jordan Jordan -**Earth Advantage  
**Raphael Arbelaez -**Wood Science and Engineering, Oregon State University  
  
Panel 2 [(recordings can be viewed here)](https://media.oregonstate.edu/media/t/0_j601fr96) (<https://media.oregonstate.edu/media/t/0_j601fr96>)  
  
**Klaus Richter -**Technical University of Munich (Holzforschung München)  
**Andreja Kutnar -**University of Primorska (Slovenia); InnoRenew CoE

* Seattle – J number – voluntary – encouraged to get a deconstruction appraisal – may move to mandatory.
* At Building Materials Reuse Association Conference – Breakout by IRS on deconstruction appraisal fraud.
  + One case claimed $360,000 of materials, found only $36,000 value
  + California has most of the fraud
  + Need for certified appraisers
* California Environmental Quality Act (CEQA) – Deconstruction could be proposed as a mitigation measure.
* Sonoma County – Heavily impacted by fire damage – very motivated by diversion opportunities (Kristin Thigpin, Sonoma County Waste Management Agency)
* Working with cities on an exemption from the CaGreen 65% diversion requirements - documentation challenges because cities do not see reuse donation numbers/confidential data. Having the same companies doing demolition and deconstruction is challenging for tracking. (Rosemarie Radford, R3 Consulting Group)
* San Mateo County is issuing a Request for Quotes for contractor deconstruction training (attached). (Krista Kuehnhackl, County of San Mateo)