



**RAMSEY/WASHINGTON
RECYCLING & ENERGY**

CONNECTING VALUE TO WASTE

R&E Board Workshop Agenda

Date: Thursday, March 12, 2020

Time: 10:00 am – 12:00 pm

Location: Ramsey Environmental Health | 2nd Floor Conference Room | 2785 White Bear Ave. N. |
Maplewood, MN 55109

Workshop Purpose:

Provide in-depth information about several key topics facing Ramsey/Washington Recycling & Energy in 2020, provide foundational information for upcoming decisions, and seek commissioner input.

Workshop Outline

- I. Managing Wood Waste Associated with Emerald Ash Borer (EAB)
- II. Legislative Update
- III. Joint Activities – Progress Report
- IV. R&E Center Enhancements
 - A. Enhancement Design/Engineering, Planning and Timeline
 - B. Financing
 - C. Durable Compostable Bags
- V. Anaerobic Digestion



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March 5, 2020

To: Recycling & Energy Board
From: Joint Leadership Team (JLT)
Re: March 12, 2020 R&E Board Workshop

The Ramsey/Washington Recycling & Energy Board (R&E Board) meeting in March is a workshop format. The overall purpose of the workshop is to provide in-depth information about several key topics facing Ramsey/Washington Recycling & Energy (R&E) in 2020, to provide some foundational information for upcoming decisions, and to seek input. This memo provides brief background to introduce each topic.

Managing Wood Waste Associated with Emerald Ash Borer (EAB)

Ken Smith of Ever-Green Energy will provide background information and the legislative status on issues related to EAB and Saint Paul Cogeneration. This is also an opportunity to discuss current and future wood waste issues with Mr. Smith.

Emerald Ash Borer (EAB) is an invasive insect that kills infested ash trees. All ash trees are susceptible. EAB has infested trees in over 20 Minnesota counties, resulting in quarantines being placed on the wood waste from ash trees. Quarantines cannot stop EAB from killing all the ash trees in Minnesota but can slow the spread.

Counties, cities and the state have stepped up to address EAB, and there is much more work to do. The Minnesota Environmental Quality Board (EQB) approved a report in October 2019, called “Emerald Ash Borer in Minnesota”, which identifies treatment, tree removal, reforestation and management of the resulting wood as key response strategies. The report stresses the need for continued statewide planning, coordination and support and indicates the need for inter-agency partners to report to the EQB on a regular basis.

Counties are concerned about Emerald Ash Borer from three perspectives. First are the costs that local government must pay to treat, remove and replace infested trees, and manage waste wood. Second, the tree canopy in urban and suburban areas is an important part of environmental and public health protection. Third, the emergence of EAB and the loss of ash trees is creating significant amounts of wood waste, now and into the future.

With nearly 520,000 ash trees in Ramsey and Washington counties, representing an estimated 355,000 tons of wood, the stakes are high. A standard calculation for removal is \$1,000 per tree (a staggering \$520 million) and for replacement is \$40 - \$300 per tree (\$20.8 million - \$156 million).

Disposal of wood waste is currently occurring at St. Paul District Energy’s St. Paul Cogeneration (CoGen) plant. The availability of that facility is threatened, and Ken Smith will address this at the workshop. Should that facility no longer be able to accept wood waste after its power purchase agreement with Xcel Energy

expires in 2023, there would be no legal market available for wood waste material. About 67,000 tons per year of wood waste from Ramsey and Washington counties, much of which is EAB related, are sent to St. Paul CoGen. If this volume of tree waste were allowed to be disposed of at a landfill at an estimated cost of \$50 per ton, the cost to the two counties' communities and homeowners would exceed \$3.3 million per year in landfill fees and taxes alone.

Legislative Update on Current Waste and Energy Legislative Efforts

Dan Donkers, program analyst for Ramsey County Environmental Health, will summarize current legislation with impacts to Ramsey, Washington, and Hennepin counties as members of the Partnership on Waste and Energy (PWE). This work is being monitored by PWE-contracted waste and energy lobbyists, Capitol Hill & Associates, and Fryberger & Associates.

Joint Activities - Progress

Staff will provide in-depth information on the status and plans for key elements of 2020-21 Joint Activities work and to seek input from commissioners. Commissioners are asked to confirm if the activities are on target, provide input, and discuss their role in helping with outreach and engagement.

R&E Center Enhancements

Staff will provide an update on the design, engineering and planning work on the R&E Center enhancements, including (a) administration building and enclosure, and (b) DCB and recyclables recovery projects, to show the timeline for the planning work and discuss key elements of the schematic design. Commissioners are asked to let staff know further information needed to help commissioners make decisions in May and June.

Introduction

The R&E vision, "vibrant, healthy communities without waste" will be pursued in several phases. While R&E activities and each county's programs focus on managing waste upstream, preventing waste and increasing source separation of recyclables, the R&E Center will be redesigned and repurposed to recover more value from waste.

Recovering more value from waste has progressed since the purchase of the R&E Center. Work already completed includes construction of the new building addition to streamline the bulky waste loadout area and provide storage space, creating room for further enhancements. In addition, procurement is underway for a robotic separator to clean up the non-ferrous metals that are separated on the processing lines, which will make the recovered metals more valuable at market.

As a step to achieve the next phase, the R&E Center will require expansion and system improvements. At its March 2019 meeting, the R&E Board received the preliminary design documents for enhancements to the R&E Center. At its May 2019 meeting, the board stated its intent to move forward with the enhancements. This triggered a series of actions, including approval of financing and procurement plans at its August 2019 meeting, pursuit of partial state funding, and authorization to proceed with development of construction-ready engineering documents.

Enhancement Design/Engineering, Planning and Timeline Information

Admin/Enclosure: CM/A and schematic design update/timeline

One of the two enhancement projects at the R&E Center includes renovation of the administration building and construction of an enclosure for the RDF/residue loadout area. Progress on this work:

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- KOMA architects (which designed the new building addition and bulky waste loadout at the R&E Center) have been retained for the design of the project, and Foth as the construction manager for the renovation and enclosure work.
- Work is in the schematic design phase – developing preliminary designs and construction estimates. This will be followed by design development and construction documents, followed by procurement of construction and equipment firms. The goal is to have this work completed by year-end 2020.

DCB and Recyclables Recovery: CM/A and schematic design update/timeline

- The approved procurement plan outlines a construction manager-agency approach. Following solicitations for construction manager services and architect/engineering services for the enhancements work, Adolfsen & Peterson Construction was hired as the construction manager, and KOMA was hired as architect/engineer (partnering with Emanuelson-Podas engineering, SCS Engineers and Loucks Engineering).
- Work is proceeding and is currently in the schematic design phase, which will result in a preliminary construction and equipment layout, enough to prepare budget estimates, and which will be followed by the design development phase, and then preparation of construction documents.
- Discussion is occurring on selection of equipment vendors for various portions of the enhancements, as part of schematic design and design development.
- The current timeline for design and construction is estimated as shown below; this can be affected by several design factors and will be synchronized with the financing timeline:
 - Schematic design: January – March 2020
 - Design development: April – June 2020
 - Construction documents: July – August 2020
 - Contractor/trade procurement: August/September 2020
 - Construction starts: September/October 2020
 - Construction: 18 – 24 months
 - Commissioning: 6 months minimum

Financing

At its August 2019 meeting, the R&E Board approved the Enhancements Financing Plan and authorized several actions related to financing:

- Financing R&E Center renovations to the administration building and construction of an RDF/residue loadout enclosure through a loan from the two counties to R&E.
 - This included steps to create an enterprise reserve fund (ERF) and release of county obligations to maintain an operating reserve fund (ORF), including amending the joint powers agreement (JPA) and bylaws and approving loan agreements.
 - Funds to create the ERF, and loan funds from the two counties to R&E have been transferred.
- Financing of the enhancements for organics and recyclables recovery include a state bonding request, with a local match using a loan from the counties using general obligation bonds, and consideration of possible outside funding.
 - Applications for state bonding funds have been submitted to Minnesota Management and Budget (MMB) for \$21 million, and the Minnesota Pollution Control Agency (MPCA) for \$8

million (the maximum request through the MPCA's Capital Assistance Program, or CAP grant). Lobbyists have been retained to work with the counties' lobbyists.

- The JLT and R&E staff have met with the respective county finance departments, finance consultants, and attorneys to begin work on necessary loan agreements and other documents necessary for consideration by the R&E Board to proceed with local funding. Discussion continues about general obligation bonds versus revenue bonds issued by R&E. A formal report, including specific actions and costs, a revised pro forma, and a timeline of events will be provided to the Facility & Finance Committee in April, and then to the R&E Board in May.
- An application is being prepared for a \$5 million zero-interest loan from the Closed Loop Fund, which is managed by Closed Loop Partners, an investment firm focused on the circular economy that manages a revolving loan fund.

Durable Compostable Bags

- Specifications for the bags are being developed in order to procure a manufacturer. One topic area raised in community engagement included inquiries about bag durability and effectiveness. While this had been previously examined, the issue is being revisited to provide greater assurance on the integrity of the collection system.
- Community engagement is occurring to help guide the program design (such as size and number of bags provided each year).
- Development of a system to accept and fulfill orders for bags is underway. The JLT intends to bring forward for R&E Board approval in June a single-source agreement with Organix Solutions (affiliated with Randy's Sanitation). Terms of an agreement have been developed, and discussions are occurring with Organix Solutions, which has provided a robust response to the services that would be provided.

Anaerobic Digestion

Work continues on anaerobic digestion technology as a market for processing and recovering value from organic waste. Staff will review recent tours of facilities in and near Toronto, describe that status of policy work on anaerobic digestion, and outline current thinking on solicitation for anaerobic digestion capacity.

- Over the past several years, staff and commissioners have visited several facilities that demonstrate different operating technologies.
- Work with Great Plains Institute, through the Partnership on Waste and Energy, continues, building on the technical and financial analysis prepared in 2018 and 2019. This includes working with state agencies to streamline/clarify the permitting process, working with stakeholders to seek greater support for anaerobic digestion technology, and pursuit of state policies that favor the production of renewable natural gas.
- Framing a solicitation document for anaerobic digestion capacity continues. This will likely be a two-phased process, similar to that used for gasification technology. The first step will be broad in scope, outlining the waste streams and R&E seeks to use as feedstock, as well as other concepts. The goal is to seek a wide variety of vendors and technologies. That data will be evaluated and lead to a second phase, wherein a short-list of vendors will be asked to submit specific proposals. The first solicitation is expected mid-2020.