

Minutes of the Waste Prevention C&D Subcommittee July 31, 2007

Attendees

Chair: Erich Kruger, ReNew Building Materials and Salvage

Members: Carolyn Rooney, Toxics Action Center; Keith Robinson, Black River Design Architects; Mike Viani, Casella; Peter Gaskill, Triple T Trucking; Tom McGrail, Smugglers Notch Resort; Jesse Robbins, Freeman French Freeman
Chris Beling, U.S. EPA Region 1; Tom Longsteth, ReCycle North; Doug Robie, DEW Construction; Mike Kuhn, State of Vermont, Buildings and General Services
DEC staff support

Buzz Surwilo & Carolyn Grodinsky

Background

In order to jump start the discussion, the DEC gave an overview of the materials that comprise the largest quantities in the C&D wastestream. The materials are drywall, clean wood, treated/painted wood, asphalt shingles, and cardboard. While these materials represent the largest percentage of C&D being disposed of, they may not be the most toxic, or the easiest to “prevent,” or contribute the most to global warming, or many other factors that we could consider in developing strategies. The group could prioritize our effort by simple waste quantities, or consider the waste prevention problem, and solutions, in a myriad of ways. The team rejected the concept of undertaking C&D waste prevention solely on the basis of material quantities, but decided to consider broad strategies that would have the greatest impact or would be relatively “painless” to implement. Some strategies may involve one or more discrete C&D waste types, but many would focus on the entire C&D wastestream.

Subcommittee exercise to generate new solutions:

Group completed an exercise to help determine and prioritize waste prevention opportunities. Members evaluated all stages of material flow (extraction, manufacturing, distribution, retail, consumption, reuse/recycling/disposal) and tools needed such as education/public awareness, regulations, government leadership, productivity improvements, economic incentives) which could be used to meet the overall goal of waste prevention.

(The full list of ideas generated during the brainstorming exercise are listed below under **Brainstorming and Prioritizing**)

Top vote getters: (3 votes or more)

! = most exciting, ☺ easiest, * = biggest results

- Develop regional markets for recycling clean wood, tear off asphalt shingles, sheet rock (e.g. materials not easily recycled) (*****)
- Switch to IRC (International Residential Code) building codes which places more emphasis on durability and building science than Vermont residential codes (****)
- Require mandatory recycling of C&D waste for any projects using public funds (☺ ☺ ☺ ☺ !)
- Specify deconstruction and recycling in bid documents (☺ ☺ ☺ *)
- Provide low interest loans for green innovation and deconstruction (!!!)
- Require packaging reduction for construction materials (model specs) (☺ ☺ *)
- Offer incentives for adaptive reuse of old buildings (renovation vs new) (**!)
- Work with national organizations such as the Product Stewardship Council and green building organizations (! ☺ *)
- Incorporate more waste prevention into the Act 250 application process (☺ ☺ *)
- Tax shifting - raise SWMAF disposal and reduce tax on labor and capital equipment, especially that is needed for waste reduction. (☺ **)
- Educate about cardboard recycling - you get paid for it! (☺ ☺ ☺)

Next Steps:

1. Next meeting to choose the top priority strategies to focus on (along with reviewing the brainstorming list to make sure we didn't miss

- anything), and identify the challenges and opportunities related to implementing each.
2. Identify research needs and outstanding questions for the strategies
 3. Refine strategies and steps to do them

Brainstorming and Prioritizing

The following ideas were posted and placed on sticky notes under the seven categories listed below. The second part of the exercise was to prioritize the ideas by voting based on 1) easiest to implement, 2) most exciting or 3) biggest results. The number of votes for each is shown below:

Note: for more details on definitions of potential strategies and programs around the world see pages 14 - 47 of the State of Oregon's Waste Prevention report at <http://www.deq.state.or.us/lq/pubs/docs/sw/WPSBkgd07.pdf>

PRODUCTIVITY IMPROVEMENTS (Such programs are aimed at improving resource productivity from manufacturers and business service providers. These include: Pollution prevention (P2), Lean manufacturing, Green permitting, Lightweighting, Industrial ecology, Technological advances, including Miniaturization and dematerialization and Micro- and nanotechnology These efforts are all aimed at changing private-sector behavior through education, technical assistance, incentives, and/or regulation, and have considerable overlap with other strategies)

- Investigate possibility of using asphalt shingles that don't have asbestos

ALTERNATIVE BUSINESS MODELS (Emerging business models have emerged that reduce waste and prevent toxic pollution. These alternative models include: Design for Environment DfE, Supply Chain Management, Product Stewardship, leasing and "servicing")

- Specify deconstruction in bid documents with % diversion goals, specify deconstruction goals (4 votes)
- Create model specifications for multiple packaging reduction (3 votes)
- LEED adaption - get more people to use it, or create a simplified LEED system for small projects and require review by zoning administrators etc... (2 votes)
- Use of local materials, generally less packaged and improved recycling potential and resource for fuel usage (2 votes)
- Packaging improvements for bulk items/supply chain management (for large retailers) for reduced packaging (1 vote)
- Select materials that require reduced maintenance (1 vote)

- Architects to reduce quantity of materials specified that cannot be easily recycled (1 vote)
- Product Stewardship - manufacturer responsibility - need to decide what products to pursue
- Eliminate unnecessary materials - sealed instead of vinyl tile, design to minimize plumbing and wiring
- Involve contractor in waste reduction planning
- Simplify "valuation" for donation of salvaged materials to non-profit organizations

ECONOMIC INCENTIVES

- Provide low interest loans for green building improvements (3 votes)
- Offer incentives for adaptive reuse of old buildings (renovation vs new) (3 votes)
- Help to fund facilities for reuse and deconstruction (2 votes)
- Subsidize start up for both reuse and recycling for underdeveloped materials (markets/products)/ Fund new pilot programs (1 vote)
- Segregated containers with an efficient method to process
- Continue and increase amounts substantially for ANR grants to those who reuse and recycle. Charge fees for those that don't
- Development density/multiunit housing (there's demand but not supply)
- Make landfills costlier (use \$\$ to fund diversion)

EDUCATION & PUBLIC AWARENESS

- Use lifecycle cost data for building materials in decision making like energy guide (star??) for appliances (2 votes)
- Promote green building specs - framing distances, standard lengths, educate about materials reduction in construction (tape and rigid insulation instead of vapor barrier (2 votes)
- State funded advertising for reuse and deconstruction (1 vote)
- Retail - Create new label to promote products that will prevent waste eg R3 Star program (like energy star label) (1 vote)
- Target small contractors/builders (1 vote)
- Educate consumers about the true environmental costs of project construction
- PR and tips on waste prevention for contractors and consumers, get small contractors and homeowners on board with C&D recycling
- Encourage Smaller Homes
- Publicize GreenSpec and other green building materials
- Emphasize renovation and adaptive reuse instead of new construction
- Encourage adoption of silica-treated lumber (currently available in the Midwest)

GOVERNMENT LEADERSHIP

- Tax shifting - raise SWMAF disposal and reduce tax on labor and capital equipment, especially that is needed for waste reduction. (3 votes)
- Work with national organizations such as the Product Stewardship and green building organizations Council (3 votes)
- Waste prevention should be prioritized for all government building projects (2 votes)
- Tax for mandatory recycling of C&D waste for any projects using public funds
- Require take back requirements for designated materials (such as drywall) in state contracts
- Asphalt shingles - subsidize to create free testing for asbestos
- Environmental purchasing polices (EPP) and requirements for state building projects

REGULATIONS

- Switch to IRC (International Residential Code) building codes which places more emphasis on durability and building science that Vermont residential codes (4 votes)
- Incorporate more waste prevention into the Act 250 application process (3 votes)
- Incorporate green building into building codes (2 votes)
- Require lifecycle cost analysis of alternate more durable materials/increase durability of products (2 votes)
- Enact zoning that mandates low impact development (1 vote)
- Require permits for demolition (1 vote)
- Regulate or limit demolition more tightly due to dust and release of hazardous materials which would improve the cost effectiveness of deconstruction (1 vote)
- Pass bills banning certain types of packaging (1 vote)
- Regulate mandatory C&D diversion for buildings larger than a designated square footage (1 vote)
- Disposal ban for asphalt shingles
- Disposal ban for cardboard
- Require tests for chemical hazards before reusing products
- Require regulations that state specific reuse ideas

RECYCLING

- Regional markets for: painted wood, shingles, sheet rock/ materials not easily recycled/"milk runs" by commodity done by the private sector/SWDs are the "special waste" collectors (7 votes)
- Educate about cardboard recycling - you get paid for it! (3 votes)

- Segregated containers with an efficient method to process
- Disseminate successful ideas company-wide. For example proceeds from the sale of scrap metal can be used to fund a BBQ for on site construction personnel
- Fund model program - demo/renovation - involve owner/architect/contractor at onset of project conception, ANR could do a training, collect data on results
- Enforce existing Act 250 waste reduction plans/verify implementation
- Get tear-off asphalt shingle recycling started back up again. Provide incentives for an existing aggregate recycler to process the materials.

Next Subcommittee Meeting
Wednesday August 15th 8:30 - 11:30
Montpelier Senior Center, 58 Barre Street, 3rd Floor
Montpelier

Construction waste and demolition debris (C&D) - Subcommittee members
 Carolyn Grodinsky and Buzz Surwilo- DEC staff support
 * = also Waste Prevention Steering Committee Members

Sector	Organization	Representative
Ski area	Smugglers	Tom McGrail*
Contractor	DEW Construction	Doug Robie*
Hauler	Casella	Mike Viani*
Deconstruction/reuse store operator	ReNew Building Materials and Salvage	Chair: Erich Kruger*
Institution	NECI	Will Colgen
Environmental	Toxics Action Center	Alyssa Schuren* Carolyn Rooney (alt)
EPA	Region 1	Chris Beling*
Legislator	Washington County Senator	Phil Scott
Building Supplier	Home Depot (hopefully participate via conference call)	Jesse Larose, headquarters
Architect	Black River Design & VT Green Building Network	Keith Robinson
Architect	Black River Design & VT Green Building Network	David Pill
Building Reuse	ReCycle North	Tom Longstreth, Ethan Mauer (alt)
Hauling	Triple T Trucking	Peter Gaskill
VT Green Building Network	Freeman French Freeman	Jesse Robbins

State	BGS	Dave Burley/Bob Rea/
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