

MEETING NOTICE

Governor's Task Force on Global Warming
Ad-hoc Waste Materials Recovery and Disposal Work Group
Friday, February 15, 2008, 10:00 a.m. to 1:00 p.m.
Xcel Energy conference room
10 East Doty Street, Suite 511, Madison

DRAFT AGENDA

- 1) Welcome and review of agenda
- 2) Review of progress and outcomes from January 22nd & February 4th meeting
- 3) Review waste wood template
- 4) Complete beverage container template
- 5) Additional waste materials policy ideas that generate GHG reductions and/or suggestions for template editing?
- 6) Public comments
- 7) Review of edited templates to submit to Task Force
- 8) Next steps

This meeting is open to the public.

For more information, or if you need special accommodations to attend this meeting, contact Nick Sayen, DNR, at (608) 267-2466 or nick.sayen@wisconsin.gov.

Materials and Information from the 2/15/08 Ad-hoc Waste Materials Meeting

NOTE: Original emails authors' contact information and names have been removed.

Hi –

I am now working with another group, the Global Warming Task Force. Among many other things, they are looking at recycling as a means of reducing systemwide greenhouse gas emissions.

One of the areas they have homed in on is C&D materials, especially untreated wood. They are also interested in how a Chicago-style ordinance might work in Wisconsin.

Any advice for them? What is your impression of how the Chicago ordinance is working, and do you think it would be a good model for statewide legislation (that would require localities above a certain size, perhaps, to pass their own similar ordinances mandating recycling at construction sites)? Any other policy instruments that they should be looking at instead, or in addition to? Do you think this approach needs to be limited to commercial construction, or can it be extended to single-family residential construction (perhaps developments of more than 5 houses, or whatever)?

A couple of other questions occur to me -- how does ADC regulation fit in to this picture? and do you know of any good work estimating a carbon emissions factor for recycling shingles?

Thanks for any help you might be able to provide –
Brad Wolbert

Brad:

You ask a lot. Let me try to answer them in a quick, Saturday morning kind of way.

Attached is a study recently released by the University of New Hampshire. It is a life cycle analysis of whether it is better to use C&D wood as a fuel product versus landfilling it, the two main options for most of our wood for the foreseeable future. In addition, the US EPA considers biomass to be GHG neutral, and certainly preferable to landfills. There is no way an MDF, mulch, or OSB option is going to suck all the wood that is generated, and I can show that almost all deconstruction projects cost more economically than demolition and recycling, unless you use a sham 501c3 organization as a tax write off. Fortunately, the IRS is now on to that scam and is targeting those outfits. Habitat for Humanity is NOT one of those types of operations.

Chicago-style ordinance is tricky. The reason it works here is that there is a recycling infrastructure in place. There is no such infrastructure throughout your state, although City Wide Recycling has opened in Milwaukee recently. Big mixed C&D operation. Will need a wood fuel outlet to keep making it happen, though. Maybe a ban in Milwaukee and Madison is the only options for now. But I think the biggest reason such a ban won't work is because your department does not allow the recycling concrete with paint on it for fear it might be lead-based paint. Illinois, like most states, has no such rule. As most buildings in Chicago are mostly concrete, masonry and metal, meeting the 50% requirement is relatively easy. And when you are looking at a 50,000-ton pile of concrete that is covered 1% with paint, even LBP, you are going to have lead at the same level as naturally occurring background levels of lead. So I don't know if you can do such a ban until you solve this situation. Don't get me wrong, lead is bad, but we have a study that recycling concrete with some LBP on it was a safe process.

I do like the SDDD program I told you guys about, one that requires a deposit before any demolition or construction job and makes them track where the waste went, and they get some of the fee back based on how much is recycled. But until the problems above are solved, I cannot suggest you do it.

As I have said before ADC is one of the few markets with have for the 30% or so of C&D fines, 2-inch minus, that a C&D recycling facility has available. Find a way to use the material. But is recycling center produces 80% ADC as their recycled product, they are not trying. Need to find the balance.

Utterly clueless on how to estimate the carbon emissions on recycling shingles, unless we use an LCA similar to the one used for wood. Does the state want to pay for one? Or for one for wood like the one attached? Would answer a lot of questions.

Hi --

Any comments on the observations above? He makes 3 points regarding a Chicago-style recycling requirement for WI:

- for wood recovery, there needs to be an allowance for combustion with energy recovery or you won't be able to get rid of all the wood
 - WI doesn't yet have enough processing capacity to support a statewide wood recovery effort
 - A requirement of 50% recycling isn't feasible in WI because we don't allow recycling of painted concrete
- The waste workgroup of the Global Warming Task Force seems poised to recommend a state-mandated system of Chicago-style local ordinances to require recycling (phased in starting with the major urban markets). I need to let them know if there are serious problems with that idea.

Thanks --
Brad

Brad-

OK, I have several emails of yours to return. Let me start with this one. I have another one started which I'll do next, and then if you want to talk, I'm in all day today (Tues) through Thursday this week.

- "For wood recovery, there needs to be an allowance for combustion with energy recovery or you won't be able to get rid of all the wood"

I agree. He's right; there are two main markets for wood – landscape mulch, and fuel. If it's true that burning is energy neutral, then that's a lot better than some other energy sources. Carol Diggelman has some important information (which we used in the Gov's Task Force) on lack of energy credits for burning wood in Wisconsin right now. If I remember correctly (it's been about a year since I've thought about this), right now Wisconsin rules do not allow burning wood for energy recovery to count as a renewable energy source. I'm not sure I'm using the right term here. Here's the issue – we energies, as just one example, can't add this to their energy portfolio under their Energy for Tomorrow program: <http://www.we-energies.com/residential/accoptions/eft.htm> Thus, we energies (and all other utilities in WI) do not have an incentive to invest in (or use) energy from wood burning.

I would strongly recommend you talk to Carol and remove regulatory/policy barriers for the burning of wood in addition to wood grinding for recycling in WI.

Here's another regulatory barrier to recycling wood which maybe you could help with – right now, a low-hazard exemption is needed for the recycling of engineered lumber. The Governor's Task Force report recommends that this requirement be removed and that recyclers follow the best management practices set by the DNR (and face fines if they don't follow the BMP).

Also, I'm concerned (maybe this is unfounded, but I don't think so) that wood is THE largest component of Wisconsin's waste stream, and yet we don't really have a good handle on the sources of that wood. Lumber, of course, is important to Wisconsin's economy. Maybe ¾ of the wood in Wisconsin's landfills is from making lumber from trees and the best solution is to work with those companies to develop ways to reclaim and reuse scrap wood. I don't know that and I suspect that's not the case, but who knows? I'd recommend a study, building off the Cascadia Waste Sort study, which looks at the sources of wood waste in Wisconsin's landfills.

- WI doesn't yet have enough processing capacity to support a statewide wood recovery effort

Yes and no. Wisconsin didn't have enough processing capacity to support a statewide can and bottle recovery effort in 1990 when the Wisconsin Recycling Law was passed, either. As Bill states, Wisconsin has processing capacity in Milwaukee and Madison, and with the State of Wisconsin Division of State Facilities requiring recycling on State projects, more capacity will be developed. The thing is, when someone looks to put together a business plan, they look to see if they're going to get the quantity they

need to support their business – Neil from Cascade Asset Management has made this same point repeatedly about this same concern related to electronics. The processing capacity will develop to meet the need.

So, perhaps a phased-in approach is appropriate. Note that the Gov Task Force recommended: “These ordinances should be required statewide and phased in to allow for markets to develop. We recommend a phased in approach which takes into account type of project (construction or demolition), whether the project is commercial or residential, size of project and whether or not taxpayer funds are utilized for the project.”

The Waste Reduction Workgroup took a stab at defining a phased in approach, but left this out of the Final Report because it seemed too specific. In case this is helpful, here’s an example phased in approach:

1. Projects subject to this requirement

a. In 2008

i. In municipalities in counties where the total population of the county is 200,000 or higher or a taxpayer-funded project and which also meets the following criteria:

1. New buildings over 100,000 ft²
2. Demolition of buildings over 100,000 ft²

b. In 2010

i. In municipalities in counties where the total population of the county is 100,000 or higher or a taxpayer-funded project and which also meets the following criteria:

1. New buildings over 50,000 ft²
2. Demolition of buildings over 50,000 ft²

c. In 2012

i. In municipalities in counties where the total population of the county is 50,000 or higher or a taxpayer-funded project and which also meets the following criteria:

1. New buildings over 25,000 ft²
2. Demolition of buildings over 25,000 ft²

- A requirement of 50% recycling isn't feasible in WI because we don't allow recycling of painted concrete

Oh, I don't know. If it's true that the CMRA has “a study that recycling concrete with some LBP on it was a safe process” then yes, remove the requirement just in case it's a barrier. I can tell you I just did a Lunch & Learn at a very large contractor's office last week and they were confused about this requirement (I sent them to the very good DNR publication: Concrete Recycling and Disposal Fact Sheet: <http://dnr.wi.gov/org/aw/wm/publications/demolition/wa605.pdf>). According to this publication, you have to do a lab or XRF instrument test to determine lead levels and if they exceed certain levels, you can't recycle the concrete.

I can tell you that Bill is right to suggest that concrete is a very significant portion of the recycling rate. It's heavy, for demolition, many buildings are made of mostly concrete and metal and that's where you get your recycling totals.

I also think you should make a determination on whether ADC is recycling or not. Mixed waste processing facilities end up with fines. These fines are often used in the landfill as ADC. Right now mixed waste facilities use this number in their recycling rate. To me, if it ends up in the landfill, it's landfilling. However, I get the argument that it's processed and made into a new product (recycling). Maybe a precedent would be helpful? Can communities use ADC toward their community's recycling rate? Maybe Bill's suggestion of balance is a good one? Some national research on how other states handle ADC would be useful I imagine.

- The waste workgroup of the Global Warming Task Force seems poised to recommend a state-mandated system of Chicago-style local ordinances to require recycling (phased in starting with the major urban markets). I need to let them know if there are serious problems with that idea.

I don't think there's a problem with that idea as long as its phased in, regulatory barriers are removed (low-hazard exemptions for drywall and wood; LBP for concrete; no burning credit for wood), and there's some thought to market development and education (check out the Gov. Task Force report – pgs 44 – 46).

Best wishes, and please let me know if you have any other questions – and I'd be happy to come to a Task Force meeting if that'd be helpful.

Materials and Information from the 2/15/08 Ad-hoc Waste Materials Meeting

NOTE: Original emails authors' contact information and names have been removed.

Hi & Thanks for the call today.

Looking through my notes from our workgroup meeting on Monday, I wanted to ask a couple more detailed questions you might know the answers to (if not, no problem).

First, what is wood recovered from the construction/demolition sites you folks have been involved with typically used for (and, more basic than that -- is there much wood recovered)?

Secondly, how important is it to provide incentives for infrastructure development--like, for example, grants for capital costs associated with establishing C&D MRFs?

Finally, are there specific regulatory barriers to recovering wood (the need for a low-hazard exemption was cited in the Task Force report--is this still a problem, and are there others)?

Thanks!

Brad

Brad,

To your questions:

[First, what is wood recovered from the construction/demolition sites you folks have been involved with typically used for](#)

Wood that's recovered from construction sites is typically used for landscape mulch. A few companies use the ground wood to put into silt socks (used instead of or along with silt fence to control erosion) or to mix with compost. It's sometimes colored and typically sold wholesale to landscape companies. There's a company that I just met with last week (DTE Energy) that's currently trying to develop a wood to energy facility on the MN side of the Mississippi river near Prairie du Chien. There is only one other facility I'm aware of in Wisconsin (Minergy in Neenah) that burns wood for energy in Wisconsin (except, of course, for wood-burning boilers all over the state).

Wood from demolition sites is typically landfilled (with apologies to the Building Materials Reuse Association for saying this). Most of it is treated in some way or full of contaminants that you wouldn't want in your mulch (paint, drywall, you name it).

[\(and, more basic than that -- is there much wood recovered\)?](#)

I assume you mean in Wisconsin. I'm not sure I can answer this question accurately. I can tell you we've found markets for wood for all of our projects, including those in Beloit, Whitewater, Wausau and Green Bay as well as in Milwaukee and Madison areas. As I noted in my last email, I think the processing capacity will quickly develop with a market need. There are companies throughout Wisconsin with wood grinders.

There's not much wood recovered right now for reuse. The cost of disassembly tends to be much more expensive than the cost of buying wood new. The exceptions to this are hard wood flooring and large timbers (like you have at Badger Army Ammunition Plant).

Secondly, how important is it to provide incentives for infrastructure development--like, for example, grants for capital costs associated with establishing C&D MRFs?

Here's the lesson I gleaned from the Recycling Market Development Board, when it existed. Do NOT put money out there without people developing the markets. What do I mean by this? Let me give you an example.

Ralph McCall of WasteCap Wisconsin worked for a long time on drywall market development. Ralph approached a fertilizer manufacturer about taking drywall for use in the manufacture of fertilizer. Ralph spent countless hours getting the drywall to the fertilizer manufacturer, getting processing equipment, getting screens, figuring out storage logistics, working with the DNR on obtaining proper low hazard exemption, obtaining information about the material in the drywall from the manufacturer, evaluating results, etc., etc.

It turned out this didn't work -- the paper from the drywall clogged up the fertilizer manufacturers screens (fertilizer dust would normally go through these screens and get re-processed to make into fertilizer pellets - when the screens were blocked, the fertilizer got "dusty" - not a good product).

Anyway, the point is that had this worked, the fertilizer manufacturer very well may have requested funding for capital improvements to their site. But they wouldn't even have thought to consider making fertilizer out of scrap drywall had it not been for Ralph.

I have ten more stories like this - I'd be happy to bore you with them if you'd like, but the point of them all is that it takes a person to coordinate these efforts, to bring people together, to result in development of markets. THEN there's a need for money for capital improvements.

That's why the Gov Task Force report recommended a "market development clearinghouse" with duties that included developing markets and making market connections.

OK, just one more example. You can offer millions of dollars for capital costs for tear off shingles, but what you really need to develop the market is people working together (the Road Builders Association, the DOT, the DNR, WasteCap, CMRA, UW Center for Byproducts Utilization, the existing processors, etc.) developing standards, specifications, best management practices and even shared goals (e.g. "We want to make a product which is at least as durable as asphalt made without tear off shingles."). Once you get that buy in and shared goals, then you can start to give out money for folks to process the shingles that will now be in demand with clear processing specifications.

Finally--are there specific regulatory barriers to recovering wood (the need for a low-hazard exemption was cited in the Task Force report--is this still a problem, and are there others)?

YES, this is still a problem and there are others. Just last week we found out that a hauler in Wisconsin (who will remain nameless though we're sure upset at them) landfilled a whole lot of drywall from some of our project sites because someone from their staff allegedly called the

DNR and the DNR told them we don't have a low hazard exemption to land apply drywall (which we do). We're working that out (a letter is coming from the DNR to clarify that we do have that exemption), but the fact is, every time we want to recycle engineered lumber or drywall from a construction site, it's a hassle. And sometimes loads go to the landfill which could have been recycled because the hauler is still running the low hazard exemption by their lawyers (this happened on another site of ours - very frustrating).

The regulatory barriers I'm aware of related to the recycling of wood:

- * lack of clarity on ability for sites that burn lumber as to whether or not they can burn engineered lumber and painted/varnished lumber. If they could (and I'm not sure if this environmentally appropriate or not), it would provide a market for wood from demolition sites. Since the market for wood is generally landscape mulch and of course you don't want paint in your landscape mulch, there hasn't been much of a market for wood from demolition.

- * lack of ability for utilities to include wood in the % of their energy generated by - is it alternative sources, or renewable sources - I don't know the term.

- * need for a low-hazard exemption to recycle engineered lumber (as shown by years of research in GA, it's environmentally safe to recycle engineered lumber along with dimensional lumber for landscaping mulch - I can send you this study if you'd like)

- * In the Gov. Task Force report, it says: "consider establishing a separate management category under solid waste processing rules for wood waste, rather than managing these under the composting rules." Ask someone more familiar with composting what this means (Joe VanRossum?).

Thank you for asking my opinion, Brad, and thank you for your work.

Governor's Task Force on Global Warming

Ad-Hoc Waste Materials Recovery and Disposal Workgroup

February 15, 2008 Meeting Notes

Members Attending: Keith Reopelle, Chair (Clean Wisconsin), John Clancy (Godfrey & Kahn – Forest Country Potawatomi Community), Dave Donovan (Xcel Energy), Lynn Morgan (Broydrick & Associates), Steve Hiniker (1000 Friends of Wisconsin), Gary Zajicek (Veridian Homes)

Members Via Conference Phone: Genise Smith-Watkins (PepsiCo)

Others Attending: Amy Boyer (Hamilton Consulting), Kelly McDowell (Wisconsin Beverage Association and Miller Brewing), Nick Sayen (DNR), Brad Wolbert (DNR)

I. Review of Progress To Date

Keith briefly reviewed the workgroup's activities to date. He gave a progress report on this workgroup at the full Task Force meeting on February 5, where he indicated that the workgroup had reached general consensus on four of the five policy templates and was continuing discussion on the beverage container template.

With regard to editing and revising templates, Keith noted that other groups had assigned lead authors to each template, but given the way the templates for this workgroup were developed, no authors were assigned as yet. He volunteered to take care of changes to templates discussed in previous meetings and asked that members volunteer to incorporate changes discussed today.

II. Policy Templates

Untreated Wood: Brad summarized email responses to questions he had posed to Jenna Kunde of WasteCap Wisconsin and William Turley of the Construction Materials Recycling Association on behalf of the workgroup. One point made was that there needs to be an outlet for combustion of recovered wood. Keith noted, and Dave confirmed, that biomass combustion does qualify for clean energy grants and renewable energy credits. However, refuse-derived fuel is not a renewable under the portfolio standards, except for grandfathered facilities. The group discussed whether a recommendation should be made regarding wood's status as a combustion feedstock and agreed that the recommendation should segment wood out from RDF and focus on clarifying wood's status with regard to renewable energy.

The group also discussed the phase in approach for mandatory local C&D recycling ordinances and whether a model ordinance would be preferable. The concern is that the economics of C&D recycling are not well enough understood, and that a mandatory ordinance requirement might lead to unintended consequences including generation of GHGs to transport wood around just to comply with ordinances. On the other hand, a model ordinance might not be effective. The group settled on recommending a system in which localities would by statute have to pass ordinances, but that there would be an "off-ramp" by which a community could show that an ordinance would be counterproductive because it would create higher emissions or that it would be infeasible because of lack of a market for the recovered material. There would not be a prescribed lower limit on the size of projects, but localities could indicate if a lower limit was

justified on a case by case basis. This provision addresses the point that residential developments generate relative large amounts of recoverable scrap wood.

The group discussed current regulatory impediments to C&D recycling and opted to include in the template several possibilities for easing these concerns, including establishing a self-implementing rule or notification system patterned after NR 538 (high-volume industrial waste recycling), or other rulemaking to clarify existing requirements. These would be intended to lower the perceived risk to investors or entrepreneurs as to whether the DNR will issue a low-hazard exemption for a proposed activity with the potential to recover C&D materials.

Lynn volunteered to develop this template further. The template would be oriented towards materials from new construction but might also improve recovery of demolition materials. Brad will provide Lynn with updated modeling results for wood based on the discussion.

Beverage Containers: Keith recalled that the discussion in the previous meeting had moved toward consideration of a broader array of recyclable components in the wastestream. The template proposes a study, but the model numbers assume successful implementation, and comments have challenged the concept of deposit systems.

The group continued its discussion of a broader template that would take the focus off of beverage containers specifically and instead attempt to improve recovery of more materials (e.g., steel cans, plastic bags, and possibly paper, keeping in mind that there is a separate template on paper). There are some open questions regarding “leakage” within the current system and where the unrecovered containers are being generated (the home, office, away from home?), and part of the recommendation might involve a study that would seek to answer these questions.

Several members suggested that a broader template might have three parts: an education component, a financial assistance and/or incentive component, and an enforcement component, in addition to a study component that would identify where the current system is working and where it is not as a basis for focusing resources. This could also form an introduction to the Waste chapter of the Task Force final report.

Grants would be based on potential for GHG reductions and would be funded by the Recycling and Renewables Fund (relying on portions of the fund that have been diverted to non-recycling uses in previous budgets). Enforcement would not necessarily focus on sanctions but would be directed toward evening out RU implementation and increasing RUs’ abilities to implement recycling effectively, especially with regard to businesses. Genise suggested allowing time for “carrot” style approaches to work before relying on “stick” activities. Regarding education, Keith pointed out that there is a sustainability template being developed by others (available on the website) and that this would fit neatly into that; the group agreed that Keith should pursue making sure that template includes recycling.

Genise volunteered to take the lead on developing this template further, and John C. offered to assist. The DNR will provide the group with general estimates of GHG reductions from existing recycling efforts and what kind of reductions might be achieved by incremental increases in recycling rates.

III. Other Template Ideas

John C. noted that the Waste Task Force included a recommendation on waste oil and filters that might be worth pursuing. Concrete may also warrant taking a look at. Keith offered to examine the potential for a template covering concrete and other non-wood C&D waste.

IV. Editing of Templates

Keith noted that there may only be about 2 weeks remaining for templates to be completed and submitted to the Task Force. There may be some additional time for templates, such as those from this group, that do not have to be included in the modeling, but for now it's best to assume that the same deadline applies.

V. Next Meeting

It appears that another meeting will be needed for final discussion of templates. Nick will contact members regarding their availability during the week of February 25.