RAMSEY/WASHINGTON
RECYCLING & ENERGY
CONNECTING VALUE TO WASTE

MEETING NOTICE
RAMSEY/WASHINGTON RECYCLING & ENERGY BOARD
FACILITY AND FINANCE COMMITTEE

Date: Thursday, May 21, 2020
Time: 1:00-3:00 p.m.
Virtual Meeting: https://zoom.us/j/98106874630?pwd=c2dud3F2UlZFSHppM3FzRkx4dE1MUT09
Meeting ID: 981 0687 4630 | Password: 972965 | Phone: 1-312 626 6799

The Chair of the Ramsey/Washington Recycling and Energy Board has determined that an in-person meeting is not practical or prudent because of the COVID-19 pandemic and the declared state and local emergencies. Commissioners will participate by telephone or other electronic means and the Board meeting will be conducted pursuant to and in compliance with Minnesota Statute 13D.021 and 13D.04 Subd. 3. Members of the public will be able to watch the public meeting live online.

AGENDA:

I.	**Call to Order and Commissioner Roll Call**		
II.	**Approval of Agenda**	Action	Page 1
III.	**Approval of Minutes** – February 20, 2020	Action	Page 2
IV.	**Finance**		
	a. 2019 Year-End Budget Report	Information	Page 5
	b. 2020 Budget Status	Information	Page 7
	c. 2021 Budget Discussion	Policy Discussion	Page 10
V.	**Facility**		
	a. Termination of Negotiations with Enerkem	Action	Page 46
	b. Enhancements Financing Report	Action	Page 49
VI.	**Updates and Reports**		
	a. Facility Update	Information	Page 107
VII.	**Other**		
	a. Set June 18, 2020 for the next Facility &Finance committee meeting	Action	
VIII.	**Adjourn**		

Next Meeting:
Thursday, June 18, 2020 |10:00 a.m. - 12:00 p.m. | Zoom meeting

RAMSEY/WASHINGTON
RECYCLING & ENERGY
CONNECTING VALUE TO WASTE

THURSDAY, FEBRUARY 20, 2020
RECYCLING & ENERGY BOARD FACILITY & FINANCE COMMITTEE MINUTES

A meeting of the Ramsey/Washington Recycling & Energy Board Facility & Finance Committee (Facility & Finance Committee) was held at 10:00 a.m. on Thursday, February 20, 2020 at the Ramsey County Environmental Health Office, 2785 White Bear Avenue North, Suite 350, Maplewood, Minnesota.

MEMBERS PRESENT
Commissioners Toni Carter, Trista MatasCastillo – Ramsey County
Commissioner Wayne Johnson – Washington County

ALSO ATTENDING
Leigh Behrens, Terese Bordeau, Leslie Duling McCollam, Zack Hansen, Sam Hanson, Sam Holl, Fatima Janati, Kevin Magnuson, Andrea McKennan, John Ristad, Nikki Stewart, Jody Tharp, Ryan Tritz, Kris Wehlage

CALL TO ORDER/APPROVAL OF THE AGENDA
Chair Carter called the meeting to order at 10:02 a.m. Commissioner MatasCastillo moved, seconded by Commissioner Johnson, to approve the agenda.

Roll Call: Ayes: 3 Nays: 0 Motion Carried.

Introductions were made. Commissioner Johnson introduced himself as a new member of the committee.

APPROVAL OF R&E FINANCE & FACILITY COMMITTEE MINUTES – JUNE 23, 2019
Commissioner MatasCastillo moved, seconded by Commissioner Johnson, to approve the June 23, 2019 minutes.

Roll Call: Ayes: 3 Nays: 0 Motion Carried.

FINANCE
2019 Year-End Budget Report
Kris Wehlage, R&E Accounting Manager, reported on the 2019 budget status. The budget is made up of three funds: Facility (enterprise fund), Joint Activities (governmental fund) and Equipment Maintenance and Replacement. Wehlage presented an update on each of these budget areas.

2020-2021 Budget Planning
Kris Wehlage presented information on the development of the 2021 budgets and discussed the process, structure and timeline for development of the budgets. The Facility & Finance Committee reviewed the previously approved 2021 budgets.

R&E Bylaws provide that:

- The Facility & Finance Committee will prepare a two-year budget for Joint Activities for R&E Board approval on or prior to August 1 of the year prior.

- The R&E Board then submits the Joint Activities Budget to the counties annually for approval for their respective contributions.
- The Facility & Finance Committee will prepare the annual Facility Budget for approval by the R&E Board each year on or prior to August 1 of the year prior.

The Joint Leadership Team (JLT) is recommending that an Equipment Maintenance and Replacement Budget also be prepared for consideration by the R&E Board.

2019 Financial Statements
Kris Wehlage presented a timeline of activity for the 2019 financial statements and discussed the Annual Audit Entry Meeting for year-end 12/31/2019.

R&E Center Enhancements & Financing Update
Zack Hansen presented the Revised Scope for Resource Management. Highlighted activity includes current and future efforts to increase source separation, renovation of the administration building, construction of the RDF/residue load-out enclosure, pre-processing enhancements (DCBs, construction plans).

Hansen addressed current financing efforts. R&E is working with the two counties' financing consultants on the administration building renovation. The state bonding process is underway for the pre-processing enhancements request. The Closed Loop Fund, a non-profit with money from Fortune 500 companies, is accepting proposals for below market loans for cities and companies to improve recycling infrastructure; R&E will apply for a $5 million, 0% interest loan.

Commissioner Carter requested a technology update for the R&E Board due to the rapid changes in technology. Hansen agreed that a longer/broader technology update would be appropriate and will plan for presentation at the R&E Board Workshop on March 12, 2020.

Commissioner Johnson asked about potential odor issues with the planned food scraps collection system. Ryan Tritz, R&E Center Facility Manager, explained that the food scraps are already in the current stream and are being handled through the existing odor control system, and that the new building for organics will have its own odor control system, making it the 3rd system for the facility.

Commissioner Johnson asked about the cost of the odor control system. Ryan Tritz provided information about the cost of the system and odor monitoring done by Foth. Zack Hansen explained the Nasal Ranger system used by Foth, which measures odor intensity, and that R&E Center staff circle the City of Newport twice a day to monitor odor, turning on the odor control system as needed.

Commissioner Carter inquired as to whether the community engagement schedule is available. Zack Hansen indicated that it will be shared at March board workshop.

FACILITY
Ryan Tritz, R&E Center Facility Manager, presented a report on volumes managed at the Center in 2019.

Commissioner Johnson asked whether the new system for processing mattresses will have a significant impact on processing metrics. Tritz responded that because mattress fluff is going into RDF, landfill tonnages will decrease, and there should be a reduction in landfill cost.

INSURANCE UPDATE
Michele Pugleasa, Risk Manager, and Sam Holl, Contract Manager, presented an update on ongoing efforts by R&E staff and R&E's insurance broker to obtain adequate property insurance coverage for the R&E Center.

Michele Pugleasa explained a "perfect storm" of renewal time (December), double-digit increases for policies for all businesses this year, and insurers not interested in this class of industry due to fires from lithium batteries. She explained the current coverage they have been able to obtain, what remains to be secured, and the carriers they are pursuing. $128 million is replacement estimate that they are using is for worst-case if the building burned down. Replacement cost would include building, contents, loss of income for the time the building would be down.

Commissioner MatasCastillo asked whether the R&E Board needs to consider self-insurance.

Holl explained the amount of coverage secured as of the R&E Board meeting is $25 million in property insurance, and working to secure additional coverage. R&E continues to look at risk mitigation strategies on-site and with operations as well. For example, the R&E is working on a contract with Fire Rover for 24/7 heat detection and remote suppression services in the event of facility fires. A discussion is taking place regarding a change of insurance renewal timing to put R&E in a better position for the future.

Commissioner Carter asked if R&E needs to look at a different insurance strategy. Zack Hansen indicated that the $10 million Enterprise Reserve Fund, in essence, a form of self-insurance.

Commissioner Johnson suggested inquiring about the possibility of an insurance pool with like facilities, as well as turning to the state to explain the current insurance situation and determining whether there is a possibility of a state fund that can be created.

UPDATES AND REPORTS
No agenda items.

OTHER
No agenda items.

ADJOURNMENT
Commissioner Johnson moved, seconded by Commissioner MatasCastillo, to adjourn. The meeting was adjourned at 11:15 a.m.

Approved: _____

Date: _____

RAMSEY/WASHINGTON RECYCLING & ENERGY
CONNECTING VALUE TO WASTE

R&E BOARD FACILITY & FINANCE COMMITTEE MEETING DATE:	May 21, 2020		**AGENDA ITEM:**	IV.a.		
SUBJECT:	2019 Year-End Budget Report					
TYPE OF ITEM:	☒	INFORMATION	☐	POLICY DISCUSSION	☐	ACTION
SUBMITTED BY:	Kris Wehlage					

BUDGET COMMITTEE ACTION REQUESTED:

For information only.

EXECUTIVE SUMMARY:

Staff will provide a report on the 2019 budget status to the Facility & Finance Committee.

ATTACHMENTS:

1. Surplus/Deficit Year-end Projection Report

FINANCIAL IMPLICATIONS:

None.

AUTHORIZED SIGNATURES		**DATE**
JOINT LEADERSHIP TEAM		5/13/20
RAMSEY COUNTY ATTORNEY		5/12/20
WASHINGTON COUNTY ATTORNEY		5/12/20

Ramsey/Washington Recycling & Energy

SURPLUS/DEFICIT YEAR-END PROJECTION REPORT
As of December 31, 2019

FACILITY	2019 Approved Budget	2019 Projection	Variance
Personnel Costs	7,443,897	6,539,485	904,412
Fuel Supply	6,682,715	6,563,804	118,911
Landfill	2,784,662	4,685,662	(1,901,000)
Waste Processing	1,329,899	52,080	1,277,819
Transportation	6,993,504	6,784,160	209,344
Transload	1,550,072	2,235,940	(685,868)
Facility Operations	5,372,559	6,853,345	(1,480,786)
Contingency	1,317,990	-	1,317,990
Transfer to Equipment Maintenance	1,848,800	1,848,800	-
Debt Services	1,391,119	1,698,129	(307,010)
	36,715,217	37,261,405	(546,188)
Revenue:	36,715,217	38,337,174	1,621,957
Surplus/(Deficit)	-	1,075,769	1,075,769

JOINT ACTIVITIES	2019 Approved Budget	2019 Projection	Variance
Project Management	1,280,831	1,410,313	(129,482)
Non-Residential Recycling	2,330,000	2,182,671	147,329
General Outreach	770,000	315,032	454,968
Policy Evaluation	1,000,000	907,879	92,121
Hauler Rebates	4,400,000	4,616,580	(216,580)
	9,780,831	9,432,475	348,356
Revenue:	9,780,831	9,860,493	79,662
Surplus/(Deficit)	-	428,018	428,018

EQUIPMENT MAINTENANCE	2019 Approved Budget	2019 Projection	Variance
Equipment/Maintenance	2,065,302	2,065,302	-

RAMSEY/WASHINGTON RECYCLING & ENERGY
CONNECTING VALUE TO WASTE

R&E BOARD FACILITY & FINANCE COMMITTEE MEETING DATE:	May 21, 2020			**AGENDA ITEM:**	IV.b.	
SUBJECT:	2020 Budget Status					
TYPE OF ITEM:	☒	INFORMATION	☐	POLICY DISCUSSION	☐	ACTION
SUBMITTED BY:	Kris Wehlage					

BUDGET COMMITTEE ACTION REQUESTED:

For information only.

EXECUTIVE SUMMARY:

Staff will provide a report on the 2020 budget status to the Facility & Finance Committee, including year-end projections.

ATTACHMENTS:

1. Facility Surplus/Deficit Year-End Projection Report
2. Joint Activities and EM&R Surplus/Deficit Year-End Projection Report

FINANCIAL IMPLICATIONS:

None.

AUTHORIZED SIGNATURES		**DATE**
JOINT LEADERSHIP TEAM		5/13/20
RAMSEY COUNTY ATTORNEY		5/12/20
WASHINGTON COUNTY ATTORNEY		5/12/20

Ramsey/Washington Recycling & Energy Board

SURPLUS/DEFICIT YEAR-END PROJECTION REPORT
As of March 31, 2020

FACILITY	2020 Approved Budget	2020 Projection	Variance
Personnel Costs	7,900,217	6,939,848	960,369
Fuel Supply	7,020,217	6,204,822	815,395
Landfill	3,552,335	4,451,379	(899,044)
Transportation	7,299,919	6,444,952	854,967
Transload	2,249,644	2,247,340	2,304
Facility Operations	5,561,594	5,104,196	457,398
Contingency	509,295	-	509,295
Enterprise Reserve Fund (ERF)	1,500,000	1,500,000	-
Transfer to Equipment Maintenance Fund	1,852,500	1,852,500	-
Debt Services	1,697,155	1,697,254	(99)
	39,142,876	36,442,292	2,700,584
Revenue:	39,142,876	36,170,384	(2,972,492)
Surplus/(Deficit)	-	(271,909)	(271,909)

* 5% waste reduction in volume in the system. Total tons for 2020 projected to be 438,000 (5% of 2019's 461,000 tons). The 5% reduction assumes that Executive Orders allow businesses that are closed to reopen with social distancing, and that manufacturing and commercial businesses rebound starting in July and into 2021.

Ramsey/Washington Recycling & Energy

SURPLUS/DEFICIT YEAR-END PROJECTION REPORT
As of March 31, 2020

JOINT ACTIVITIES	2020 Approved Budget	2020 Projection	Variance
Project Management	1,571,964	1,437,462	134,502
Non-Residential Recycling	3,603,000	1,772,440	1,830,560
General Outreach	1,045,000	804,828	240,172
Policy Evaluation	870,000	880,000	(10,000)
Ramsey County Additional Programs	1,964,000	1,764,888	199,112
	9,053,964	6,659,618	2,394,346
Revenue:	9,053,964	9,053,964	-
Surplus/(Deficit)	-	2,394,346	2,394,346

EQUIPMENT MAINTENANCE	2020 Approved Budget	2020 Projection	Variance
Equipment/Maintenance	1,145,000	1,145,000	-

RAMSEY/WASHINGTON RECYCLING & ENERGY
CONNECTING VALUE TO WASTE

R&E BOARD FACILITY & FINANCE COMMITTEE MEETING DATE:		May 21, 2020		**AGENDA ITEM:**		IV.c.
SUBJECT:	2021 Budget Discussion					
TYPE OF ITEM:	☐	INFORMATION	☒	POLICY DISCUSSION	☐	ACTION
SUBMITTED BY:	Kris Wehlage, Accounting Manager					

BUDGET COMMITTEE ACTION REQUESTED:

The 2021 Budget is presented for committee discussion; changes requested by the committee will be brought back for action by the committee at its June meeting.

EXECUTIVE SUMMARY:

During 2020, the Facility & Finance Committee will review and recommend any changes to the previously approved 2021 budgets for Ramsey/Washington Recycling & Energy (R&E). The R&E Board's bylaws provide that the Facility & Finance Committee will prepare a two-year budget for Joint Activities for R&E Board approval on or prior to August 1 of the year prior. The R&E Board then submits the Joint Activities Budget to the counties annually for approval of their respective contributions. The bylaws also state that the Facility & Finance Committee will prepare the annual Facility Budget for approval by the R&E Board each year on or prior to August 1 of the year prior. While not called for in the bylaws, the Joint Leadership Team (JLT) is recommending that an Equipment Maintenance and Replacement Budget also be prepared for consideration by the R&E Board.

2021 Joint Activities Budget:
No recommended changes to the 2021 Joint Activities Budget.

2021 Equipment/Maintenance Budget:
No recommended changes to the 2021 Equipment/Maintenance Budget.

2021 Facility Budget:
Recommended changes include adding four full-time equivalent (FTE) positions to the 2021 Facility complement. These positions are funding neutral as a result of reduced overtime/double time and reduction in contracted staff. The recommended positions are: one supervisor, two processor helpers, and one electrician. Reducing overtime/double time is a safety measure, ensuring that staff do now become fatigued on long days.

Supervisor Position – The supervisor position is a non-union position. The facility currently has 5.0 (FTE) employees that oversee the work of 50 union employees. The facility operates 24/7, and the additional supervisor position is needed to better monitor staffing levels and allow current supervisors to take PTO hours when they desire.
Processor Helper Positions – Process helper positions are union positions. The facility has seen significant increases in overtime/double time due to staff shortages. Staffing shortages are due to vacant positions, leave of absences, sick time, and vacations of current staff. The additional 2.0 FTE processor helper positions will provide efficient and effective staffing coverage of facility operations.
Electrician Position – Electrician position is a union position. Staff electricians perform electrical maintenance work on a continual basis, as well as special projects. Hiring the 1.0 FTE electrician would allow the facility to decrease its dependence on expensive contracted labor and would allow for a transfer of knowledge and continuity of operations within the organization.

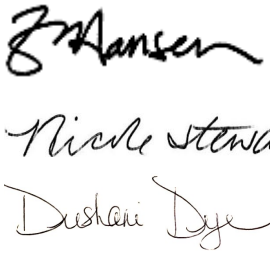
The 2021 Facility Budget is recommended to remain at the current funding levels. It is also recommended that the tipping fee be set as previously approved, at $84.00 per ton.

ATTACHMENTS:

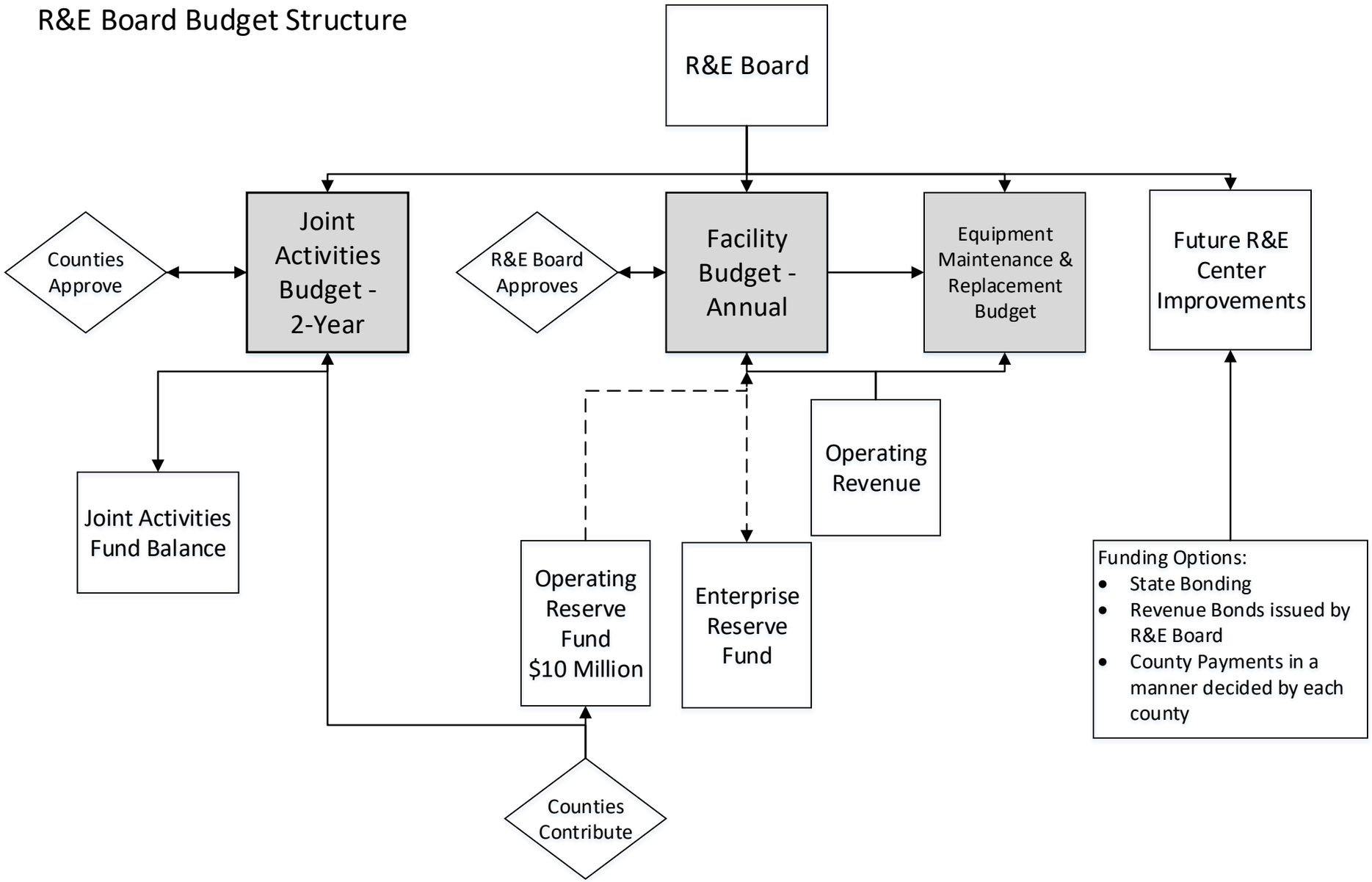
1. R&E Budget Structure
2. 2021 Budget Timeline
3. 2021 Joint Activities Budget
4. 2021 Equipment/Maintenance & Repair Budget
5. 2021 Facility Budget

FINANCIAL IMPLICATIONS:

None.

AUTHORIZED SIGNATURES		**DATE**
JOINT LEADERSHIP TEAM		5/13/20
RAMSEY COUNTY ATTORNEY		5/12/20
WASHINGTON COUNTY ATTORNEY		5/12/20

R&E Board Budget Structure



RAMSEY/WASHINGTON RECYCLING & ENERGY
CONNECTING VALUE TO WASTE

2021 Budget Processes

Joint Activities Budget

February	Facility & Finance Committee reviews budget process, timeline
April	Facility & Finance Committee discusses JLT budget proposals, recommends changes
May	Facility & Finance Committee reviews revised budgets, approves forwarding to R&E Board
June	Facility & Finance Committee approves 2021 budgets and recommends R&E Board approval
June	Facility & Finance Committee presents proposed budget for R&E Board discussion
July	R&E Board recommends approval of budget by county boards
August-September	County boards approve 2021 Joint Activities Budget

Facility Budget and Facility Equipment Maintenance and Replacement Budget

February	Facility & Finance Committee reviews budget process, timeline
April	Facility & Finance Committee discusses JLT budget proposals, recommends changes
May	Facility & Finance Committee reviews revised budgets, approves forwarding to R&E Board
June	Facility & Finance Committee approves 2021 budgets and recommends R&E Board approval
June	Facility & Finance Committee presents proposed 2021 budgets for R&E Board discussion
July	R&E Board approves 2021 Facility Budget and Facility Equipment Maintenance and Replacement Budget and establishes tipping fee for 2021

Ramsey/Washington Recycling & Energy Board

JOINT ACTIVITIES	2020 Approved Budget	2021 Approved Budget
APPROPRIATIONS:		
Project Management	1,571,964	1,603,369
Non-Residential Recycling	3,603,000	3,721,000
General Outreach	1,045,000	925,000
Policy Evaluation	870,000	870,000
Ramsey County Additional Programs	1,964,000	1,964,000
Total Appropriations	9,053,964	9,083,369
REVENUE:		
Washington County	1,914,290	1,922,230
Ramsey County	5,175,674	5,197,139
Ramsey County Additional Programs	1,964,000	1,964,000
Total Revenue	9,053,964	9,083,369

TOTAL	2020 Approved Budget	2021 Approved Budget
Appropriations	9,053,964	9,083,369
Revenue	9,053,964	9,083,369
Surplus/(Deficit)	-	-

Ramsey/Washington Recycling & Energy Board
Joint Activities

Account	Description	2020 Approved	2021 Approved
APPROPRIATIONS:			
PROJECT MANAGEMENT			
411101	Salaries Permanent	652,320	670,652
411103	Salaries Temporary	15,000	15,000
411201	PERA	38,301	39,240
411202	Fica - OASDI	31,042	31,791
411203	FICA - HI	7,499	7,680
411301	Health & Dental Ins	111,550	122,658
411306	Life Ins	665	729
411307	Long Term Disability Ins	320	352
411410	Cell Phone Reimbursement	3,817	3,817
421102	Auditor	20,000	20,000
421110	Fiscal agent Fees	50,000	50,000
421208	County Attorney	50,000	50,000
421501	Consulting	115,000	115,000
521522	Other Professional Services	6,500	6,500
421525	Recruitment Services	1,000	1,000
421603	Printing	4,500	4,500
421701	Postage	2,000	2,000
422402	Buildings & Office Space	25,000	25,000
423107	Other Education	100,000	100,000
423111	Employee Development	4,000	4,000
423309	Records Storage	250	250
424302	Membership & Dues	8,050	8,050
424303	Conference & Seminar	20,000	20,000
424304	Other Travel	40,000	40,000
424305	Meeting Expense	2,000	2,000
424501	Mileage	2,300	2,300
424507	Messenger Service	350	350
424601	Other Services	260,000	260,000
431101	Office Supplies	500	500
	Total Project Management	1,571,964	1,603,369
NON-RESIDENTIAL RECYCLING			
421522	Other Professional Srvs	1,453,000	1,921,000
421602	Promotional Activities	200,000	200,000
425102	Grants	1,800,000	1,500,000
423107	Other Education	150,000	100,000
	Total Non-Residential Recycling	3,603,000	3,721,000

GENERAL OUTREACH			
421509	Design Services	280,000	160,000
421522	Other Professional Services	100,000	100,000
421602	Promotional Activities	265,000	265,000
423107	Other Education	400,000	400,000
	Total General Outreach	1,045,000	925,000
POLICY EVALUATION			
421201	Legal Services	450,000	450,000
421502	Engineering Services	400,000	400,000
424601	Other Services	20,000	20,000
	Total Policy Evaluation	870,000	870,000
RAMSEY COUNTY ADDITIONAL PROGRAMS			
411101	Salaries Permanent	88,316	90,064
411201	PERA	6,624	6,753
411202	Fica - OASDI	5,184	5,287
411203	FICA - HI	1,016	1,036
411301	Health & Dental Ins	10,032	10,032
411306	Life Ins	104	104
411307	Long Term Disability Ins	64	64
411410	Cell Phone Reimbursement	660	660
421522	Other Professional Services	1,075,000	1,075,000
421602	Promotional Activities	152,000	150,000
425102	Grants	625,000	625,000
	Total Ramsey County Additional Programs	**1,964,000**	**1,964,000**
	Total Appropriations	9,053,964	9,083,369
REVENUE:			
314103	Washington County	1,914,290	1,922,230
319110	Ramsey County	5,175,674	5,197,139
319110	Ramsey County Additional Programs	1,964,000	1,964,000
	Total Revenue	9,053,964	9,083,369

Ramsey/Washington Recycling & Energy Board
Joint Activities

LINE ITEM EXPLANATIONS

APPROPRIATIONS EXPLANATIONS

Project Management (51808)

Account Code	Account Name	2020 Approved	2021 Approved
411101	Salaries Permanent	652,320	670,652

EXPLANATION: Compensation for permanent full-time and permanent part-time employees.

Account Code	Account Name	2020 Approved	2021 Approved
411103	Salaries Temporary	15,000	15,000

EXPLANATION: Compensation for temporary full-time and temporary part-time employees.

Account Code	Account Name	2020 Approved	2021 Approved
411201	PERA	38,301	39,240

EXPLANATION: PERA rate calculation at 7.5% of Salaries Permanent

Account Code	Account Name	2020 Approved	2021 Approved
411202	Fica - OASDI	31,042	31,791

EXPLANATION: Fica - OASDI is calculated at 6.2% of Salary Permanent and Salaries Temporary

Account Code	Account Name	2020 Approved	2021 Approved
411203	FICA - HI	7,499	7,680

EXPLANATION: Fica - HI is calculated at 1.452% of Salaries Permanent and Salaries Temporary

Account Code	Account Name	2020 Approved	2021 Approved
411301	Health & Dental Ins	111,550	122,658

EXPLANATION: Health & Dental Insurance for Staff

Account Code	Account Name	2020 Approved	2021 Approved
411306	Life Ins	665	729

EXPLANATION: Life Insurance is paid up to a maximum of $50,000 or 1 times an employee's salary for Staff

Ramsey/Washington Recycling & Energy Board
Joint Activities

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved
411307	Long Term Disability Ins	320	352

EXPLANATION: Long Term Disability Insurance for Staff

Account Code	Account Name	2020 Approved	2021 Approved
411410	Cell Phone Reimbursement	3,817	3,817

EXPLANATION: Cell phone reimbursement for staff, $55 per month per employee

Account Code	Account Name	2020 Approved	2021 Approved
421102	Auditor	20,000	20,000

EXPLANATION: Expenses associated with the required annual audit of the R&E Board

Account Code	Account Name	2020 Approved	2021 Approved
421110	Fiscal agent Fees	50,000	50,000

EXPLANATION: Annual Expenses paid to Ramsey County Finance for the cost of managing the R&E Board's finances

Account Code	Account Name	2020 Approved	2021 Approved
421208	County Attorney	50,000	50,000

EXPLANATION: Reimbursement expenses to the Ramsey and Washington County Attorney's office for legal services
Ramsey County - $35,000/yr for 2020 and 2021
Washington County - $15,000/yr for 2020 and 2021

Account Code	Account Name	2020 Approved	2021 Approved
421501	Consulting	115,000	115,000

EXPLANATION: Ramsey County Human Resources - $75,000/yr, Ramsey County Information Services - $40,000/yr

Account Code	Account Name	2020 Approved	2021 Approved
421522	Other Professional Services	6,500	6,500

EXPLANATION: Expenses related to processing payroll

Ramsey/Washington Recycling & Energy Board
Joint Activities

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved
421525	Recruitment Services	1,000	1,000

EXPLANATION: Costs relating to hiring Recycling and Energy staff

Account Code	Account Name	2020 Approved	2021 Approved
421603	Printing	4,500	4,500

EXPLANATION: Printing services

Account Code	Account Name	2020 Approved	2021 Approved
421701	Postage	2,000	2,000

EXPLANATION: Postage

Account Code	Account Name	2020 Approved	2021 Approved
422402	Buildings & Office Space	25,000	25,000

EXPLANATION: Expenses paid to Ramsey County for providing office space to R&E Board employees that are not located at the R&E Center

Account Code	Account Name	2020 Approved	2021 Approved
423107	Other Education	100,000	100,000

EXPLANATION: Grant Management/Data Tool - EMERGE coordinated database

Account Code	Account Name	2020 Approved	2021 Approved
423111	Employee Development	4,000	4,000

EXPLANATION: Staff training

Account Code	Account Name	2020 Approved	2021 Approved
423309	Records Storage	250	250

EXPLANATION: Fee paid for storing records

Account Code	Account Name	2020 Approved	2021 Approved
424302	Membership & Dues	8,050	8,050

EXPLANATION: Minnesota Resource Recovery Association- $5,250 for 2020 and 2021
American Biogas Council - $300 for 2020 and 2021
Great Plains Institute - Bio-economy coalition - $2,500 for 2020 and 2021

Ramsey/Washington Recycling & Energy Board
Joint Activities

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved
424303	Conference & Seminar	20,000	20,000

EXPLANATION: Conference & Seminars for R&E Board and staff

Account Code	Account Name	2020 Approved	2021 Approved
424304	Other Travel	40,000	40,000

EXPLANATION: Site visits and other educational opportunities

Account Code	Account Name	2020 Approved	2021 Approved
424305	Meeting Expense	2,000	2,000

EXPLANATION: Expenses related to R&E Board staff meetings

Account Code	Account Name	2020 Approved	2021 Approved
424501	Mileage	2,300	2,300

EXPLANATION: Parking/Mileage paid to employees based on IRS reimbursement rate

Account Code	Account Name	2020 Approved	2021 Approved
424507	Messenger Service	350	350

EXPLANATION: Courier services

Account Code	Account Name	2020 Approved	2021 Approved
424601	Other Services	260,000	260,000

EXPLANATION: Olson-Thielen - Hauler audit for compliance with the County Environmental Charge in both counties Master Plan Alignment - $150,000 for 2020 and 2021. Work performed on aligning the Master Plans for Ramsey County and Washington County for greater coordination between the two Counties.

Account Code	Account Name	2020 Approved	2021 Approved
431101	Office Supplies	500	500

EXPLANATION: General office supplies

	Total Project Management	1,571,964	1,603,369

Ramsey/Washington Recycling & Energy Board
Joint Activities

LINE ITEM EXPLANATIONS

Non-Residential Recycling (51809)

Account Code	Account Name	2020 Approved	2021 Approved
421522	Other Professional Srvs	1,453,000	1,921,000

EXPLANATION:

1) BizRecycling consultants - The demand for existing BizRecycling resources has increased. Budget proposes additional funding for BizRecycling grants, which increases need for consulting services to meet growing demand for technical assistance, grants, and other resources from businesses. MN Waste Wise - $500,000 in 2020 and 2021; EcoConsilium - $100,000 in 2020 and 2021

2) A new, comprehensive effort to reduce food waste engaging a variety of food recovery stakeholders, including a stronger partnership with Second Harvest Heartland, increased community engagement and new partnerships - $153,000 for 2020 and $121,000 for 2021

3) Maintain current BizRecycling Partners (non-profit business organizations such as chambers of commerce) to continue to effectively engage the business community and recruit program participation- $250,000 for 2020 and $250,000 for 2021

4) Building on 2019 Pilot, a fully funded Multi-Unit Recycling Program will require expert consultants, like those for BizRecycling, to provide technical assistance, coordinate grants, and provide other resources - $400,000 for 2020 and 2021

5) Schools Continuum Consultant - Continue to provide counties with consultant support for implementation of school recycling continuum developed in 2019 - $50,000 for 2020 and 2021

6) Durable Compostable Bags (DCB) - Design of the distribution system to receive and process orders and assure delivery of DCBs to residents, prior to roll-out of new county-wide organics program - $0 for 2020 and $500,000 for 2021

Account Code	Account Name	2020 Approved	2021 Approved
421602	Promotional Activities	200,000	200,000

EXPLANATION:

Biz Sponsorships - Maintaining existing efforts, to market BizRecycling and other programs through formal sponsor partnerships, large and small event sponsorships, engaging focus groups, developing materials. St. Paul Saints $50,000 for 2020 and 2021, MN Brewers Guild $25,000 for 2020 and 2021, MN United $52,500 for 2020 and 2021, Ordway $20,000 for 2020 and 2021, new sponsor opportunities $52,500 for 2020 and 2021.

Account Code	Account Name	2020 Approved	2021 Approved
425102	Grants	1,800,000	1,500,000

EXPLANATION:

1) BizRecycling starter, reward, container, sustaining, and label grants - increase grant levels from 2019 level of $1,000,000 to - $1,300,000 in 2020, and return to $1,000,000 for 2021

2) Multi-Unit Recycling Program starter, reward, container, and label grants - expanding grant pool from pilot test to meet needs of large, untapped sector - $500,000 in each 2020 and 2021

Ramsey/Washington Recycling & Energy Board
Joint Activities

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved
423107	Other Education	150,000	100,000
EXPLANATION:	1) Sustaining BizRecycling investments - following 2019 evaluation, design and implement new strategies to that will help advance new and improved recycling/organics efforts at participating businesses and ensure those efforts are maintained well into the future - $100,000 for 2020 and 2021 2) R&E Center Tours/Curriculum - Design a comprehensive educational curriculum for the new tour room at the R&E Center, and about the integrated solid waste system in the East Metro for a variety of audiences - $50,000 for 2020		
	Total Non-Residential Recycling	3,603,000	3,721,000

Ramsey/Washington Recycling & Energy Board
Joint Activities

LINE ITEM EXPLANATIONS

General Outreach (51810)

Account Code	Account Name	2020 Approved	2021 Approved
421509	Design Services	280,000	160,000

EXPLANATION:

1) Using contract graphic design services, prepare the annual county Green Guides, the R&E annual report, and other materials - $30,000 for 2020 and 2021
2) Recycling & Energy and BizRecycling websites - comprehensive updates to websites, online channels, and public content - $150,000 for 2020 and $80,000 for 2021.
3) BizRecycling and R&E Center videos - New and updated educational videos - $100,000 for 2020 and $50,000 for 2021 (more videos in 2020 to support launch of new web presence - decreased costs in 2021)

Account Code	Account Name	2020 Approved	2021 Approved
421522	Other Professional Services	100,000	100,000

EXPLANATION:

1) Communication services - contractors to assist with specialized communications needs like crisis communications, strategic planning, issue management, and public relations - $50,000 in 2020 and 2021
2) Cultural consultants - contracting with specialists to better engage with specific cultural communities to ensure equitable distribution of resources - $50,000 for 2020 and 2021

Account Code	Account Name	2020 Approved	2021 Approved
421602	Promotional Activities	265,000	265,000

EXPLANATION:

Promotion and marketing efforts using a variety of mediums, channels, and content - paid media campaigns, social media content, material development and distribution - ongoing to support programs and focused campaigns on timely issues - $265,000 in 2020 and 2021

Account Code	Account Name	2020 Approved	2021 Approved
423107	Other Education	400,000	400,000

EXPLANATION:

Outreach and engagement activities focused on education - focused outreach campaigns, videos, educator forums, and other strategies to address issues like odor mitigation communications, new R&E Center technologies, R&E Center branding, food waste reduction education, quality of recycling, DCBs, hauler rebates/tip fee increases, bulky waste, etc.- $400,000 for 2020 and 2021

	Total General Outreach	1,045,000	925,000

Ramsey/Washington Recycling & Energy Board
Joint Activities

LINE ITEM EXPLANATIONS

Policy Evaluation (51811)

Account Code	Account Name	2020 Approved	2021 Approved
421201	Legal Services	450,000	450,000

EXPLANATION: Legal services contract with Stoel-Rives for legal services related to the R&E Board

Account Code	Account Name	2020 Approved	2021 Approved
421502	Engineering Services	400,000	400,000

EXPLANATION: General engineering and technical services contracted with Foth Infrastructure & Environmental, LLC - $400,000 for 2020 and 2021

Account Code	Account Name	2020 Approved	2021 Approved
424601	Other Services	20,000	20,000

EXPLANATION: Other services - $20,000 in 2020 and 2021

	Total Policy Evaluation	870,000	870,000

Ramsey/Washington Recycling & Energy Board
Joint Activities

LINE ITEM EXPLANATIONS

Ramsey County Additional Programs

Account Code	Account Name	2020 Approved	2021 Approved
411101	Salaries Permanent	88,316	90,064
411201	PERA	6,624	6,753
411202	Fica - OASDI	5,184	5,287
411203	FICA - HI	1,016	1,036
411301	Health & Dental Ins	10,032	10,032
411306	Life Ins	104	104
411307	Long Term Disability Ins	64	64
411410	Cell Phone Reimbursement	660	660

EXPLANATION: Additional Recycling & Energy Program Coordinator to assist with program coordination for Ramsey County

Account Code	Account Name	2020 Approved	2021 Approved
421522	Other Professional Services	1,075,000	1,075,000

EXPLANATION:

1) BizRecycling consultants - The demand for existing BizRecycling resources has increased. Budget proposes additional funding for BizRecycling grants, which increases need for consulting services to meet growing demand for technical assistance, grants, and other resources from businesses. $100,000 for 2020 and 2021

2) Building on 2019 Pilot, a fully funded Multi-Unit Recycling Program will require expert consultants, like those for BizRecycling, to provide technical assistance, coordinate grants, and provide other resources - $125,000 for 2020 and 2021

3) A new, comprehensive effort to reduce food waste engaging a variety of food recovery stakeholders, including a stronger partnership with Second Harvest Heartland, increased community engagement and new partnerships - $340,000 for 2020 and 2021

4) Expand current BizRecycling Partners (non-profit business organizations such as chambers of commerce) to continue to effectively engage the business community and recruit program participation- $60,000 for 2020 and 2021

5) Partnering with Environmental Initiative/Clean Air Minnesota to reduce hazardous waste and emissions of pollutants that have adverse health effects. $350,000 for 2020 and 2021

6) Programming development to provide a recycling outlet for mattresses to prevent them from being delivered to the R&E Center. $75,000 for 2020 and 2021

7) Work with cities and service providers to ensure convenient textile recycling opportunities exist county wide. $75,000 for 2020 and 2021

Account Code	Account Name	2020 Approved	2021 Approved
421602	Promotional Activities	152,000	150,000

EXPLANATION:

1) Biz Sponsorships - Expand existing efforts, to market BizRecycling and other programs through formal sponsor partnerships, large and small event sponsorships, engaging focus groups, developing materials. $100,000 for 2020 and 2021.

2) Work to develop markets for finished compost, especially with Public Works Departments at cities and counties. $52,000 for 2020 and $50,000 for 2021

Ramsey/Washington Recycling & Energy Board
Joint Activities

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved
425102	Grants	625,000	625,000
EXPLANATION:	1) BizRecycling starter, reward, container, sustaining, and label grants - 50 additional grants per year. $500,000 for 2020 and 2021 2) Multi-Unit Recycling Program starter, reward, container, and label grants - expanding grant pool from pilot test to meet needs of large, untapped sector - additional 6-12 grants per year		
	Total Ramsey County Additional Programs	1,964,000	1,964,000
	Total Appropriations	9,053,964	9,083,369

Ramsey/Washington Recycling & Energy Board
Joint Activities

LINE ITEM EXPLANATIONS

REVENUE EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved
314103	Washington County	1,914,290	1,922,230

EXPLANATION: Washington County 27% of Joint Activities Budget

Account Code	Account Name	2020 Approved	2021 Approved
319110	Ramsey County	5,175,674	5,197,139

EXPLANATION: Ramsey County 73% of Joint Activities Budget

Account Code	Account Name	2020 Approved	2021 Approved
319110	Ramsey County Additional Programs	1,964,000	1,964,000

EXPLANATION: Additional Ramsey County funding to provide Recycling & Energy activities conducted only in Ramsey County

	Total Revenue	9,053,964	9,083,369

Ramsey/Washington Recycling & Energy Board

EQUIPMENT/MAINTENANCE	2019 Approved Budget	2020 Approved Budget	2021 Approved Budget
APPROPRIATIONS:			
Equipment	1,215,302	505,000	505,000
Maintenance	850,000	640,000	685,000
Total Appropriations	2,065,302	1,145,000	1,190,000
REVENUE:			
Transfer from Facility Budget:			
Approved Per Board Resolution R&EB - 2017-3	1,548,800	1,552,500	1,552,500
Additional Transfer - Proposed	300,000	300,000	300,000
Total Revenue	1,848,800	1,852,500	1,852,500

TOTAL	2019 Approved Budget	2020 Approved Budget	2021 Approved Budget
Appropriations	2,065,302	1,145,000	1,190,000
Revenue/Fund Balance Transfer	1,848,800	1,852,500	1,852,500
Reserve for Future Years	(216,502)	707,500	662,500
Cumulative Reserve	513,830 *	1,221,330	1,883,830

* Amount consists of $720,332 carried forward from 2018.

Ramsey/Washington Recycling & Energy Board
Recycling and Energy Center - Equipment Maintenance Fund

Account	Description	2019 Approved Budget		2020 Approved Budget	2021 Approved Budget
APPROPRIATIONS:					
441207	Equipment	1,215,302		505,000	505,000
443101	Maintenance	850,000		640,000	685,000
	Total Appropriations	2,065,302		1,145,000	1,190,000
REVENUE:					
341208	Approved Per Board Resolution R&EB - 2017-3	1,548,800		1,552,500	1,552,500
341208	Additional Transfer - Proposed	300,000		300,000	300,000
	Total Revenue	1,848,800		1,852,500	1,852,500
Total Appropriations EM&R		2,065,302		1,145,000	1,190,000
Total Revenue EM&R		1,848,800		1,852,500	1,852,500
Reserve for Future Years		(216,502)		707,500	662,500
Cumulative Reserve		513,830	*	1,221,330	1,883,830

* Amount consists of $720,332 carried forward from 2018.

Ramsey/Washington Recycling & Energy Board
Recycling & Energy Center - Equipment & Maintenance Fund

LINE ITEM EXPLANATIONS

APPROPRIATIONS EXPLANATIONS

Account Code	Account Name	2019 Approved Budget	2020 Approved Budget	2021 Approved Budget
441207	Equipment	1,215,302	505,000	505,000

EXPLANATION: 2020 - Replace front end loader - $355,000, and replace yard tractor - $150,000
2021 - Replace front end loader - $355,000, Backhoe - $130,000,
Replace parts truck - $20,000

Account Code	Account Name	2019 Approved Budget	2020 Approved Budget	2021 Approved Budget
443101	Maintenance	850,000	640,000	685,000

EXPLANATION: 2020 - OBW rotors and pumps - $225,000, C1 Tail upgrade - $150,000, Radiation detector - $100,000,
2nd floor roof - $75,000, Primary disc screen rebuild - $40,000, Flail roof area replacement - $25,000,
Bailer relining - $25,000
2021 - Secondary disc screen rebuild - $105,000, Primary disc screen rebuild - $300,000,
Cyclone/Dust collection - $100,000, C9's Retro - $60,000, Dust control system turn trailer - $50,000,
2nd floor HVAC - $50,000, Oil and water separator - $20,000

REVENUE EXPLANATIONS

Account Code	Account Name	2019 Approved Budget	2020 Approved Budget	2021 Approved Budget
341208	Approved Per Board Resolution R&EB - 2017-3	1,548,800	1,552,500	1,552,500

EXPLANATION: Board Resolution R&EB-2017-3 approvals the use of revenue from the sale of recyclable material to support the Equipment & Maintenance Fund

Account Code	Account Name	2019 Approved Budget	2020 Approved Budget	2021 Approved Budget
341208	Additional Transfer - Proposed	300,000	300,000	300,000

EXPLANATION: Additional Board Proposed Transfer

Capital Expense and Repair/Maintenance Expense Estimates - 5 years - 2020 thru 2024							
Capital Improvements -Capital Maintenance Fund	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**Comments**
Replace Mobile Equipment - Aluminum Walking Floor RDF Trailers	$ 580,302	$ -	$ -	$ -	$ 660,000	$ 660,000	6 trailers per year starting in 2018 ($110,000/trailer includes signage)
Al Aluminum Recycling Equipment	$ 450,000						Recycle more aluminum out of waste. Projected payback of 2-3 years
MO22A- (Horizontal In feed Conveyer)- Complete rebuild every 3 years.	$ 300,000	$ -	$ -	$ 340,000	$ -	$ -	
MO22B- (Horizontal In feed Conveyer)- Complete rebuild every 3 years.	$ 300,000	$ -	$ -	$ 340,000	$ -	$ -	
Flail Mill Grate Cradles	$ 150,000						These hold the grates from falling into C1 conveyer belt
Al Waste Stream Equipment	$ 150,000						
Secondary Disc Screen Rebuild- Every other year rebuild. Based off of last 2 purchases they have increased 5-6K per set.	$ 100,000	$ -	$ 105,000	$ -	$ 110,000	$ -	
Skid Loader	$ 35,000	$ -	$ -	$ -	$ -	$ 55,000	
Front End Loader (rebuild)- Includes 1 set of tires at $45k	$ -	$ 355,000	$ 355,000	$ -	$ 355,000	$ -	Loader #13 2018, Loader #14 2020, Loader #16 2021, Loader #15 2023
OBW Rotors and Pumps		$ 225,000		$ 100,000		$ 100,000	Every 4 to 5 years these need to be rebuilt
Yard Tractor		$ 150,000	$ -	$ -	$ 150,000	$ -	Purchase new yard tractor
C1 Tail Upgrade		$ 150,000	$ -	$ -	$ -	$ -	Turn the bottom 50 feet into a slider deck. Spill/explosion/impact resistant
Radiation Detector		$ 100,000	$ -	$ -	$ -	$ -	
2nd floor roof		$ 75,000					seal roof replace the penetration seals/ repair
Primary Disc Screen Rebuild	$ -	$ 40,000	$ 300,000	$ -	$ -	$ 350,000	Rebuild every three years
Flail Roof Area/Replacement	$ -	$ 25,000	$ -	$ -	$ -	$ 250,000	Explosion repairs every 6-7 years - replace the floor grading and I beams
Bailer Relining	$ -	$ 25,000	$ -	$ -	$ -	$ -	Inside the bailer lining
Backhoe		$ -	$ 130,000	$ -	$ -	$ -	
Cyclones/Dust Collection	$ -	$ -	$ 100,000	$ -	$ 400,000	$ -	100k Replace tunnels/Cyclones 25 years old / rust buildup / outside skin on dust collection repair
C9's Retro		$ -	$ 60,000	$ -	$ -	$ -	replace the conveyor decks with slider decks and new drives
Dust Control System Turn Trailer	$ -	$ -	$ 50,000	$ -	$ -	$ -	
2nd floor HVAC		$ -	$ 50,000	$ -	$ -	$ -	old dampers/old unit/ and condensation elimination
Oil and Water Separator	$ -	$ -	$ 20,000	$ -	$ -	$ -	30 years old
Replace Parts Truck		$ -	$ 20,000	$ -	$ -	$ -	
MO20B-(Flat in feed conveyer before MO22A, MSW is loaded on this conveyer from tipping floor)- Complete rebuild every 5 years.	$ -	$ -	$ -	$ 175,000	$ -	$ -	
Tipping Floor	$ -	$ -	$ -	$ 50,000	$ -	$ 50,000	Replace tipping floor every 10 years
Camera system PLC upgrade				$ 20,000			
MO20A- (Flat in feed conveyer before MO22A, MSW is loaded on this conveyer from tipping floor)- Complete rebuild every 5 years.	$ -	$ -	$ -	$ -	$ 260,000	$ -	
Parking Lot Resurfacing	$ -	$ -	$ -	$ -	$ -	$ 250,000	2024 Estimate to pave west side of property
DC Drives for Primary Disk Screens		$ -	$ -	$ -	$ -	$ 150,000	replace old hyd units with direct drive motors/VFDs
Control Room Computers and Upgrade Software - needs to be done every 3 to 4 years.	$ -	$ -	$ -	$ -	$ -	$ 100,000	TKDA recommends 3-5 years
	$ 2,065,302	$ 1,145,000	$ 1,190,000	$ 1,025,000	$ 1,935,000	$ 1,965,000	

Beginning Cumulative Reserve	$ 513,830	$ 1,221,330	$ 1,883,830	$ 2,711,330	$ 2,628,830
Revenue from Recyclables	$ 1,552,500	$ 1,552,500	$ 1,552,500	$ 1,552,500	$ 1,552,500
Additional Board Approved Transfer	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000
Ending Cumulative Reserve	$ 1,221,330	$ 1,883,830	$ 2,711,330	$ 2,628,830	$ 2,516,330

Ramsey/Washington Recycling & Energy Board

R&E CENTER	2020 Approved Budget	2021 Approved Budget	2021 Amended Budget
APPROPRIATIONS:			
Personnel Costs	7,718,574	7,938,405	8,127,905
Fuel Supply Agreements	7,020,217	6,511,520	6,511,520
Landfill	3,552,335	4,645,295	4,645,295
Waste Processing			
Mattress Recycling	260,000	260,000	260,000
Transportation	7,299,919	7,265,506	7,265,506
Transload	2,249,644	2,306,960	2,306,960
Facility Operations	5,483,237	5,602,008	5,412,508
Contingency	2,009,295	1,980,073	1,980,073
Debt Services	1,697,155	1,695,748	1,695,748
Transfer to Equipment/Maintenance Fund:			
Approved Per Board Resolution R&EB - 2017-3	1,552,500	1,552,500	1,552,500
Additional Transfer -Approved/Proposed	300,000	300,000	300,000
Total Appropriations	39,142,876	40,058,015	40,058,015
REVENUE:			
Operations Revenue	37,590,376	38,505,515	38,505,515
Sale of Recyclable Materials -			
Transfer to Equipment/Maintenance Fund	1,552,500	1,552,500	1,552,500
Total Revenue	39,142,876	40,058,015	40,058,015

TOTAL	2020 Approved Budget	2021 Approved Budget	2021 Amended Budget
Appropriations	39,142,876	40,058,015	40,058,015
Revenue	39,142,876	40,058,015	40,058,015
Surplus/(Deficit)	-	-	-

Notes:
* 2020 and 2021 budget prepared based on receiving 450,000 tons of MSW.
** 2020 Proposed Tipping Fee is $82/ton
2021 Proposed Tipping Fee is $84/ton

Ramsey/Washington Recycling & Energy Board
Recycling & Energy Center - Facility

	Tons Budget	450,000	450,000	450,000
Account	**Description**	**2020 Approved**	**2021 Approved**	**2021 Amended**
APPROPRIATIONS:				
PERSONNEL COSTS				
411101	Staff Non Union- Salary	1,442,799	1,482,389	1,560,389
411103	Temporary Staff	50,000	50,000	50,000
411201	PERA - Non Union Staff	111,960	114,929	120,429
411202	Fica - OASDI	75,901	77,836	78,542
411203	FICA - HI	18,363	18,832	18,903
411301	Health & Dental Ins	219,711	241,682	260,882
411306	Life Ins	2,252	2,308	2,376
411307	Long Term Disability Ins	1,405	1,441	1,508
411115	Staff Union - Salary	3,922,101	4,020,154	4,026,032
411412	Staff - Union Fringe	1,579,924	1,627,322	1,692,929
411201	PERA - Union Staff	294,158	301,512	315,914
421519	Contracted Labor	-	-	-
	Total Personnel Costs	7,718,574	7,938,405	8,127,905
FUEL SUPPLY				
424515	NSP Fuel Supply Agreement	7,020,217	6,511,520	6,511,520
424516	Great River Energy Fuel Supply Agreement	-	-	
	Total Fuel Supply	7,020,217	6,511,520	6,511,520
LANDFILL				
424517	Landfill	3,552,335	4,645,295	4,645,295
	Total Landfill	3,552,335	4,645,295	4,645,295
Waste Processing				
422304	Mattress Recycling	260,000	260,000	260,000
	Total Waste Processing GRE	260,000	260,000	260,000
TRANSPORTATION				
424513	Transportation	7,299,919	7,265,506	7,265,506
	Total Transportation	7,299,919	7,265,506	7,265,506
TRANSLOAD				
424514	Transload Fee	2,249,644	2,306,960	2,306,960
	Total Transload	2,249,644	2,306,960	2,306,960
FACILITY OPERATIONS				
421112	Credit Card Fees	500	500	500
421401	Computer Support Contracts	98,350	98,350	98,350
421402	Telecommunication	35,543	35,543	35,543
421405	Computer Software License	36,311	37,219	37,219
421501	Consulting Services	115,000	115,000	115,000
421519	Contracted Services	49,055	50,281	50,281
421522	Other Professional Srvs	323,973	332,072	142,572

421525	Recruitment Services	500	500	500
421603	Printing	4,942	4,942	4,942
421701	Postage	250	250	250
422101	Building & Structures Repair	126,912	133,258	133,258
422109	Fire Systems Inspection	35,865	36,762	36,762
422203	Janitorial Service	-	-	-
422301	Gas	44,229	46,441	46,441
422302	Electricity	921,377	967,446	967,446
422303	Water Sewer	28,134	29,541	29,541
422601	Equipment & Machinery Repairs	654,365	670,723	670,723
422602	Data Proc Equip Main	4,695	4,695	4,695
422705	Trailer Repairs	423,300	423,300	423,300
422801	Grounds-Repairs	66,074	67,726	67,726
422802	Snow Removal	49,000	50,225	50,225
422811	Pest & Rodent Control	9,000	9,225	9,225
422813	Security Services	301,457	308,993	308,993
423110	On the Job Training Services	8,194	8,194	8,194
423111	Employee Development	48,296	48,296	48,296
424101	Automobile Truck Ins	37,500	37,500	37,500
424103	Workers Compensation Ins	202,000	202,000	202,000
424107	Liability &Property Damage	303,259	303,259	303,259
424110	Public Liability Ins	17,723	17,723	17,723
424112	Multi Cover Ins	169,888	169,888	169,888
424201	Payment in Lieu of Taxes	195,431	195,431	195,431
424302	Membership Dues	2,000	2,000	2,000
424303	Conference Seminar	12,300	12,300	12,300
424305	Meeting Exp	2,300	2,300	2,300
424501	Mileage	4,582	4,697	4,697
424507	Messenger Service	250	250	250
424602	Special Programs/Awards	12,000	12,000	12,000
424607	Licensing Fee	9,800	9,800	9,800
471101	Contingency/Appropriations	2,009,295	1,980,073	1,980,073
431101	Office Supplies	9,835	10,080	10,080
431104	Oils Lubricants Etc.	81,387	83,423	83,423
431105	Uniforms and Clothing	66,486	68,148	68,148
431205	First Aid Supplies	36,438	37,349	37,349
431508	Equipment Parts & Supplies	553,099	566,926	566,926
431604	Diesel Fuel	138,653	142,119	142,119
431702	Small Tools and Safety Equip	19,609	20,099	20,099
431902	Shop Materials & Supplies	74,375	76,234	76,234
443301	Computer Equipment	12,000	12,000	12,000
541101	Remittance To State	100,000	100,000	100,000
541106	Washington County CEC	37,000	37,000	37,000
	Total Facility Operations	7,492,532	7,582,081	7,392,581
DEBT SERVICES				
501101	Principal Payment	1,059,015	1,076,185	1,076,185
502101	Interest Payment	638,140	619,563	619,563
	Total Debt Services	1,697,155	1,695,748	1,695,748
TRANSFER TO EQUIPMENT/MAINTENANCE FUND				
481110	Approved Per Board Resolution R&EB - 2017-3	1,552,500	1,552,500	1,552,500
481110	Additional Transfer -Approved/Proposed	300,000	300,000	300,000
	Total Transfer To Equipment/Maintenance Fund	1,852,500	1,852,500	1,852,500
	Total Appropriations	39,142,876	40,058,015	40,058,015

REVENUE:				
311766	Tipping Fee	36,900,000	37,800,000	37,800,000
311767	Tipping Fee Special	275,307	280,015	280,015
311768	Tipping Fee Private	190,069	200,500	200,500
317321	Sale of Recyclable Materials	1,552,500	1,552,500	1,552,500
319103	Recovery- Current Yr Exp	15,000	15,000	15,000
353152	Solid Waste Management Tax	100,000	100,000	100,000
318102	Interest	110,000	110,000	110,000
	Total Revenue	39,142,876	40,058,015	40,058,015
	Surplus/(Deficit)	-	-	-

Ramsey/Washington Recycling & Energy Board
Recycling & Energy Center - Facility

LINE ITEM EXPLANATIONS

APPROPRIATIONS EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
411101	Staff Non Union- Salary	1,442,799	1,482,389	1,560,389

EXPLANATION: Compensation for permanent full-time and permanent part-time Non Union employees.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
411103	Temporary Staff	50,000	50,000	50,000

EXPLANATION: Compensation for temporary full-time and temporary part-time Union employees.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
411201	PERA - Non Union Staff	111,960	114,929	120,429

EXPLANATION: PERA rate calculation at 7.5% of Staff Non Union Salary

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
411202	Fica - OASDI	75,901	77,836	78,542

EXPLANATION: Fica - OASDI is calculated at 6.2% of Staff Non Union Salary

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
411203	FICA - HI	18,363	18,832	18,903

EXPLANATION: Fica - HI is calculated at 1.45% of Staff Non Union Salary

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
411301	Health & Dental Ins	219,711	241,682	260,882

EXPLANATION: Health & Dental Insurance is paid for Staff Non Union

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
411306	Life Ins	2,252	2,308	2,376

EXPLANATION: Life Insurance is paid up to a maximum of $50,000 or 1 times an employee's salary for Staff Non Union

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
411307	Long Term Disability Ins	1,405	1,441	1,508

EXPLANATION: Long Term Disability Insurance for Staff Non Union

Ramsey/Washington Recycling & Energy Board
Recycling & Energy Center - Facility

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
411115	Staff Union - Salary	3,922,101	4,020,154	4,026,032

EXPLANATION: Compensation for permanent full-time and permanent part-time Union employees

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
411412	Staff - Union Fringe	1,579,924	1,627,322	1,692,929

EXPLANATION: Fringes for permanent full-time and permanent part-time Union employees

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
411201	PERA - Union Staff	294,158	301,512	315,914

EXPLANATION: PERA rate calculation at 7.5% of Staff Union Salary

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
421112	Credit Card Fees	500	500	500

EXPLANATION: Monthly bank fees and credit card fees

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
421401	Computer Support Contracts	98,350	98,350	98,350

EXPLANATION: Cyber Advisors, MN Occupational , Annual Support - Paradigm.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
421402	Telecommunication	35,543	35,543	35,543

EXPLANATION: CenturyLink, Verizon, Integra, Ramsey County IS (Comcast) - $12,000/yr

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
421405	Computer Software License	36,311	37,219	37,219

EXPLANATION: Infor (MP2), Upgrade to CW , NetSuite, Anti-virus firewall Veeam Backup,
Control room computer software and hardware updates.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
421501	Consulting Services	115,000	115,000	115,000
EXPLANATION:	Consulting Services Labor Relations	100,000	100,000	100,000
	Consulting Services IS Superior Services	-	-	-
	Consultant - Risk Management	15,000	15,000	15,000

Ramsey/Washington Recycling & Energy Board
Recycling & Energy Center - Facility

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
421519	Contracted Services	49,055	50,281	50,281

EXPLANATION:

	Contracted Labor	49,055	50,281	50,281
	2 laborer's 6 weeks out of the year for dust collection cleaning. Plus spring and fall cleanup of 2 laborer's 2 weeks each cleanup			
	Contracted Accountant In Personnel Costs	-	-	-
	Contracted Human Resources in Personnel Costs	-	-	-

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
421522	Other Professional Srvs	323,973	332,072	142,572

EXPLANATION: Payroll expense, Rigging Inspections, Air Sample Testing, Emissions Testing, Hearing and Respirator Sample, 2 IW's 8 month/year, plus IW's for outage and flail mill rotor change outage single source contract with Corval, electricians for incidental coverage.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
421525	Recruitment Services	500	500	500

EXPLANATION: Costs relating to hiring staff at the Recycling and Energy Center.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
421603	Printing	4,942	4,942	4,942

EXPLANATION: Printing services

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
421701	Postage	250	250	250

EXPLANATION: Postage

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422101	Building & Structures Repair	126,912	133,258	133,258

EXPLANATION: Repairs to walls , repair divots, Roof Repairs, HVAC, Building Improvements, $25K (estimate) to replace fire protection piping in tipping floor annually a section at a time. Current piping is original equipment and needs to be replaced.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422109	Fire Systems Inspection	35,865	36,762	36,762

EXPLANATION: Annual fire system inspection

Ramsey/Washington Recycling & Energy Board
Recycling & Energy Center - Facility

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422203	Janitorial Service	-	-	-

EXPLANATION: Janitorial / Housekeeping

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422301	Gas	44,229	46,441	46,441

EXPLANATION: Utilities - Gas

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422302	Electricity	921,377	967,446	967,446

EXPLANATION: Utilities - Electricity

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422303	Water Sewer	28,134	29,541	29,541

EXPLANATION: Utilities - water/sewer

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422601	Equipment & Machinery Repairs	654,365	670,723	670,723

EXPLANATION: Repairs to Work Platforms, Forklifts, Front End Loaders, Backhoes, Yard Tractors, Skid Steers, Scale Maintenance, Air Compressors, Air Knife, Compactors, Belt Conveyors, Apron Conveyors, Disc Screens, Flail Mills, Grapple Cranes, Secondary Shredders, Magnetic Separators, Dust Control, Conveyor Belts, Spin Roller Replacement

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422602	Data Proc Equip Main	4,695	4,695	4,695

EXPLANATION: Copiers

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422705	Trailer Repairs	423,300	423,300	423,300

EXPLANATION: Repairs to trailers

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422801	Grounds-Repairs	66,074	67,726	67,726

EXPLANATION: Lawn care, street sweeping, paving - patch work and sealing cracks

Ramsey/Washington Recycling & Energy Board
Recycling & Energy Center - Facility

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422802	Snow Removal	49,000	50,225	50,225

EXPLANATION: Snow removal

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422811	Pest & Rodent Control	9,000	9,225	9,225

EXPLANATION: Pest & rodent control

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422813	Security Services	301,457	308,993	308,993

EXPLANATION: Security contract for R&E Center that provides security services and scalehouse operations on overnights and weekends

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
423110	On the Job Training Services	8,194	8,194	8,194

EXPLANATION: New employee screening/physicals, misc. purchases for facility.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
423111	Employee Development	48,296	48,296	48,296

EXPLANATION: 3 classes, RDF II $12,480, Welding Certification Class $9,600, Heavy Equipment Training $13,250. All of these classes are required as part of the MN Apprentice Program, CompuWeigh Training 3 employees $600, supervisors computer training, AED Renewal $120, 10 employees re-certification $780, Fire Protection Training, RJF Monthly Fee/Annual Hazardous Waste Training, Safety & Health Conference in May each year $1500

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424101	Automobile Truck Ins	37,500	37,500	37,500

EXPLANATION: This insurance policy covers vehicles owned by the R&E Center. The amount determined by Risk Management Consultant

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424103	Workers Compensation Ins	202,000	202,000	202,000

EXPLANATION: This insurance policy covers losses due to employee injury. The amount determined by Risk Management Consultant

Ramsey/Washington Recycling & Energy Board
Recycling & Energy Center - Facility

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424107	Liability &Property Damage	303,259	303,259	303,259

EXPLANATION: This insurance policy covers losses to property damage at the R&E Center. The amount determined by Risk Management Consultant

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424110	Public Liability Ins	17,723	17,723	17,723

EXPLANATION: This insurance policy covers elected officials associated with the R&E Center. The amount determined by Risk Management Consultant

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424112	Multi Cover Ins	169,888	169,888	169,888

EXPLANATION: This insurance policy covers the R&E Center. The amount is determined by Risk Management Consultant

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424201	Payment in Lieu of Taxes	195,431	195,431	195,431

EXPLANATION: List of entities due Payment in Lieu of Taxes. 2018 and 2019 are estimates because the tax rates are not known until Washington County approves their budgets in December:

Washington County General	38,572	38,572	38,572
Washington County Regional Rail Authority	309	309	309
City of Newport	76,392	76,392	76,392
ISD 833 South Washington	53,332	53,332	53,332
School District other Levies	20,205	20,205	20,205
Non-School Voter Approved Referenda Levies	363	363	363
Metropolitan Council	1,086	1,086	1,086
Metropolitan Council Transit	1,657	1,657	1,657
Metropolitan Mosquito Control	585	585	585
South Washington Watershed	1,063	1,063	1,063
County HRA	1,868	1,868	1,868
Total	195,431	195,431	195,431

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424302	Membership Dues	2,000	2,000	2,000

EXPLANATION: Newspaper, Minnesota Safety Council membership

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424303	Conference Seminar	12,300	12,300	12,300

EXPLANATION: CW Training 3 employees, Travel conventions airfare and hotel.

Ramsey/Washington Recycling & Energy Board
Recycling & Energy Center - Facility

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424305	Meeting Exp	2,300	2,300	2,300

EXPLANATION: Expenses related to R&E Center meetings

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424501	Mileage	4,582	4,697	4,697

EXPLANATION: Parking/Mileage paid to employees based on IRS reimbursement rate

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424507	Messenger Service	250	250	250

EXPLANATION: Courier services

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424513	Transportation	7,299,919	7,265,506	7,265,506

EXPLANATION: Contracted costs for trucking firms to transport material to various destinations, such as metal markets, Xcel energy facilities, and landfills.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424514	Transload Fee	2,249,644	2,306,960	2,306,960

EXPLANATION: Fees paid to transfer station operators to receive, weigh, and manage MSW delivered to their facilities by licensed haulers with a waste delivery agreement with the R&E Board as well as self-haulers delivering acceptable waste generated in Ramsey County or Washington County

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424515	NSP Fuel Supply Agreement	7,020,217	6,511,520	6,511,520

EXPLANATION: Expenses associated with marketing of refuse derived fuel (RDF) to Xcel Energy, pursuant to a Fuel Supply Agreement.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424517	Landfill	3,552,335	4,645,295	4,645,295

EXPLANATION: Contracted costs to deposit residue, bulky waste and excess waste at landfills.

Ramsey/Washington Recycling & Energy Board
Recycling & Energy Center - Facility

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
422304	Waste Processing	260,000	260,000	260,000

EXPLANATION: 2020 and 2021 proposed budget is mattress recycling program that is new in 2020. 2020-2021 budget based on 13,000 mattresses at $20/mattress.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424602	Special Programs/Awards	12,000	12,000	12,000

EXPLANATION: Programs - such as - Employee recognition, Employee retirement , Annual hauler appreciation event,

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
424607	Licensing Fee	9,800	9,800	9,800

EXPLANATION: Licensing and Permit fees.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
431101	Office Supplies	9,835	10,080	10,080

EXPLANATION: This account includes all basic office supplies for staff. Most office supply items are consumable and must be replenished.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
431104	Oils Lubricants Etc.	81,387	83,423	83,423

EXPLANATION: Oil lubricant supplies

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
431105	Uniforms and Clothing	66,486	68,148	68,148

EXPLANATION: Staff uniforms and clothing. Costs include boots, winter clothing, hard hats, gloves, and glasses

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
431205	First Aid Supplies	36,438	37,349	37,349

EXPLANATION: Safety supplies

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
431508	Equipment Parts & Supplies	553,099	566,926	566,926

EXPLANATION: Tires and other equipment parts, Welding, Bolts, Fasteners, Hoses, Chisels, Radio Equipment, annual electrical/ARC Flash maintenance

Ramsey/Washington Recycling & Energy Board
Recycling & Energy Center - Facility

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
431604	Diesel Fuel	138,653	142,119	142,119

EXPLANATION: Fuel costs for running equipment at the R&E Center

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
431702	Small Tools and Safety Equip	19,609	20,099	20,099

EXPLANATION: Replacing worn out tools

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
431902	Shop Materials & Supplies	74,375	76,234	76,234

EXPLANATION: Safety mats, towels, misc shop materials and supplies

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
443301	Computer Equipment	12,000	12,000	12,000

EXPLANATION: Computer and monitor replacements

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
471101	Contingency/Appropriations	2,009,295	1,980,073	1,980,073

EXPLANATION: A contingency account because of uncertainty associated with new ownership and operation.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
481110	Transfers to Other Funds	1,852,500	1,852,500	1,852,500
EXPLANATION:	Approved Per Board Resolution R&EB - 2017-3	1,552,500	1,552,500	1,552,500
	Additional Transfer -Approved/Proposed	300,000	300,000	300,000

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
501101	Principal Payment	1,059,015	1,076,185	1,076,185

EXPLANATION: Debt principal payments made to Ramsey County and Washington County.
Includes $307,010 payments to Counties for BWRLO loan in 2020 and 2021

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
502101	Interest Payment	638,140	619,563	619,563

EXPLANATION: Debt interest payments made to Ramsey County and Washington County.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
541101	Remittance To State	100,000	100,000	-

EXPLANATION: Payments to MN Department of Revenue for SWM Tax.

Ramsey/Washington Recycling & Energy Board
Recycling & Energy Center - Facility

LINE ITEM EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
541106	Washington County CEC	37,000	37,000	37,000

EXPLANATION: Washington County CEC tax collected from non-license haulers and citizens.

REVENUE EXPLANATIONS

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
311766	Tipping Fee	36,900,000	37,800,000	37,800,000

EXPLANATION: Fee charging haulers. 2019 fee is $79/ton, 2020 fee is $82/ton, 2021 fee is $84/ton

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
311767	Tipping Fee Special	275,307	280,015	280,015

EXPLANATION: The fees approved for 2020 and 2021 are unchanged from the 2019 Board approved fees. Rates are Tires - $8.00 per item, Auto or Truck tire and rim - $10.00 per item, Mattresses - $20.00 plus tax per item, Appliance Non Freon - $16.00 per item, Appliance Freon - $20.00 per item, Electronics - $30.00 per item, Large bulky furniture such as couch or love seat - $20.00 plus tax per item.

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
311768	Tipping Fee Private	190,069	200,500	200,500

EXPLANATION: Special fees charged to citizens and unlicensed self haulers

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
317321	Sale of Recyclable Materials	1,552,500	1,552,500	1,552,500

EXPLANATION: Sale of Recyclable Materials. This revenue is transferred to the Equipment Maintenance Fund per Board Resolution R&EB-2017-3

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
319103	Recovery- Current Yr Exp	15,000	15,000	15,000

EXPLANATION: Revenue received for processing credit cards

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
353152	Solid Waste Management Tax	100,000	100,000	100,000

EXPLANATION: R&E Center must collect the Solid Waste Management Tax (SWMT) from self-haulers who have a waste delivery agreement but not filed an SWMT exemption certificate with the R&E Center

Account Code	Account Name	2020 Approved	2021 Approved	2021 Amended
318102	Interest	110,000	110,000	110,000

EXPLANATION: Interest revenue

RAMSEY/WASHINGTON
RECYCLING & ENERGY
CONNECTING VALUE TO WASTE

R&E BOARD MEETING DATE:			May 21, 2020		**AGENDA ITEM:**		V.a.	
SUBJECT:	Termination of Negotiations with Enerkem							
TYPE OF ITEM:	☐	INFORMATION	☐	POLICY DISCUSSION	☒	ACTION	☐	CONSENT
SUBMITTED BY:	Joint Leadership Team (JLT)							

FACILITY & FINANCE COMMITTEE ACTION REQUESTED:

1. Recommend that the R&E Board authorize the JLT to terminate negotiations with Enerkem, Inc. for acceptance of refuse-derived fuel (RDF) for use in a gasification facility.
2. Recommend that the R&E Board authorizes the JLT to aggressively identify and evaluate alternate markets for RDF and other products derived from solid waste.

EXECUTIVE SUMMARY:

At its meeting on January 24, 2019, the Recycling & Energy Board (R&E Board) authorized the Joint Leadership Team (JLT) to enter into contract negotiations with Enerkem, Inc. for acceptance of RDF for use in a gasification facility (Res. No. R&EB – 2019 – 03). This action followed a two-phase gasification procurement process, in which Enerkem, Inc. and OWS, Inc. both submitted proposals to Phase I request for proposals (RFP). At its September 2018 meeting, the R&E Board approved Enerkem, Inc. be invited to respond to the Phase II RFP.

Enerkem partnered with SKB, Inc. in proposing to build a facility in Dakota County to manage mixed municipal solid waste (MSW) and convert it into refuse-derived fuel (RDF) for use in a gasification process. Enerkem, in responding to the RFP, had proposed to take 50,000 tons per year of RDF from R&E. Enerkem also envisioned building a gasification facility capable of handling all RDF produced by the R&E Center in the future.

Since January 2019, the JLT has attempted to initiate negotiations with Enerkem. In mid-2019, Enerkem informed the JLT that one of its major investment partners had backed out, citing concerns that the Enerkem facility could not meet the requirements needed to benefit from the California low carbon fuel standard, a key economic benefit to the project. Since that time, Enerkem has failed to find another investment partner. Also during that time, there was substantial leadership and staff turnover at Enerkem, making it clear that little attention was being paid to the Minnesota project.

The JLT and Foth reached out to Enerkem several times in 2019 and early 2020, and, in each instance, the status of Enerkem's project did not change. The Metropolitan Council had sought and received authorization from the Minnesota legislature to provide a $1.5 million grant for a wastewater reuse grant

that would serve the Enerkem facility with a July 1, 2019 deadline for contracting. Enerkem missed the deadline, and the grant was forfeited.

For these reasons, the JLT recommends termination of negotiations with Enerkem, Inc. This will allow the JLT to more freely pursue alternative uses for MSW and RDF from the R&E Center. Enerkem has been contacted about terminating negotiations and is agreeable with it.

Ramsey and Washington counties have been evaluating alternate waste management technologies for nearly two decades, and more aggressively since 2013. Gasification of waste, an emerging technology with promise, is a viable method of recovering resources from waste. There are several firms developing and planning use of this technology. Ending negotiations with Enerkem would allow R&E to more freely engage other firms. It also provides R&E with the opportunity to explore other technologies for use of RDF and MSW.

ATTACHMENTS:

1. Draft Resolution

FINANCIAL IMPLICATIONS:

There were no financial commitments associated with entering into negotiations, and no commitments were made to Enerkem.

AUTHORIZED SIGNATURES		**DATE**
JOINT LEADERSHIP TEAM		5/15/20
RAMSEY COUNTY ATTORNEY		5/15/20
WASHINGTON COUNTY ATTORNEY		5/15/20

RAMSEY/WASHINGTON
RECYCLING & ENERGY
CONNECTING VALUE TO WASTE

RESOLUTION R&EB-2020-03

WHEREAS, The Ramsey/Washington Recycling & Energy Board ("R&E Board") is governed by the amended and restated joint powers agreement by and between Ramsey County and Washington County dated September 22, 2015 ("Joint Powers Agreement"); and

WHEREAS, The R&E Board, and its predecessor the Ramsey/Washington County Resource Recovery Project Board ("Project Board"), invested considerable time and effort into evaluating the future of the solid waste system in the East Metro area; and

WHEREAS, As part of that evaluation, the Project Board and R&E Board investigated and evaluated different waste management technologies, including gasification systems that convert waste to fuels and industrial chemicals and other products; and

WHEREAS, The Scope for Resource Management, which outlines the strategic direction for waste management, includes use of refuse derived fuel ("RDF") produced at the Recycling & Energy Center ("R&E Center") in gasification systems; and

WHEREAS, At its meeting on March 22, 2018, the R&E Board approved a two-phase procurement process and authorized the Joint Leadership Team ("JLT") to release of the first phase RFP (Resolution 2018-R&EB-10); and

WHEREAS, At its meeting on September 27, 2018, the R&E Board approved the selection of Enerkem, Inc. to receive a phase II RFP (Resolution 2018-R&EB-18); and

WHEREAS, At its meeting on January 24, 2019 the R&E Board authorized the JLT to enter into negotiations with Enerkem (Resolution R&EB-2019-03); and

WHEREAS, Because of loss of an investor and a change in business direction, Enerkem has not entered into negotiations with R&E and has agreed to terminate negotiations. NOW, THEREFORE, BE IT

RESOLVED, The R&E Board hereby authorizes the JLT to terminate negotiations with Enerkem, Inc. for acceptance of refuse derived fuel (RDF) for use in a gasification facility. BE IT FURTHER

RESOLVED, The R&E Board hereby authorizes the JLT to aggressively identify and evaluate alternate markets for RDF and other products derived from solid waste.

_____
Board Chair
May 28, 2020

_____
Attest
May 28, 2020

RAMSEY/WASHINGTON RECYCLING & ENERGY
CONNECTING VALUE TO WASTE

R&E BOARD FACILITY & FINANCE COMMITTEE MEETING DATE:		May 21, 2020		**AGENDA ITEM:**		V.b.
SUBJECT:	Enhancements Financing Report					
TYPE OF ITEM:	☐	INFORMATION	☐	POLICY DISCUSSION	☒	ACTION
SUBMITTED BY:	Joint Leadership Team (JLT)					

FACILITY & FINANCE COMMITTEE ACTION REQUESTED:

Recommend that the Recycling & Energy Board:

1. Accept the state bond funds in the amount approved by the legislature and authorize the Joint Leadership Team (JLT) to negotiate documents for receipt of state bond funds, with such agreements brought back for R&E Board approval as soon as possible.
2. Authorize the chair of the R&E Board to execute documents necessary for the receipt of state bond funds, upon approval as to form by the county attorney.
3. Authorize proceeding with the full scope of the R&E Center enhancements, including the durable compostable bag organics recycling system and the recyclables recovery system, and authorize the JLT to proceed with final engineering, architecture and construction plans to prepare for construction bidding as soon as funds are available.
4. Approve and recommend that the county boards approve and implement a financing structure for the R&E Center enhancements, said financing structure to include the following:
    a. Each county shall loan a proportionate share to the R&E Board sufficient to cover its share of total financing for the R&E Center enhancements, according to of the percentages set forth in the joint powers agreement: Ramsey County – 73%, Washington County – 27% (the "County Enhancement Loans").
5. Ramsey County shall issue general obligation bonds on behalf of both counties (the "County Bonds") to fund the full loan amount for the R&E Center enhancements.
6. Ramsey County and Washington County shall enter into an agreement whereby Washington County agrees that Ramsey County will issue bonds on behalf of both counties, and that Washington County shall pay its share of the total financing of the R&E Center Enhancements through its loan agreement with the R&E Board.
7. The R&E Board shall be obligated to and is hereby authorized to enter into one or more loan agreements pursuant to which it will agree to repay the County Enhancements Loans from facility revenues, CEC funds and other available revenues on terms and conditions that match, or are otherwise consistent with, any terms and conditions of any bonds issued to fund its County Enhancements Loans.
8. Authorize the JLT to make all necessary budget adjustments related to the R&E Center enhancements project.

SUBJECT: *Enhancements Financing Report*

EXECUTIVE SUMMARY:

The Recycling & Energy Board (R&E Board) has been engaged in policy development to achieve environmental, economic and social benefits through the Recycling & Energy Center (R&E Center) since 2013. As a step to achieve the next phase, the R&E Center will require expansion and system improvements. 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.

This report covers the following:

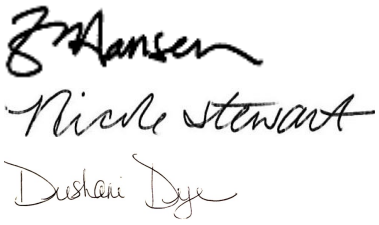
- Background on the R&E Center enhancements
- Pandemic-related economic conditions and R&E financing
- Economic activity generated by the enhancements
- Recommendations on implementation of the August 2019 R&E Center Enhancements Finance Plan
- Timelines
- Summary of community engagement

ATTACHMENTS:

1. Resolution
2. Enhancements Financing Report

FINANCIAL IMPLICATIONS:

The recommended actions would result in the R&E Board approving loans from the two counties in an amount to be approved upon resolution of state bonding. R&E would pay back the loans to the counties using revenue from tipping fees. The exact financial implications are not known until state bonding is complete during the current legislative session.

AUTHORIZED SIGNATURES		DATE
JOINT LEADERSHIP TEAM		5/15/20
RAMSEY COUNTY ATTORNEY		5/15/20
WASHINGTON COUNTY ATTORNEY		5/15/20

RAMSEY/WASHINGTON
RECYCLING & ENERGY
CONNECTING VALUE TO WASTE

RESOLUTION R&EB-FFC-2020-01

WHEREAS, it is the stated policy of the State of Minnesota, under the Waste Management Act, to manage solid waste in an environmentally sound manner; and

WHEREAS, Ramsey and Washington Counties (the "Counties") have committed to continue to protect and ensure the public health, safety, welfare and environment of each County's residents and businesses through sound management of solid and hazardous waste generated in each County; and

WHEREAS, Ramsey and Washington Counties have in place County Solid Waste Management Master Plans ("Master Plans") approved by the Commissioner of the Minnesota Pollution Control Agency, which clearly state the policy goal of maintaining and improving an integrated system of solid waste management that supports Minnesota's hierarchy of solid waste management, with an emphasis on waste reduction, reuse, recycling and composting before the remaining solid waste is managed through resource recovery; and

WHEREAS, the Master Plans also include policies that affirm the processing of waste, for recovering energy and recyclables, and other beneficially usable materials, as the preferred method to manage solid waste that is not reduced, reused or recycled; and

WHEREAS, the Ramsey/Washington Recycling & Energy Board ("R&E Board") is governed by the amended and restated joint powers agreement by and between Ramsey County and Washington County dated September 22, 2015 ("Joint Powers Agreement"); and

WHEREAS, R&E has conducted extensive evaluation and analysis of methods to enhance recovery of value from the waste stream using source separation and mechanical separation of organics and recyclables, and has designed system changes to assist in meeting state recycling goals; and

WHEREAS, a peer-reviewed preliminary engineering design has been completed for enhancements to the R&E Center that would recover source separated organic waste in durable compostable bags and add equipment for removal of recyclables; and

WHEREAS, extensive analysis of these enhancements has been completed for technology, economics, environmental benefits, risk assessment and procurement; and

WHEREAS, to be "shovel ready" R&E has engaged the services of a construction manager and architect/engineer to prepare plans and budgets for these enhancements, and has completed the schematic design and budget, with a timeline to complete design and procurement with construction to begin in late 2020; and

WHEREAS, the R&E Board has applied to receive funding from the state of Minnesota to assist with construction of the proposed enhancements to provide this necessary public service, through the Minnesota Management and Budget (MMB) administered capital grants program, and through the Minnesota Pollution Control Agency's (MPCA) capital assistance program, both of which require a local matching of funds; and

WHEREAS, At its meeting on August 21, 2019 the R&E Board approved Resolution R&EB-2019-16, which approved the Financing Plan to fund the capital improvements necessary for the system enhancements for recycling, and also approved a Procurement Plan (Resolution R&EB-2019-18) for steps necessary to proceed with design and budgeting of the enhancements; and

WHEREAS, the Joint Leadership Team (JLT), working with the two county finance departments, the counties' financial advisors and bond counsel, the R&E financial advisor Ehlers, and county attorneys, as completed a Financing Report to move forward the R&E Board's plans for R&E Center enhancements. NOW, THEREFORE, BE IT

RESOLVED, the R&E Facility & Finance Committee hereby recommends that the R&E Board approve the following:

RESOLVED, The R&E Board hereby approves the R&E Center Enhancements Financing Report. BE IT FURTHER

RESOLVED, the R&E Board hereby accepts state bond funds in the amount approved by the legislature and authorizes the Joint Leadership Team (JLT) to negotiate documents for receipt of state bond funds, with such agreements brought back for R&E Board approval as soon as possible. BE IT FURTHER

RESOLVED, The R&E Board hereby authorizes the Chair of the R&E Board to execute documents necessary for the receipt of state bond funds, upon approval as to form by the county attorney. BE IT FURTHER

RESOLVED, the R&E Board hereby authorizes proceeding with the full scope of the R&E Center enhancements, including the durable compostable bag food scraps recycling system and the recyclables recovery system and authorizes the JLT to proceed with final engineering, architecture and construction plans. BE IT FURTHER

RESOLVED, the R&E Board hereby authorizes the JLT to apply for permits necessary for the enhancements, and further authorizes the Chair to execute necessary easement and permit documents upon approval as to form by county attorneys. BE IT FURTHER

RESOLVED, The Recycling & Energy Board hereby approves and recommends that the county boards approve and implement a financing structure for the R&E Center enhancements, with said financing structure to include the following:

- Each county shall loan a proportionate share to the R&E Board sufficient to cover its share of total financing, including all financing costs, for the R&E Center enhancements, according to the percentages set forth in the joint powers agreement: Ramsey County – 73%, Washington County – 27% (the "County Enhancement Loans").
- Ramsey County shall issue general obligation bonds on behalf of both counties (the "County Bonds") to fund the aggregate County Enhancement Loan amount for the R&E Center enhancements.
- Ramsey County and Washington County shall enter into an agreement whereby Washington County agrees that Ramsey County will issue bonds on behalf of both counties, and that Washington County shall provide its general obligation pledge to Ramsey County for its share of the financing and pay its share of the total financing of the R&E Center Enhancements through its loan agreement with the R&E Board.

- The R&E Board shall be obligated to and is hereby authorized to enter into one or more loan agreements pursuant to which it will agree to repay the County Enhancements Loans from facility revenues, CEC funds and other available revenues on terms and conditions that match, or are otherwise consistent with, any terms and conditions of any other loans outstanding and owed to the counties, additional covenants required by the counties and the County Bonds issued to fund R&E Board's County Enhancements Loans. BE IT FURTHER

RESOLVED, The R&E Board hereby authorizes the JLT to make all necessary budget adjustments related to the R&E Center enhancements project.

_____

Toni Carter, Committee Chair
May 21, 2020

RAMSEY/WASHINGTON
RECYCLING & ENERGY
CONNECTING VALUE TO WASTE

To: **Ramsey/Washington Recycling & Energy Board Facility & Finance Committee**
From: **Joint Leadership Team (JLT)**
Re: **Report on Recycling & Energy Center (R&E Center) Enhancements Financing**
Date: **May 15, 2020**

Action Requested

In the attached resolution, the Facility & Finance Committee is requested to recommend that the Recycling & Energy Board (R&E Board):

- Accept the state bond funds in the amount approved by the legislature and authorize the Joint Leadership Team (JLT) to negotiate documents for receipt of state bond funds, with such agreements brought back for R&E Board approval as soon as possible.
- Authorize the chair of the R&E Board to execute documents necessary for the receipt of state bond funds, upon approval as to form by county attorneys.
- Authorize proceeding with the full scope of the R&E Center enhancements, including the durable compostable bag food scraps recycling system and the recyclables recovery system.
- Authorize the JLT to proceed with final engineering, architecture and construction plans; necessary permits; and construction bidding documents as soon as funds are available.
- Authorize the JLT to apply for permits necessary for the enhancements, and further authorize the Chair to execute necessary easement and permit documents upon approval as to form by county attorneys.
- Approve and recommend that the county boards approve and implement a financing structure for the R&E Center enhancements, with said financing structure to include the following:
    - Each county shall loan a proportionate share to the R&E Board sufficient to cover its share of total financing, including all financing costs, for the R&E Center enhancements, according to the percentages set forth in the joint powers agreement: Ramsey County – 73%, Washington County – 27% (the "County Enhancement Loans").
    - Ramsey County shall issue general obligation bonds on behalf of both counties (the "County Bonds") to fund the aggregate County Enhancement Loan amount for the R&E Center enhancements.
    - Ramsey County and Washington County shall enter into an agreement whereby Washington County agrees that Ramsey County will issue bonds on behalf of both counties, and that Washington County shall provide its general obligation pledge to Ramsey County for its share of the financing and pay its share of the total financing of the R&E Center Enhancements through its loan agreement with the R&E Board.
    - The R&E Board shall be obligated to and is hereby authorized to enter into one or more loan agreements pursuant to which it will agree to repay the County Enhancements Loans from facility revenues, CEC funds and other available revenues on terms and conditions that match, or are otherwise consistent with, any terms and conditions of any other loans outstanding and owed to the counties, additional covenants required by the counties and the County Bonds issued to fund R&E Board's County Enhancements Loans.
- Authorize the JLT to make all necessary budget adjustments related to the R&E Center enhancements project.

This memo covers the following:

- Background on the R&E Center enhancements
- Pandemic-related economic conditions and R&E financing
- Economic activity generated by the enhancements
- Recommendations on implementation of the August 2019 R&E Center Enhancements Finance Plan
- Timelines
- Summary of community engagement

Background

The R&E Board has been engaged in policy development to achieve environmental, economic and social benefits through the Recycling & Energy Center (R&E Center) since 2013. The R&E vision, "vibrant, healthy communities without waste," is being pursued through a variety of efforts. While R&E activities and each county's programs compliment each other in working upstream, preventing waste and increasing source-separation of recyclables, the R&E Center will be redesigned and repurposed to recover more value from waste.

The effort to recover more value from waste has progressed since 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. Procurement is underway for a robotic separator to clean the non-ferrous metals that are separated on the processing lines to make these used beverage containers more valuable at market. Procurement is also underway to add a magnet to the bulky waste shredder, allowing the metal from mattresses to be recycled, and the fluff to be used as refuse-derived fuel (RDF).

These improvements will be followed by enhancements to the R&E Center to accommodate source-separated organics and to separate high-value recyclables from trash. Also under development are plans to use the remaining waste, now used to produce refuse-derived fuel, to produce alternate products through more modern conversion technologies, such as gasification, digestion to biofuels and/or chemical recycling.

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.

Pandemic-Related Economic Conditions and R&E Financing

The JLT, R&E staff and finance team have approached these recommendations fully aware of and with understanding of the significance of the current COVID-19 pandemic. The current economic downturn has affected the waste and recycling industry, both in positive and negative ways. Because the R&E Center operates as an enterprise fund and relies solely on R&E Center revenues, the status of waste deliveries as the pandemic proceeds is important to understand. With that in mind, R&E has evaluated probable and possible effect of the economic uncertainty on the solid waste stream and economics of trash, and has also conducted financial tests to determine the resilience of R&E's finances.

Projections of the future of the economy are challenging. Relating economic projections to waste generation is also difficult. However, staff and consultants have been gathering information that can inform the R&E Board's decision moving forward. While there are predictions at the national and state level, it is important to note that "all trash is local." The composition of the East Metro area residential, commercial and industrial waste generators determines the volumes and types of waste and recyclable material.

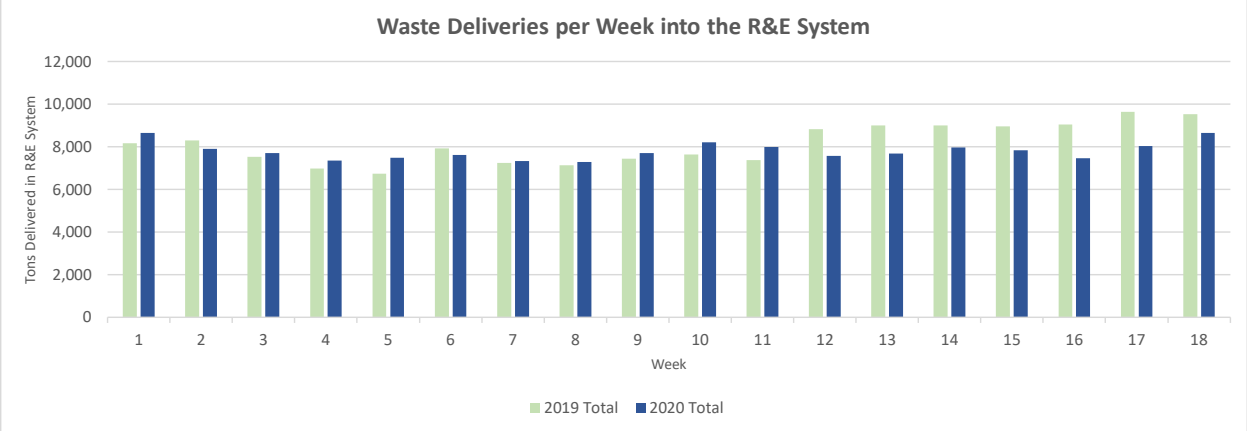
This section of the report is a summary of the pandemic's expected effects on waste generation, short term and long term. In short, these are the findings:

- The gross domestic product (GDP) is a good predictor of waste generation, but it is not exact and does not always reflect local conditions.
- The GDP is expected to drop for three quarters in 2020, and then begin to grow again. This means an economic recession for three quarters, then resumed economic growth.
- The rate of growth is uncertain – the downturn is heavily related to consumer activity, and it depends on the rate of business openings, jobs, and consumer spending.
- Waste volumes in the East Metro have declined over the past eight weeks, then have rebounded somewhat.
- Waste volumes will likely expand to pre-pandemic levels.
- Financial analyses in this report take the pandemic into account.

Short Term Effects

Current effects on the waste industry will likely not last. Executive orders closing many businesses resulted in a significant reduction in commercial and industrial waste generation. At the same time, residential waste volumes have increased with more people staying at home. Some of the residential increase is attributed to home clean-outs.

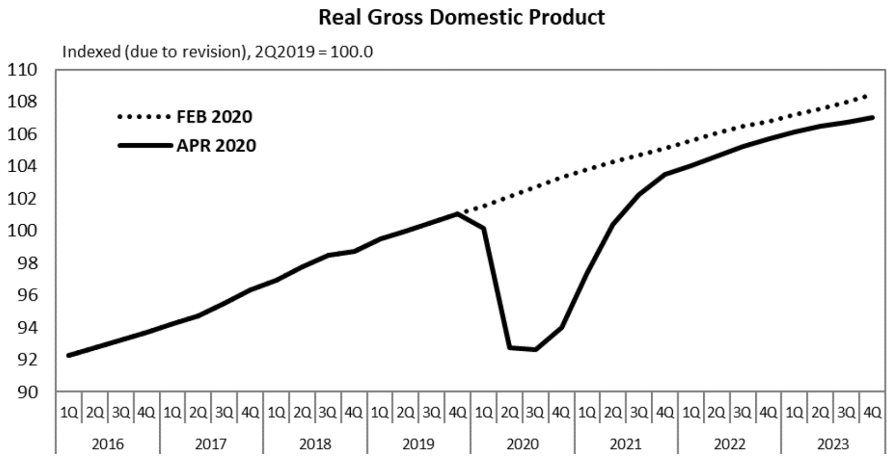
Through May 4, this year's deliveries at the R&E Center were 140,546 tons, compared to 146,618 tons in 2019, a difference of 6,072 tons, or 4%. Between March 17, 2020 and May 4, 2020, deliveries have been below 2019 levels for the same period by 13%. Week-to-week comparisons show an initial drop, then rising deliveries to approach 2019 levels. Commercial tonnage is expected to increase as businesses reopen in late May, which will begin to close the gap with 2019. The graph below compares first quarter 2019 waste totals by week to 2020. At this time, R&E projects a 0-5% reduction in total annual deliveries for 2020, which would be 440,000 tons delivered in 2020 compared to 462,000 tons in 2019. With regard to R&E Center receivables, there have been no issues with hauler payments, nor a departure from previous remittance patterns. The reopening of commercial establishments and industries in the two counties will be a key factor in total waste receipts in 2020.



Long Term Effects

The current economic condition is unprecedented. While the great recession in 2009 had a downturn that both began and was resolved gradually, the current situation was abrupt, as shown in the drop in waste deliveries between weeks 11 and 12 in the graph above. There is no consensus about how growth will occur looking forward.

A reasonable projection produced by the State of Minnesota's May 2020 Interim Budget Projection outlines, at a national level, projected changes in the GDP, shown in the graph below:



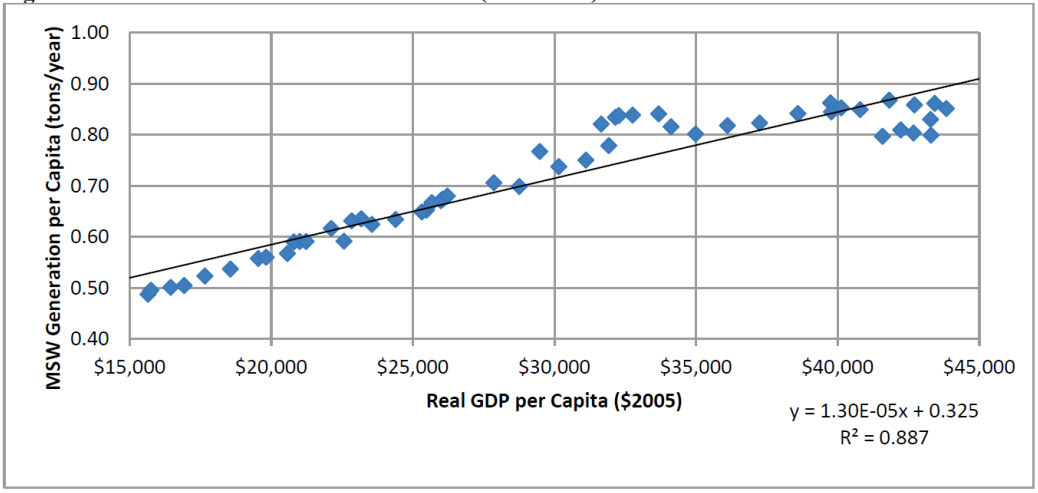
The Interim Budget Projection states that:

> "*IHS Markit (IHS), Minnesota's macroeconomic consultant, is now forecasting a three-quarter recession, resulting in a 5.4 percent decline in real GDP in 2020.*
>
> *"IHS expects real GDP to reach its pre-pandemic level in mid-2021, but within our projection horizon, GDP does not get back to where it would have been without the pandemic. Moreover, the recession is expected to dampen business investment, and slower growth in capital services will limit future economic growth. Consequently, while IHS forecasts the U.S. to regain full employment in 2024, they expect GDP in that year to be below the level they forecast for 2024 February*."

In other words, after a recession over three quarters of the year, economic growth will occur, but reaching pre-pandemic rates will likely take several years.

There is a strong relationship between GDP and waste generation, as cited by the Environmental Protection Agency in "Economic Indicators and Scoping Analysis," 2013. The following figure shows that strong relationship. The higher the GDP per capita, the more trash is produced. In Figure 3, the solid line represents GDP, and the diamonds represent per capita waste generation.

Figure 3: MSW Generation Versus Real GDP (1960-2012)



From the Interim Budget Projection, one can infer that there will be a drop in waste generation during a recession lasting three quarters and then an increase as GDP grows. While the relationship is strong, waste generation will not mirror GDP exactly. And the local economy in the East Metro will determine the effects on waste.

A March 17, 2020 Brookings article, "The Places a COVID-19 Recession Will Likely Hit Hardest," states "*While essentially all of America will likely be affected by COVID-19's economic effects, those effects will be distinct and varied from place-to-place. Given that, we must not only act quickly, but also attend to the unique regional and local impacts within this national crisis."* This article reports and builds on work by the chief economist at Moody's, which examines the five most vulnerable industries in the current situation and looks at the share of those industries in 384 metropolitan areas across the U.S. The Minneapolis-St. Paul-Bloomington region ranked 248th in their list, indicating a certain level of resilience and less vulnerability than other regions. The five industries at highest risk are: leisure and hospitality, travel arrangements, employment services, transportation, and mining.

Reports from other sources on the subject of waste generation related to the current pandemic find some noted effects and probable changes in the solid waste stream. Below are three examples:

- Out of consumer concern for hygiene coming out of the pandemic, there may be an increase in packaging to protect products.
- There may be less comfort with dining-in restaurants and possibly an increase in take-out packaging.
- During an economic downturn and corporate belt-tightening, less investment is likely on "greener" innovations. On the other hand, some businesses will see this as an opportunity to streamline processes and packaging, with a focus on sustainability. Others may be ready to invest more in the circular economy aimed at waste elimination and continual use of resources.

In May 2020, Foth Infrastructure and Environment, LLC contacted David Bidermen, executive director/CEO of the Solid Waste Association of North America (SWANA) to get a national view on waste generation and the impacts of the pandemic. He reported that, in an April 2020 SWANA presentation on COVID-19 impacts, Michael E. Hoffman, managing director, Stifel, indicated that he anticipated that the economy would recover in 2021 along with growing waste volumes. Mr. Biderman, who is in regular contact with firms in the industry, indicated that in his opinion, industry is past the worst of the current debacle. Mr. Biderman's view also is confirmed by earnings calls recently held by Waste Management, Republic, and Waste Connections. Overall, commercial waste volumes continue to be down approximately 20 percent. Residential volumes are trending 5-30 percent higher. Mr. Biderman felt that volumes have normalized for the solid waste sector. His caveat was that volumes could again decrease if a second surge of COVID-19 occurs this fall.

A May 12 article in Waste 360, an online industry journal, reported on the major publicly-traded waste firms, most of which recently held conference calls with first quarter results. These firms include Waste Management, Republic Services and Waste Connections, which operate in the East Metro. Firms reported on the significant downturn in late March but noted stabilization. "Across the board, the companies noted recent green shoots and signs of a bottom, if not an uptick, that generally appeared in the last week of April or first week of May. RSG [Republic Services] was perhaps the most optimistic in stating that a bottom had been put in, but WM [Waste Management] also noted that the rate of volume decline had improved, while WCN [Waste Connections] noted that a number of its metrics had turned in the last week: Service increases exceeded service decreases and net new business went positive again." The article noted that firms are being cautious, continuing with cost saving measures, deferring mergers and acquisitions, and waiting to see second quarter results.

Economic Activity Generated by the Enhancements

R&E Center Enhancements – Effect on the Minnesota Economy:	
Construction:	**155 – 198 new jobs; $55,556,254 - $64,718,413 added to the economy**
Operation:	**42 new jobs; $9,099,556 added to the economy**

Dr. William F. Lazarus, a professor of applied economics at the University of Minnesota, prepared a report for R&E titled "Economic Impact of the Ramsey/Washington Recycling & Energy Center," which can be found in Attachment 1. The IMPLAN input-output software package and 2017 IMPLAN data was used for the analysis.

The report presents an economic impact analysis of the R&E Center. Three main scenarios are compared: R&E Center in its current state, R&E Center with the planned enhancements implemented for organics recycling and recyclables recovery, and R&E Center with enhancements and RDF being processed for alternative use.

- In its current state, the R&E Center, with 66 employees and $36,715,217 in spending, results in an overall economic impact in the state of 367 jobs and $88,319,850 in economic activity.

- With the addition of the R&E Center enhancements (with an additional 18 new employees at the R&E Center) and in full operation, the overall impact rises to 490 jobs and $97,419,406 in economic activity.
- The enhancements alone generate 42 additional jobs (18 at the R&E Center and the rest are indirectly created) and $9,099,556 in economic activity. During the two-year construction period for the enhancements, the impact is between 155 and 198 jobs, and $55,556,254 and $64,718,413.

Finance Plan

At its August 2019 meeting, the R&E Board approved the enhancements financing plan and authorized several actions related to financing of the enhancements for organics and recyclables recovery. These 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. Since that time, the counties have aggressively pursued state bonding, a finance team has developed specific recommendations for local funding, and the JLT has applied for funding from the Closed Loop Fund.

Closed Loop Fund

An application was submitted 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. While R&E had conversations with the Closed Loop Fund several times since 2016, and had been led to believe that the enhancements project had elements that would be eligible for a loan, the application that was submitted in March was turned down by the Closed Loop Fund. JLT is following up to identify specific reasons for the decision.

State Bonding

Applications for state bond funds were 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 (CAP)). Lobbyists have been retained to work with the counties' lobbyists on this effort.

The Governor included $8 million for the R&E Center project in the MPCA CAP bonding request. Bills were introduced in the House and Senate, which include both the $8 million and $21 million requests. Tours of the facility were held for the Governor, Governor's staff, the MPCA commissioner, the MMB commissioner, and Senate and House members.

The legislature is scheduled to adjourn on May 18, prior to the Facility & Finance Committee meeting, but after this document was prepared. The committee will be updated about the status of state bonding at its May 21 meeting.

Local Funds

The JLT created a finance team comprised of R&E staff, respective county finance departments, R&E and county financial advisers (Ehlers and Baker-Tilly, respectively), bond counsel for the counties, and attorneys (Stoel Rives and county attorneys) have prepared the process and documents to proceed with funding the enhancements upon R&E Board and county board approvals.

The finance team examined the use of general obligation bonds issued by the counties versus revenue bonds issued by R&E. As a result of the analysis, the team recommends the use of general obligation bonds, issued by Ramsey County on behalf of both counties.

R&E has requested that Ramsey and Washington counties provide loan(s) for capital funding of the proposed enhancements. In 2015, when the facility was initially purchased, the counties provided the acquisition capital in the form of loans according to established funding percentages of 73% for Ramsey County and 27% for Washington County. Ramsey County issued bonds to fund its share. Washington County funded its share from available cash. In each case, the Recycling & Energy Board entered into a loan agreement and promissory note with each respective county to repay the obligations from Net Revenues of the facility. The two 2015 county loans are on a parity, or equal claim, with one another.

Due to the amount of funding anticipated to be needed and if the enhancements project is approved, the counties expect to access the capital markets (sell bonds) as the funding source. R&E has requested that the counties use their general obligation pledges to back the financing/s. Any county's financing that goes forward is subject to approval in final form by the respective county boards. However, after consideration of options, finance department staff from both counties have agreed to bring forth a funding proposal that includes the following basic elements:

1. A single fixed rate bond issued by Ramsey County for the full amount needed (the "County Bond"). The County Bond will be a general obligation of Ramsey County; however, 27% of the debt obligation will be secured by a general obligation bond issued by Washington County to Ramsey County for its 27% share. Repayment terms of Washington County's bond will mirror those of the Master Bond.
2. A final bond structure is yet to be determined; however, it is anticipated that the overall term will be 20 years. Alternatives are being considered that will moderate the debt service cost in the first two years as the project is being completed. Alternatives could include interest only and/or capitalized interest.
3. County, state and federal bonding requirements for the proposed financing have been preliminarily reviewed by bond counsel. In particular, requirements related to the average life of the bonds and the average life of the items being financed are being reviewed. Preliminary legal findings indicate that such considerations should be able to be accommodated within a 20-year debt structure.
4. Ramsey County and Washington County will loan their respective funding amounts to R&E, funded by the Master Bond. The repayment of the R&E debt to each county will be evidenced by a loan agreement(s) and secured by a pledge of Net Revenues of the facility. The loan agreement(s) will be on a parity with the 2015 loan agreements: each loan will have an equal, proportionate claim on Net Revenues as each of the other loans. Repayment of the 2020 loan(s) will be pledged to Ramsey County in support of the Master Bond.
5. Due to the amount of the combined 2015 and 2020 borrowings, exacerbated by impact of the current pandemic, additional covenants may be requested of R&E. Any such covenants will be discussed and documented prior to final action of R&E, Ramsey County and Washington County with consideration given to the impact, if any, on operations or tipping fees.
6. R&E would pay back the 2015 and 2020 loans using Net Revenue from the facility, primarily from tipping fees. Net Revenue is defined under the existing loan agreements to include "…gross revenues of the facility (including without limitation operating revenues and any contributions by Washington County or Ramsey County of County Environmental Charge revenues) after payment of all reasonable expenses of the current operations and

maintenance of the Facility and will be calculated in accordance with the policies and procedures established in accordance with Section VII.F of the Joint Powers Agreement."

The primary source for payment of debt service is expected to be Recycling & Energy facility revenues. The use of Ramsey County and Washington County general taxing authority is not anticipated and would only be sought in the absence of all other available R&E resources.

As noted in this memo, the COVID-19 pandemic has impacted daily life and private and public economics. As a result, additional financial analyses were performed by R&E and the description of the proposed funding mechanism described above is subject in all respects to review of those analyses and the ability of the bond market to fund the anticipated Master Bond.

R&E has identified additional resources and actions to support debt service payments should net revenues of the R&E Center be insufficient to meet debt service requirements. Any allocation of these resources would be intended to mitigate or eliminate the need to invoke county property tax levies or other county general support for debt payments. Those resources and actions are set forth below in priority order:

1. Expenditure or other budget adjustment during the fiscal period
2. Deployment of contingency budget towards debt service
3. Adjust the tipping fee (90-day implementation window)
4. Draw on the Joint Activities Fund balance (R&E General Fund balance)
5. Draw on ORF/ERF balances (with pledge to replenish adopted in policy)
6. Equipment Maintenance & Replacement Reserve balance
7. Equipment Maintenance & Replacement Reserve budget
8. County Environmental Charge (short-term loan from counties)

Degradation in R&E revenues would likely be foreseen as a result of declining volumes that would manifest over time. The JLT would bring mitigation strategies before the R&E Board for consideration and action, as well as consulting with both counties through such process. It should be noted that the R&E Center's cost structure is highly correlated to processing volumes. Therefore, variable expenses would decline at some proportion to waste volumes.

The balances in the funds referenced above as of December 31, 2019 are as follows:

Joint Activities Fund	$3,120,414
ORF	$4,100,000
ERF	$1,650,000
EM&R Reserve	$514,000
TOTAL	**$9,384,414**

Ehlers conducted a sensitivity analysis to test the ability of these strategies to respond to a prolonged reduction in waste volumes, which was provided to the county finance team. The analysis assumed a sustained 10% reduction in waste volume, starting in 2020 and continuing through 2025. The purpose of this "stress test" was to illustrate several ways in which R&E could mitigate a volume-driven reduction in tipping fee revenues – including reducing variable operating costs and contingencies, raising the tipping fee, and drawing on reserves. The sensitivity analysis showed the R&E could successfully apply a variety of strategies to maintain a strong financial position with a substantial reduction in waste volume over a prolonged period.

Financial Impacts

Ehlers has prepared a template for a pro forma for the enhancements. Because the level of state bonding is not known at this time, a pro forma is not included in this memo, but will be provided at the May 21 Facility & Finance Committee meeting.

Financing Timeline

Attachment 2 is the timeline for financing the enhancements, starting with R&E Board approval to proceed on May 28. This includes actions to be taken for:

- Ramsey County to consider a bonding ordinance for the County Bond
- Washington County to consider a bonding resolution for its general obligation pledge to Ramsey County for Washington County's portion of the County Bond
- Ramsey and Washington counties to each consider
    - Loan agreement(s) between the counties and R&E Board, contingent on sale of bonds
    - An agreement between Washington County and Ramsey County on joint bonding

This schedule results in funds being available for final construction design, equipment development and construction on November 15, 2020.

Construction Timeline

The R&E's construction manager, Adolfson & Peterson Construction, has prepared a construction schedule, which is shown in Attachment 3. This schedule is aligned with the Financing Timeline, and shows a construction start in April 2021, with the DCB building and equipment complete in early December 2021, and the recycling recovery system complete in late July 2022.

Community Engagement

Community engagement has helped inform major decisions made by the counties and R&E regarding the region's waste management system. R&E sees community engagement work as an ongoing work critical to building and maintaining relationships, educating partners and the community, and informing R&E's work. Attachment 4 summarizes community engagement to date around the following topics:

- Purchasing the R&E Center
- 2018-2038 county solid waste management master plans
- Waste designation
- Waste-to-energy
- System enhancements – recyclables recovery and durable compostable bags

Community engagement informed and shaped each of these decisions and continues to do so for ongoing work.

Attachments

- Attachment 1: Dr. Lazarus' Economic Analysis report
- Attachment 2: Bonding Schedule
- Attachment 3: Construction schedule from A&P
- Attachment 4: R&E Community Engagement Summary
- Attachment 5: Memorandum from Baker Tilley

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Prepared for the Ramsey/Washington Recycling & Energy Board

May 2020

Economic Impact of the Ramsey/Washington Recycling and Energy Center

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The analyses and views reported in this paper are those of the author. They are not necessarily endorsed by the Department of Applied Economics or by the University of Minnesota.

Helpful comments by Brigid Tuck are gratefully acknowledged.

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Economic Impact of the Ramsey/Washington Recycling and Energy Center

William F. Lazarus

May 2020

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Introduction

The Ramsey/Washington County Recycling & Energy Center (R&E Center), located in Newport, was purchased by the Ramsey/Washington County Recycling & Energy Board in 2016. This joint powers board is comprised of commissioners from the two counties. The R&E Center processes all garbage produced in the two counties, in an arrangement intended to best recover the value that lies within the trash.

The R&E Center manages more than 450,000 tons of trash per year. At the R&E Center, trash is processed to recover recyclable metals and make fuel for producing electricity. Through this system, R&E is maximizing the recovery of resources and diverting as much as possible from landfills. The R&E Center is the only facility of its kind in the state, and, in 2018, over 90% of waste in the two counties was diverted from landfills. The R&E Center processes over 1,000 tons of trash each day, enough to cover a football field six feet high.

When trash arrives at the R&E Center, it is tipped on a floor the size of a football field. Conveyor belts carry the material through a series of shredders, screens, and magnets that recover recyclable metals from the trash and process the remaining material into a fuel source (called refuse-derived fuel) that is used in Xcel power plants in Red Wing and Mankato to generate electricity.

In 2018, refuse-derived fuel produced at the R&E Center produced enough electricity to power 40,000 homes for a year. Also in 2018, 9,861 fewer tons of carbon dioxide were produced than if the trash had been landfilled - equivalent to taking over 2,000 cars off the road - and over 14,000 tons of metal were recovered from the trash for recycling (Ramsey/Washington Recycling and Energy 2019a).

Despite strong efforts to increase recycling in homes and businesses, a large number of recyclables remain in the trash. R&E plans to add equipment at the R&E Center to recover high-value recyclables, such as metals, certain plastics and cardboard, from the waste stream. This will augment, and not replace, household and business recycling (Ramsey/Washington Recycling and Energy 2019b).

This report presents an economic impact analysis of the Recycling and R&E Center. Three main scenarios are compared:

1) the R&E Center in its current state,

2) the R&E Center with the planned enhancements implemented for organics recycling and recyclables recovery, and

3) the R&E Center with enhancements and RDF being processed for alternative use.

The IMPLAN input-output software package and 2017 IMPLAN data was used for the analysis.[1]

[1] For more information on the IMPLAN modeling process, visit IMPLAN.com.

Table 1. Demographics of the statewide and Ramsey/Washington County study areas

	Minnesota	Ramsey & Washington Counties
Population, 2018 estimate	5,629,416	813,744
Income, Average annual pay, 2018	$58,007	$58,582
Education, age 25+ w/BS or higher degree	35.4%	43.9%
Households, 2018 estimate	2,221,628	312,433
Employment, 2018 average	2,882,944	420,716
Number of Nonfarm Business establishments, 2017	151,816	19,507

Sources: (U.S. Census Bureau 2017, Minnesota State Demographic Center 2018, U.S. Bureau of Labor Statistics 2018, U.S. Census Bureau 2018)

Table 2. Number of nonfarm business establishments and employment by sector, 2017

	Establishments	**Employment**	**Employees/ establishment**
Minnesota			
Agriculture		93,579	
Mining	153	10,476	68
Construction	16,548	181,987	11
Manufacturing	7,177	329,922	46
Transportation, Information & Public Utilities	7,964	202,435	25
Trade	26,767	500,341	19
Financial, Insurance & Real Estate	16,783	345,834	21
Health Services	17,156	397,733	23
Other Services	58,686	1,279,128	22
Government		418,095	
Total	151,234	3,759,530	
Ramsey & Washington Counties			
Agriculture		977	
Mining	11	282	26
Construction	1,512	20,810	14
Manufacturing	774	40,044	52
Transportation, Information & Public Utilities	779	24,171	31
Trade	2,269	64,707	29
Financial, Insurance & Real Estate	2,230	48,067	22
Health Services	2,781	60,405	22
Other Services	9,151	219,567	24
Government		68,139	
Total	19,507	547,170	

Sources: County Business Patterns (U.S. Census Bureau 2017) and IMPLAN data (IMPLAN Group 2020)

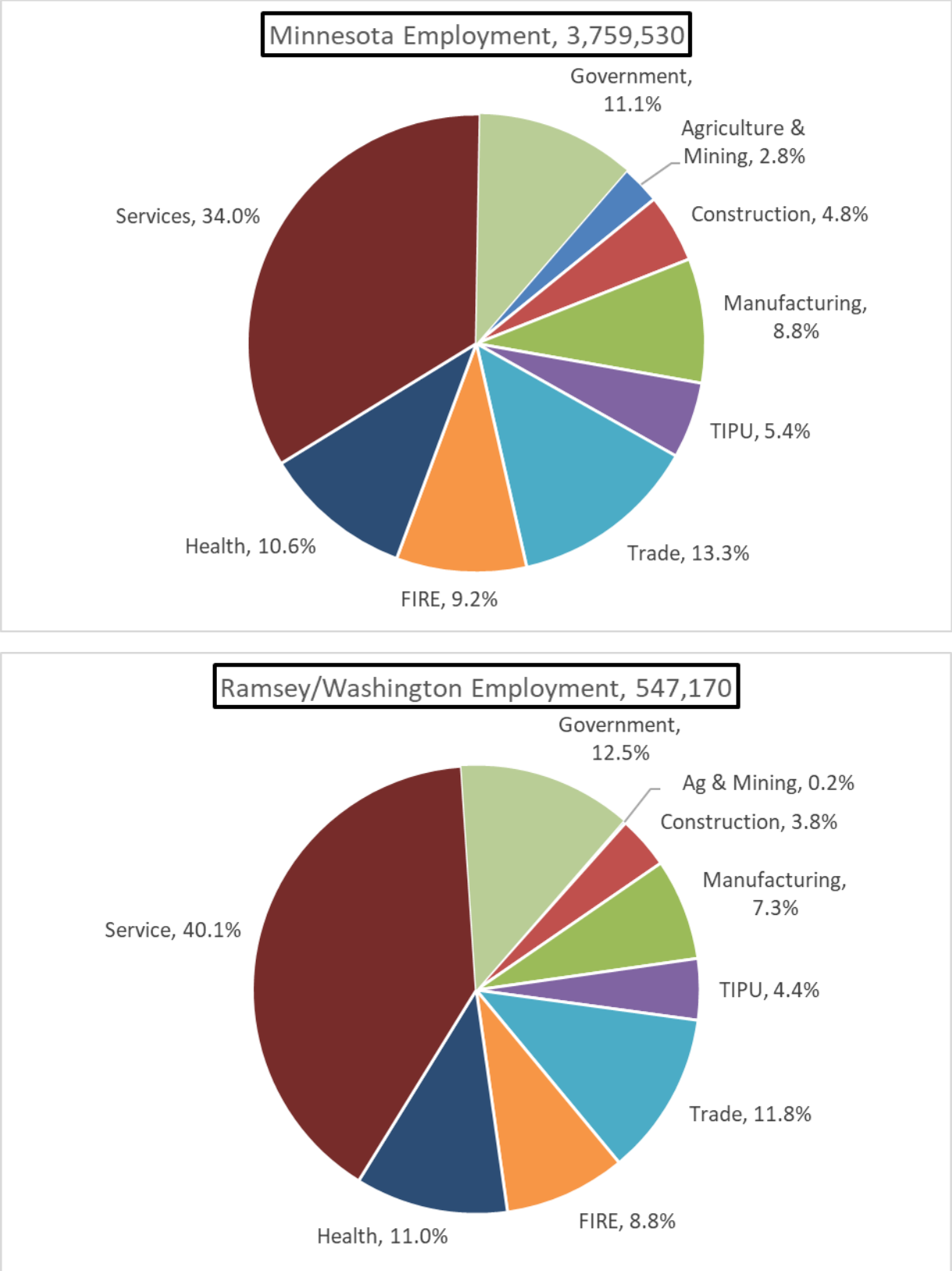


Figure 1. Employment in Minnesota and in the Ramsey/Washington County area, 2017

Economic Impact Data Sources and Analysis Methodology

Scenario 1 - R&E Center the R&E Center in its current state

The center currently employs 66 employees and spends around $36 million per year. It contributes $88 million in activity with $37 million in labor income and tax payments to the state's economy with an overall employment impact of 367 jobs (Table 3). Ramsey and Washington Counties capture 259 of those jobs. These impacts consider the indirect contributions to other industry sectors and the spending by household members of the employees of the center and the other affected sectors. The total value-added contribution is $32 per resident of the two counties or $7 per Minnesota resident. Value added includes labor income, other property type income such as rent, and taxes on production and imports. In this study, because the recycling center is a government entity "payments in lieu of taxes" is included rather than taxes here.

IMPLAN calculates the backward linkages between the industry or firm of interest (the R&E Center, in this case) and the industry sectors that it purchases goods and services from (see the Appendix for more details). The version of IMPLAN used for this analysis describes the local economy as a set of 536 industry sectors. Each sector is described with a default production (balance sheet) that lists the sectors that that sector purchases from, its spending on labor, other property-related costs, and business taxes. For some analyses, the industry or firm of interest is similar enough to one of these default sectors that it can be used with little or no modification. The fixed-price, linear nature of IMPLAN and the input-output methodology generally, means that the total activity contribution calculated in any analysis ($88 million in this analysis) will vary in size depending on the situation but will always be in the same direction or sign as the direct spending contribution that the analysis is based on ($36 million here).

There is no IMPLAN default sector that resembles the R&E Center closely enough to be usable, so one was constructed from scratch by allocating the center's recent budget to the IMPLAN sectors that most closely match each line item in the budget. The main sources for the scenario 1 analysis are the 2019 approved budget contained in an Excel spreadsheet provided by Kris Wehlage, accounting manager for the center. Data on the number of employees working at the center was provided in a follow-up email from Mr. Wehlage.

One of the significant payments that the center makes is to a landfill to accept the material that cannot be utilized in some other way. There does not appear to be an IMPLAN sector that resembles a landfill closely enough, so again a production was constructed using data for a typical landfill that was provided by Jennefer Klennert of Foth Infrastructure and Environment. The landfill is located outside of the two-county area, so that spending is included in the statewide analysis but not in the Ramsey/Washington County analysis.

Table 3. Direct and total annual contributions of the facility under scenario 1, in its current state.

	Output	Employment	Labor Income	Value Added
Direct contribution	$36,715,217	66	$7,443,898	$7,804,719
Indirect and induced contribution to Ramsey & Washington Cos.	$30,700,364	193	$12,043,053	$18,080,030
Total contribution to Ramsey & Washington Cos.	$67,415,581	259	$19,486,951	$25,884,749
Per capita change @ 813,744 population			$23.95	$31.81
Indirect and induced contribution to Minnesota	$51,604,633	301	$18,611,495	$29,468,026
Total contribution to Minnesota	$88,319,850	367	$26,055,393	$37,272,745
Per capita change @ 5,629,416 population			$4.64	$6.64

Table 4 shows how the total contribution of the center affects various aggregate sectors of the economy. The most affected sectors are “Transportation and utilities”, “Financial, Insurance, and Real Estate”, and “Other Services”.

Table 4. Industry breakdown of the indirect and induced contributions of the facility in its current state.

	Output	Employment	Labor Income	Value Added
Ramsey and Washington Counties				
Ag, Forestry & Mining	0.0%	0.0%	0.0%	0.0%
Construction	1.3%	1.1%	1.4%	1.2%
Manufacturing	2.4%	0.4%	0.6%	1.3%
Transport & Util	33.2%	27.2%	29.2%	26.5%
Trade	7.4%	11.4%	9.0%	9.8%
Financial, Insurance, RE	22.9%	11.0%	12.9%	23.2%
Health-Related Services	6.7%	7.7%	9.6%	7.4%
Other Services	23.9%	37.4%	33.0%	27.5%
Public Administration	2.0%	3.2%	4.3%	3.1%
Private Households	0.0%	0.6%	0.1%	0.1%
Total	100.0%	100.0%	100.0%	100.0%
Minnesota				
Ag, Forestry & Mining	1.0%	1.0%	0.6%	1.1%
Construction	2.9%	2.7%	3.2%	2.5%
Manufacturing	4.9%	1.2%	1.7%	2.6%
Transport & Util	31.3%	22.5%	26.5%	25.3%
Trade	7.5%	11.8%	9.1%	9.5%
Financial, Insurance, RE	21.5%	11.3%	12.8%	23.1%
Health-Related Services	6.3%	8.0%	9.6%	7.1%
Other Services	22.4%	37.9%	32.7%	26.2%
Public Administration	2.1%	3.1%	3.7%	2.7%
Private Households	0.0%	0.5%	0.1%	0.1%
Total	100.0%	100.0%	100.0%	100.0%

Detailed breakdown of the aggregate “Other services” sector in Minnesota:

	Output	Employment	Labor Income	Value Added
Commercial and industrial machinery and equipment repair and maintenance	6.2%	6.8%	8.9%	7.9%
Professional- scientific & tech services	4.6%	6.0%	8.0%	5.4%
Administrative & waste services	2.5%	5.5%	3.9%	3.0%
Accommodation & food services	2.3%	6.2%	2.4%	2.3%
Management of companies	1.1%	0.7%	1.7%	1.3%
Real estate & rental	1.0%	0.7%	0.7%	1.1%
Arts- entertainment & recreation	0.9%	2.0%	0.8%	0.8%
Automotive repair and maintenance, except car washes	0.8%	1.2%	1.1%	0.9%
Educational services	0.8%	2.2%	1.2%	0.8%
Social services	0.7%	2.5%	1.2%	0.8%
Other services	1.6%	4.1%	2.7%	1.9%
Total	22.4%	37.9%	32.7%	26.2%

Scenario 2 - R&E Center with planned enhancements for organics recycling and recyclables recovery

Tables 5 through 8 show the results of the IMPLAN analysis for scenario 2. On the "direct impact" line of Table 5, the difference between labor income and value added is payments in lieu of taxes. The payments in lieu of taxes are assumed to remain at current levels after the enhancements, and the center does not pay rent, so the direct value-added amounts are the same as the labor income in both the construction period and during ongoing operation. The main sources for the scenario 2 analysis are Tables 6-1 through 6-3, Tables 7-1 through 7-3, and Table 8-3 in the "Assessment of Organics Collection and Recyclable Recovery Enhancements in the East Metro" document dated March 8, 2019 and provided by the center staff (copies of these tables are included in the accompanying PDF for convenience).

Construction

The construction of the building addition and installation of the new equipment is expected to require 58 person-years of labor, or 29 workers average over the expected two-year construction period. The $38 million of construction spending would have an overall impact of $10 million on the state, with $9 million of that in the two counties.

For the construction period, the direct impact output amount is the sum of the high range totals in Tables 6-1 through 6-3. The direct employment and labor income are based on the "general conditions", "site development", and "admin/other" line items from Table 6-1 plus the installation amounts from 6-2 and 6-3. Forty-seven percent of "general conditions" and "site development" are assumed to be labor income based on the IMPLAN balance sheets for the "construction of new power and communication structures" sector. The "admin/other" line item is placed into the IMPLAN "architectural, engineering, and related services" sector. Based on the industry balance sheet for that sector, 57 percent of "admin/other" is included in labor income for the direct impact. All of "installation" is considered labor. Direct employment jobs are based labor income divided by a salary of $71,446/worker for the "construction of new power and communication structures" sector and $93,507 for "architectural, engineering, and related services" based on the IMPLAN balance sheet data.

Assumptions made in arriving at the direct impacts for the construction period:

Table 6-1 line item	IMPLAN industry sector	Labor income % of total	Annual worker salary
general conditions, and site development	construction of new power and communication structures	47%	$71,446
admin/other	architectural, engineering, and related services	57%	$93,507
installation	Labor income	100%	$71,446

The total impacts shown in Table 5 for the two-county area and the state include indirect and induced impacts calculated by IMPLAN and added to the direct impacts described above. A critical variable in an economic impact analysis is how much of the firm's purchases of goods and services are made from other industries in the study area (Ramsey/Washington County or Minnesota, in this case) versus from outside. In this case, the engineer working on the Recycling & Energy project expects that the concrete will be produced in Minnesota and possibly in the two-county area. Based on that information, all of the concrete is assumed to be made in the two-county area.

Other items that for the North Addition that he thought might possibly but not definitely be manufactured in the two counties or in Minnesota are:

Metals
Lumber
Plastics
Thermal Protection
Moisture Protection
Doors
Windows
Electrical

Given that uncertainty, only a percentage of the expenditures for each of these components is included in the indirect and induced impact calculations. The percentages are based on the IMPLAN database's estimated percentages of the total regional demand for each that is purchased in the two counties or in the state.

The engineer did not think that any of the equipment other than the possibly the conveyors would be made in Minnesota. Based on that, 7 percent (the IMPLAN default) of the conveyor expenditures but none of the other equipment purchases are included in the analysis.

The timeframe for the impacts is the overall construction period including the expected 18 months of actual construction plus six months for commissioning. If annual impact amounts are desired, divide these amounts by two.

Table 5 shows that, for example, the construction is expected to result in an additional 139 jobs in the two-county area and 155 jobs in Minnesota if only a percentage of the above components are purchased in Minnesota. On the other hand, if the components listed above were to be totally sourced in Minnesota, the number of jobs would be 198 rather than 155.

Table 6 shows how the indirect and induced impacts of the construction are distributed across the remainder of the local economy.

Ongoing Operation

The additional operation is expected to require 18 additional employees and add $5 million per year to the operating budget for operating and maintenance expenses (Table 5). The total economic impact would be 42 additional jobs in the state with 38 of those in the two counties. The annual operating expenses other than labor are from the high estimates in Table 7-3, with the high estimates of recyclables revenues from Table 8-3.

The indirect and induced impact of those additional expenses and revenues only affect the region to the extent that those payments and receipts are to or from businesses in the region. The IMPLAN data

suggests that the labor, electricity, and fuel are the expenses that will be mostly from within the two-county region. The spare parts, like the original equipment, will mostly be purchased from outside the state and so will not have an impact.

The parts and supplies expenses are allocated to the same industry sectors as for the initial equipment purchase amounts for the DCB and recyclable recovery systems in Tables 6-2 and 6-3. The north addition is itself is not assumed to require parts or supplies. However, similar to the construction analysis, none of the parts or supplies are assumed to be purchased in the two counties so they have no impact. Seven percent of the parts and supplies for the conveyors are assumed to be purchased in Minnesota like the conveyors themselves. The cost of the conveyors is 9 percent of the total equipment cost, so 7 percent of that 9 percent (or 0.6%) of the parts and supplies is assumed to be purchased in the state for the statewide results. If the conveyor parts are all purchased in-state rather than just 7 percent of them, it would add roughly one additional job.

As a result, the labor is the main factor in the economic impact of the ongoing operation, with the electricity generation, fuel, and in the statewide analysis the conveyor parts and supplies, playing a lesser role.

Table 7 shows how the indirect and induced impacts of the ongoing operation changes are distributed across the remainder of the local economy. These impacts will be ongoing as long as the facility operates at proposed levels. Table 8 shows these changes added to the contributions of the current operation as described in Scenario 1.

Table 5. Direct and total impacts of changes in the facility under scenario 2

	Output	Employ-ment	Labor Income	Value Added
Construction period (two years)				
Direct impact	$38,184,200	58	$4,311,708	$4,311,708
Indirect and induced impact on Ramsey & Washington Cos.	$14,131,181	81	$5,170,973	$7,875,632
Total impact on Ramsey & Washington Cos.	$52,315,381	139	$9,482,681	$12,187,340
Per capita change @ 813,744 population			$11.72	$15.06
Indirect and induced impact on Minnesota	$17,372,054	97	$5,973,001	$9,340,320
Total impact on Minnesota	$55,556,254	155	$10,284,709	$13,652,028
Per capita change @ 5,629,416 population			$1.83	$2.43
Indirect and induced if components listed in Table_ are purchased in-state	*$26,534,213*	*140*	*$9,009,024*	*$13,561,403*
Total impact if the components listed in Table_ are purchased in-state	*$64,718,413*	*198*	*$13,320,732*	*$17,873,111*
Per capita change			*$2.37*	*$3.19*
Construction period (annual average)				
Direct impact	$19,092,100	29	$2,155,854	$2,155,854
Indirect and induced impact on Ramsey & Washington Cos.	$7,065,591	41	$2,585,487	$3,937,816
Total impact on Ramsey & Washington Cos.	$26,157,691	70	$4,741,341	$6,093,670
Per capita change @ 813,744 population			$5.86	$7.53
Indirect and induced impact on Minnesota	$8,686,027	49	$2,986,501	$4,670,160
Total impact on Minnesota	$27,778,127	78	$5,142,355	$6,826,014
Per capita change @ 5,629,416 population			$0.92	$1.22
Indirect and induced if components listed in Table_ are purchased in-state	*$13,267,107*	*70*	*$4,504,512*	*$6,780,702*
Total impact if the components listed in Table_ are purchased in-state	*$32,359,207*	*99*	*$6,660,366*	*$8,936,556*
Per capita change			*$1.19*	*$1.60*

Table 5 (continued)

Ongoing operation (annual)

	Output	Employ-ment	Labor Income	Value Added
Direct impact (Operating & maintenance expenses)	$5,089,001	18	$3,479,873	$3,479,873
Indirect and induced impact on Ramsey & Washington Cos.	$3,299,028	20	$1,080,150	$1,904,392
Total impact on Ramsey & Washington Cos.	$8,388,028	38	$4,560,024	$5,384,266
Per capita change @ 813,744 population			$5.60	$6.62
Indirect and induced impact on Minnesota	$4,010,555	24	$1,274,204	$2,243,604
Total impact on Minnesota	$9,099,556	42	$4,754,078	$5,723,477
Per capita change @ 5,629,416 population			$0.85	$1.02

Percentage changes, ongoing operation compared with current state of the facility

Indirect and induced impact on Ramsey & Washington Cos.	10.3%	9.0%	10.5%
Total impact on Ramsey & Washington Cos.	14.6%	23.4%	20.8%
Indirect and induced impact on Minnesota	7.8%	6.8%	7.6%
Total impact on Minnesota	11.3%	18.2%	15.4%

Table 6. Industry breakdown of the indirect and induced impacts of the facility during construction.

	Output	Employment	Labor Income	Value Added
Ramsey and Washington Counties				
Ag, Forestry & Mining	0.1%	0.1%	0.0%	0.0%
Construction	1.0%	0.9%	1.3%	0.9%
Manufacturing	2.8%	0.5%	0.9%	1.5%
Transport & Util	21.4%	6.0%	11.4%	16.0%
Trade	11.9%	17.8%	14.5%	13.3%
Financial, Insurance, RE	26.8%	11.1%	12.6%	28.4%
Health-Related Services	14.3%	17.2%	24.5%	16.2%
Other Services	21.1%	44.6%	33.7%	23.2%
Public Administration	0.5%	0.5%	0.8%	0.3%
Private Households	0.1%	1.3%	0.2%	0.1%
Total	100.0%	100.0%	100.0%	100.0%
Minnesota				
Ag, Forestry & Mining	0.6%	0.6%	0.2%	0.4%
Construction	1.2%	1.2%	1.6%	1.1%
Manufacturing	6.5%	1.7%	2.6%	3.4%
Transport & Util	20.1%	6.6%	11.6%	15.5%
Trade	11.7%	17.6%	14.2%	13.4%
Financial, Insurance, RE	25.4%	11.3%	13.1%	27.6%
Health-Related Services	12.5%	15.6%	21.7%	14.3%
Other Services	20.5%	43.2%	33.2%	23.2%
Public Administration	1.4%	1.2%	1.5%	1.0%
Private Households	0.1%	0.9%	0.2%	0.1%
Total	100.0%	100.0%	100.0%	100.0%

Table 7. Industry breakdown of indirect and induced impacts of the changes in the facility during ongoing operation, compared with the current state.

	Output	Employment	Labor Income	Value Added
Ramsey and Washington Counties				
Ag, Forestry & Mining	0.1%	0.1%	0.0%	0.0%
Construction	1.0%	0.9%	1.3%	0.9%
Manufacturing	1.3%	0.2%	0.3%	1.0%
Transport & Util	21.7%	6.0%	11.4%	16.0%
Trade	12.0%	17.8%	14.5%	13.3%
Financial, Insurance, RE	27.3%	11.1%	12.7%	28.7%
Health-Related Services	14.6%	17.3%	24.8%	16.3%
Other Services	21.4%	44.8%	33.9%	23.3%
Public Administration	0.5%	0.5%	0.8%	0.3%
Private Households	0.1%	1.3%	0.3%	0.1%
Total	100.0%	100.0%	100.0%	100.0%
Minnesota				
Ag, Forestry & Mining	0.5%	0.6%	0.2%	0.3%
Construction	1.3%	1.2%	1.6%	1.1%
Manufacturing	2.2%	0.6%	0.4%	1.6%
Transport & Util	20.8%	6.5%	11.6%	15.5%
Trade	12.2%	17.8%	14.5%	13.5%
Financial, Insurance, RE	26.8%	11.5%	13.4%	28.4%
Health-Related Services	13.3%	16.0%	22.6%	14.8%
Other Services	21.4%	43.7%	33.9%	23.5%
Public Administration	1.5%	1.2%	1.5%	1.0%
Private Households	0.1%	1.0%	0.2%	0.1%
Total	100.0%	100.0%	100.0%	100.0%

Table 8. Direct and total impacts of the facility under scenario 1, in its current state plus the scenario 2 changes

	Output	Employ-ment	Labor Income	Value Added
Direct impact	$41,804,218	84	$10,923,771	$11,284,592
Indirect and induced impact on Ramsey & Washington Cos.	$33,999,392	213	$13,123,203	$19,984,422
Total impact on Ramsey & Washington Cos.	$75,803,609	297	$24,046,974	$31,269,015
Per capita change @ 813,744 population			$29.55	$38.43
Indirect and induced impact on Minnesota	$55,615,188	325	$19,885,699	$31,711,630
Total impact on Minnesota	$97,419,406	409	$30,809,471	$42,996,222
Per capita change @ 5,629,416 population			$5.47	$7.64

Revenues not considered in the results

The change is expected to generate revenue of around $2.8 million from recovered recyclables that will offset part of the additional expenses in the center's bottom line, but these revenues are NOT considered in the IMPLAN analysis because they reflect forward linkages while IMPLAN only considers backward linkages. Whether these revenues have indirect impacts on the state or the two counties would depend on whether they are sold to buyers in the state or the two counties. If sold to buyers within the state or the two counties, then aside from transportation the impact would depend on whether they replace inputs that would have been imported (domestically or internationally) with the buying industries remaining at the same volumes as before, or if the buyers started up or expanded production as a result of these recyclables becoming available. If they are sold outside or if they displace current purchases that are coming from outside the state (import substitution) then it would benefit the facility's bottom line but there would be no indirect impact of such a change on the rest of the economy. On the other hand, small indirect and induced impacts could occur if the sector's businesses do start up or expand as a result of this newly-available material.

The largest component of the recyclables is expected to be aluminum at valued at $1,417,403 per year, which could be purchased by the IMPLAN sector "Alumina refining and primary aluminum production". This sector does not exist in the two counties, based on the IMPLAN database. The database shows a small aluminum refining sector elsewhere in Minnesota, with seven workers. Its annual purchases of aluminum is about the same as the amount that would be generated by the facility, so purchasing this output would require it to double in size, which seems unlikely, it would thus add around seven jobs in the state. The second largest component of the recyclables is PET and HDPE, valued at an estimated $1,017,269 per year. The IMPLAN sector "Plastics material and resins" produces an annual volume of $716 million and purchases around $34 million of plastics and resins per year in Minnesota. That sector also exists in the two-county region but its volume there is only around one-tenth the size in the state as a whole. So, if the facility's PET and HDPE is suitable to replace some of that sector's purchases, there would appear to be ample room to replace some of its plastics purchases that are now coming from elsewhere without expanding its current volume.

APPENDIX 1: METHODOLOGY

Special models, called input-output models, exist to conduct economic impact analysis. There are several input-output models available. IMPLAN (IMpact Analysis for PLANning, MIG) is one such model. Many economists use IMPLAN for economic contribution analysis because it can measure output and employment impacts, is available on a county-by-county basis and is flexible for the user. IMPLAN has some limitations and qualifications, but it is one of the best tools available to economists for input-output modeling. Understanding the IMPLAN tool, its capabilities, and its limitations will help ensure the best results from the model.

One of the most critical aspects of understanding economic impact analysis is the distinction between the "local" and "non-local" economy. The local economy is identified as part of the model-building process. Either the group requesting the study or the analyst defines the local area. Typically, the study area (the local economy) is a county or a group of counties that share economic linkages, or a state. In this study, the results are presented for two versions of the study area: 1) the entire state of Minnesota, and 2) Ramsey and Washington Counties only.

A few definitions are essential in order to properly read the results of an IMPLAN analysis. The terms and their definitions are provided below.

Output

Output is measured in dollars and is equivalent to total sales. The output measure can include significant "double counting." Think of corn, for example. The value of the corn is counted when it is sold to the mill, again when it is sold to the dairy farmer, again as part of the price of fluid milk, and yet again when it is sold as cheese. The value of the corn is built into the price of each of these items and then the sales of each of these items are added up to get total sales (or output).

Employment

Employment includes full- and part-time workers and is measured in annual average jobs, not full-time equivalents (FTE's). IMPLAN includes total wage and salaried employees, as well as the self-employed, in employment estimates. Because employment is measured in jobs and not in dollar values, it tends to be a very stable metric.

Labor Income

Labor income measures the value added to the product by the labor component. So, in the corn example when the corn is sold to the mill, a certain percentage of the sale goes to the farmer for his/her labor. Then when the mill sells the corn as feed to the dairy farmer, it includes some markup for its labor costs in the price. When the dairy farmer sells the milk to the cheese manufacturer, he/she includes a value for his/her labor. These individual value increments for labor can be measured, which amounts to labor income. Labor income does *not* include double counting. Labor income includes both

employee compensation and income received by business proprietors (proprietor income is assumed zero for the R&E Center).

Value Added

Value added includes labor income, other property type income such as rent, and taxes on production and imports.

Direct Impact

Direct impact is equivalent to the initial activity in the economy. In this study, it is the change in purchases.

Indirect Impact

The indirect impact is the summation of changes in the local economy that occur due to spending for inputs (goods and services) by the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, this implies a corresponding increase in output by the plant. As the plant increases output, it must also purchase more inputs, such as electricity, steel, and equipment. As the plant increases purchases of these items, its suppliers must also increase production, and so forth. As these ripples move through the economy, they can be captured and measured. Ripples related to the purchase of goods and services are indirect impacts. In this study, indirect impacts are those associated with spending by small businesses to purchase inputs.

Induced Impact

The induced impact is the summation of changes in the local economy that occur due to spending by labor, that is spending by employees in the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, the new employees will have more money to spend to purchase housing, buy groceries, and go out to dinner. As they spend their new income, more activity occurs in the local economy. This can be quantified and is called the induced impact. Primarily, in this study, the induced impacts are those economic changes related to spending by employees of small businesses receiving federal funding.

Total Impact

The total impact is the summation of the direct, indirect, and induced impacts.

Other Details

IMPLAN is a regional economic analysis software application that is designed to estimate the impact or ripple effect (specifically backward linkages) of a given economic activity within a specific geographic area through the implementation of its Input-Output model. Studies, results, and reports that rely on IMPLAN data or applications are limited by the researcher's assumptions concerning the subject or

event being modeled. Studies such as this one are in no way endorsed or verified by IMPLAN Group, LLC unless otherwise stated by a representative of IMPLAN.

IMPLAN provides the estimated Indirect and Induced Effects of the given economic activity as defined by the user's inputs. Some Direct Effects may be estimated by IMPLAN when such information is not specified by the user. While IMPLAN is an excellent tool for its designed purposes, it is the responsibility of analysts using IMPLAN to be sure inputs are defined appropriately and to be aware of the following assumptions within any I-O Model:

- Constant returns to scale
- No supply constraints
- Fixed input structure
- Industry technology assumption
- Constant byproducts coefficients
- The model is static

By design, the following key limitations apply to Input-Output Models such as IMPLAN and should be considered by analysts using the tool:

Feasibility: The assumption that there are no supply constraints and there is fixed input structure means that even if input resources required are scarce, IMPLAN will assume it will still only require the same portion of production value to acquire that input, unless otherwise specified by the user. The assumption of no supply constraints also applies to human resources, so there is assumed to be no constraint on the talent pool from which a business or organization can draw. Analysts should evaluate the logistical feasibility of a business outside of IMPLAN. Similarly, IMPLAN cannot determine whether a given business venture being analyzed will be financially successful.

Backward-linked and Static model: I-O models do not account for forward linkages, nor do I-O models account for offsetting effects such as cannibalization of other existing businesses, diverting funds used for the project from other potential or existing projects, etc. It falls upon the analyst to take such possible countervailing or offsetting effects into account or to note the omission of such possible effects from the analysis.

Like the model, prices are also static: Price changes cannot be modeled in IMPLAN directly; instead, the final demand effects of a price change must be estimated by the analyst before modeling them in IMPLAN to estimate the additional economic impacts of such changes.

(Also see accompanying PDF with copies of Tables 6-1 through 6-3, Tables 7-1 through 7-3, and Table 8-3 in the "Assessment of Organics Collection and Recyclable Recovery Enhancements in the East Metro" document dated March 8, 2019, which is a data source for the scenario 2 analysis.)

REFERENCES

IMPLAN Group, L. (2020). "IMPLAN Pro Software and 2017 Databases for Minnesota and for Ramsey and Washington Counties." Retrieved 7/6/2007, from IMPLAN.com.

Minnesota State Demographic Center. (2018). "Population Data, Our Estimates, Key Findings." Retrieved 3/26/2020, 2020, from https://mn.gov/admin/demography/data-by-topic/population-data/our-estimates/.

Ramsey/Washington Recycling and Energy. (2019a). "About the R&E Center." Retrieved 3/26/2020, 2020, from http://morevaluelesstrash.com/re-center-about.

Ramsey/Washington Recycling and Energy. (2019b). "Investing in the Future." Retrieved 3/26/2020, 2020, from http://morevaluelesstrash.com/investing-in-the-future.

U.S. Bureau of Labor Statistics. (2018). "Quarterly Census of Employment and Wages." Retrieved 3/26/2020, 2020, from https://www.bls.gov/cew/.

U.S. Census Bureau. (2017). "County Business Patterns." Retrieved 3/26/2020, 2020, from https://www.census.gov/programs-surveys/cbp.html.

U.S. Census Bureau. (2018). "American Community Survey." Retrieved 3/26/2020, 2020, from https://www.census.gov/programs-surveys/acs.

Material Referenced from R&E Center Documents

Table 6-1 159
North Addition Construction Cost Range

Description	*Low Range Cost*	*High Range Cost*
General Conditions	$533,600	$816,400
Site Development	$637,300	$975,000
Concrete	$1,353,500	$2,070,900
Metals	$1,190,100	$1,820,900
Woods & Plastics	$52,500	$80,400
Thermal & Moisture Protection	$149,600	$228,900
Doors & Windows	$555,000	$849,200
Finishes	$70,000	$107,100
Mechanical	$314,200	$480,800
Electrical	$397,400	$607,900
SUBTOTAL	$5,253,200	$8,037,500
Contingency	$1,050,700	$1,607,500
TOTAL CONSTRUCTION COST	**$6,303,900**	**$9,645,000**
ADMIN/OTHER PROJECT COSTS(SEE NOTE 3)	**$725,000**	**$1,109,200**
TOTAL	**$7,028,900**	**$10,754,200**

NOTES:
Costs above do not include:
Equipment
Relocation Expenses.
Costs were developed using 2019 dollars.
Includes engineering fees and an allowance for miscellaneous administrative costs.

The total cost for the construction of the North Addition is estimated to be approximately $7.0 to $10.8 million. The range in cost can be refined with further design development and is believed to be appropriate for the level of design detailed at this time. The total cost for construction of the North Addition does not include any components of the DCB Processing System.

DCB Processing System

The estimated cost for the Processing Enhancement equipment includes two DCB Processing Lines capable of processing a total of 45 to 50 TPH and all associated conveyors. Also included in the equipment cost estimate is a single additional front end loader for the tipping floor in the North Addition for the DCB processing equipment. Table 6-2 shows a summary of the cost for the main components of the DCB Processing system.

Table 6-2
Summary of Major Component Cost for the DCB Processing System

Equipment Description	Quantity	Low Range Cost	High Range Cost
Robotics	2	$1,600,000	$2,000,000
Additional Loader	1	$500,000	$700,000
Conveyor Allowance	1	$1,125,000	$1,575,000
Subtotal		$3,225,000	$4,275,000
Installation	25%	$806,250	$1,068,750
Contingency	30%	$1,209,375	$1,603,125
Total Capital Costs		**$5,240,625**	**$6,946,875**

The estimated equipment cost, including installation and contingency, is approximately $5.2 to $7.0 million. Further refinements in the design will help to narrow this range in estimated cost. The total cost for the DCB Processing System does not include any of the construction of the North Addition in which it will be located.

Recyclables Recovery System

The estimated cost for the Recyclables Recovery System includes a 35 to 40 TPH processing line from the shredder to the eddy current separator including the quality control station for the eddy current separator and all associated conveyors. Note that this eddy current quality control station is in addition to the quality control station budgeted for purchase in 2019 for the existing non- ferrous. Table 6-3 shows a summary of the cost for the main components of the Recyclables Recovery System.

Table 6-3
Summary of Major Component Cost for the Recyclable Recovery System

Equipment Description	Quantity	Low Range Cost	High Range Cost
Shredder	1	$750,000	$1,000,000
Decline Screen	2	$700,000	$900,000
Electro-Magnets	3	$105,000	$180,000
Bag Opener	1	$150,000	$200,000
Two Inch Minus Screen	1	$275,000	$400,000
2D/3D Screen	2	$700,000	$850,000
Air Classifier	2	$900,000	$1,150,000
Optical Sorters	3	$1,800,000	$2,250,000
Eddy Current Separator	1	$300,000	$450,000
Robotic Quality Control	4	$1,100,000	$1,700,000
Conveyor Allowance	1	$2,000,000	$2,750,000
Grapple Crane	1	$225,000	$275,000
Silo Allowance	1	$300,000	$500,000
Subtotal		$9,305,000	$12,605,000
Installation	25%	$2,326,250	$3,151,250
Contingency	30%	$3,489,375	$4,726,875
Total Capital Costs		**$15,120,625**	**$20,483,125**

The estimated equipment cost, including installation, and a new grapple crane to replace the existing aged grapple crane is approximately $15.1 to $20.5 million, based on communication with processing and heavy equipment vendors and current Recyclable Recovery System preliminary design. The range in cost can be refined with further design development.

Processing Enhancement

The total cost for adding all Processing Enhancement system including the North Addition, DCB Processing System, and the Recyclables Recovery System is estimated to be between $27.3 and $38.3 million. See Table 6-4

Operation and Maintenance Cost Estimate

The operation and maintenance cost associated with the Processing Enhancements System includes the estimated costs associated with the DCB Processing System as well as the Recyclables Recovery System. An additional front end loader operator would be required to bring co-collected MSW to the in-feed of the DCB processing lines. An additional grapple operator is anticipated in order to observe and remove bulky materials from the processing line feeding into the Recyclables Recovery System.

DCB Processing System

Based on the operating schedule previously discussed, it is anticipated that two operators (loader operator and traffic director), an additional helper, an additional maintenance staff member, and an additional electrician will be necessary for the new DCB Processing System during the hours of operation necessary to process the incoming material. An additional helpers, mechanic and electrician will be necessary during non-operational hours, which are estimated to be 8 hours per day for 7 days per week.

Labor rates for the positions are estimated based on the current, fully loaded labor rate categories. An additional 18% is added to each labor rate to account for vacation, sick leave and holiday pay when overtime pay may be required (1.5 to 2 times the typical hourly rate). See Table 7-1 for the detailed assumptions of shift hours and labor rates used to estimate the labor costs for the DCB Processing System.

Table 7-1 Labor Cost Estimates
DCB Processing System Only

Position	Shift	Staff/ Shift	Shifts/ Day	Hours/ Shift	Days/ Week	Labor Rate/ Hour	Weekly Cost/ Shift	Total Weekly Cost	TOTAL ANNUAL COST
Electrician	Day	1	1	10	6	$52.09	$3,125	$5,228	$271,856
	Afternoon	1	1	8	5	$52.56	$2,103		
Maintenance	Day	1	1	10	6	$52.09	$3,125	$5,228	$271,856
	Afternoon	1	1	8	5	$52.56	$2,103		
Operator	Day	2	1	10	6	$48.04	$5,765	$9,646	$501,608
	Afternoon	2	1	8	5	$48.52	$3,881		
Helper	Day	1	1	8	7	$40.18	$2,250	$4,527	$235,430
	Afternoon	1	1	8	7	$40.67	$2,277		
Subtotal of Annual Labor Costs During Operational Hours									**$1,280,750**
Helpers	Night	1	1	8	7	$41.81	$2,341	$2,341	$121,745
Mechanic	Night	1	1	8	7	$53.71	$3,008	$3,008	$156,393
Electrician	Night	1	1	8	7	$53.71	$3,008	$3,008	$156,393
Subtotal of Annual Costs During Non-Operational Hours									**$434,532**
TOTAL COSTS (During Both Operational + Non-Operational Hours)									**$1,715,281**

Recyclables Recovery System

For the Recyclables Recovery System labor cost estimates, it is anticipated that one operator, an additional helper, an additional maintenance staff member, and an additional electrician will be necessary during the hours of operation necessary to process the incoming material. An additional helper, mechanic and electrician will be necessary during non-operational hours, which are estimated to be 8 hours per day for 7 days per week.

Labor rates for the positions are estimated based on the current, fully loaded labor rate categories with an additional 18% added similar to the DCB Processing System. See Table 7-2 for the detailed assumptions of shift hours and labor rates used to estimate the labor costs for the Recyclables Recovery System.

Table 7-2 Labor Cost Estimates
Recyclables Recovery System Only

Position	Shift	Staff/ Shift	Shifts/ Day	Hours/ Shift	Days/ Week	Labor Rate/ Hour	Weekly Cost/ Shift	Total Weekly Cost	TOTAL ANNUAL COST
Electrician	Day	1	1	10	6	$52.09	$3,125	$5,228	$271,856
	Afternoon	1	1	8	5	$52.56	$2,103		
Maintenance	Day	1	1	10	6	$52.09	$3,125	$5,228	$271,856
	Afternoon	1	1	8	5	$52.56	$2,103		
Operator	Day	2	1	10	6	$48.04	$2,882	$4,823	$250,804
	Afternoon	2	1	8	5	$48.52	$1,941		
Helper	Day	1	1	8	7	$40.18	$2,250	$4,527	$235,430
	Afternoon	1	1	8	7	$40.67	$2,277		
Subtotal of Annual Labor Costs During Operational Hours									**$1,029,946**
Helpers	Night	1	1	8	7	$41.81	$2,341	$2,341	$121,745
Mechanic	Night	1	1	8	7	$53.71	$3,008	$3,008	$156,393
Electrician	Night	1	1	8	7	$53.71	$3,008	$3,008	$156,393
Subtotal of Annual Costs During Non-Operational Hours									**$434,532**
TOTAL COSTS (During Both Operational + Non-Operational Hours)									**$1,464,477**

Processing Enhancements
Table 7-3 displays the current overall O&M cost estimates for both Processing Enhancement systems: DCB Processing System and Recyclables Recovery System. These estimates are rounded to the nearest $1,000 to better reflect the degree of precision available at this planning stage. The labor estimates in Table 7-3 are derived from the detailed assumptions used in Table 7-1 for the DCB Processing System and Table 7-2 for the Recyclables Recovery System.

Based on the long operating experience at the R&E Center, other assumptions were made for total estimated O&M costs, which include, but are not limited to, parts and supplies, electricity, and fuel. It was assumed that the DCB Processing System would use about one third of the parts, supplies and electricity compared to two thirds for the Recyclables Recovery System.
Refinements to these estimates should be made almost continuously as more detailed information about the procurement method, equipment selections, and recovery rates are developed. Note that the current O&M budget at the R&E Center is approximately $5.2M.

Table 7-3
Overall O&M Cost Estimates
For Both Processing Enhancement Systems

Annual Cost Estimates

	DCB Processing System			**Recyclables Recovery System**			**TOTAL**		
Labor[1]			$1,715,000			$1,464,000			$3,179,000
Parts and Supplies	$250,000	to	$333,000	$500,000	to	$667,000	$750,000	to	$1,000,000
Electricity	$108,000	to	$133,000	$217,000	to	$267,000	$325,000	to	$400,000
Fuel	$55,000	to	$70,000	$0	to	$0	$55,000	to	$70,000
Contingency	$205,000	to	$217,000	$201,000	to	$223,000	$406,000	to	$440,000
TOTAL O&M COST ESTIMATE	**$2,333,000**	**to**	**$2,468,000**	**$2,382,000**	**to**	**$2,621,000**	**$4,715,000**	**to**	**$5,089,000**

Notes:
1 Based on labor rates and shift assumptions in Tables 7-1 and 7-2)

The annual O&M costs are presented individually for the DCB Processing System and the Recyclables Recovery System as well as an estimated total cost for both systems. Foth anticipates that there may be some overlap in labor if both systems were installed and the total labor cost may be reduced if the R&E Board proceeded with both projects.

The addition of the DCB Processing System and Recyclables Recovery System will result in an increase in the electrical usage at the R&E Center. However, the exact costs will be dependent on the final design and specific equipment utilized and can be calculated upon the final design approval. The estimated electrical costs are based on the current system electrical usage and a comparison of estimated electrical demand for the preliminary design of the Processing Enhancements.

The Processing Enhancements system equipment maintenance generally includes costs associated with the conveyors, shredder, disc screens, optical sorters, robotics, and air classifiers. Based on the anticipated maintenance items and communication with equipment vendors the estimated maintenance cost for parts and supplies only for the Processing Enhancements system is $750,000 to $1,000,000/year, but will depend on the specific equipment utilized.

Total annual operation and maintenance cost associated with operation of the Processing Enhancements system are estimated to be approximately $4.7 to $5.1 million. It is important to note, this operation and maintenance cost does not include transport and processing fees for recovered DCBs or Organic Rich Materials.

Table 8-3
Estimated Potential Revenue from Materials Recovered Using a Processing Enhancements System

Material	Current Market Price/Ton [1]	Downgraded percentage	Assumed Market Price/Ton[2]	Low Estimated Annual Revenue	Low Estimated Annual Revenue
PET	$305	80%	$244	$461,526	$653,829
HDPE	$380	80%	$304	$256,546	$363,440
Cardboard/Boxboard	$93	60%	$56	$41,488	$69,146
Ferrous (Tin/Steel containers)	$225	55%	$124	$202,863	$280,888
Non-ferrous (Aluminum)	$1,440	55%	$792	$1,023,680	$1,417,403
	Estimated Total Annual Revenue			**$1,986,102**	**$2,784,705**

[1] Current market prices from RecyclingMarkets.net accessed on May 7, 2018 as presented in Foth Memo, *Analysis for Recovery of Recyclable Commodities using Pre-Processing*, June 12, 2018.
[2] The assumed market price is reduced from the current market price to be conservative given market variability and product cleanliness.

The estimated revenue associated with the marketable materials recovered using a Recyclables Recovery System is estimated to be approximately $2.0 to $2.8 million annually. This is considered a conservative estimate based on data from the Waste Characterization, reduced recovery rates, and reduced market value for marketable materials.

There are also costs associated with the Organic Rich Material from the Recyclables Recovery System as well as the organics from the DCB Processing System. As previously discussed, there is currently no established market for the Organic Rich Material recovered from the Recyclables Recovery System.

8.3 Identification of Ongoing Changes to MSW

MSW continues to be subject to the Evolving Ton which is the phenomenon where MSW composition continue to change over time due to adjustments in packaging and light weighting of materials in general. Packaging while being light weighted continues to become stronger over time such as the increased strength of plastic including Polyethylene (PE) used in garbage bags. The Recyclables Recovery System includes a shredder and a bag breaker to assist with this phenomenon. The Recyclables Recovery System design allows for flexibility including room for additional equipment and allowance for changes in equipment and technology over time.

Technology is also evolving to allow for the installation of equipment including cameras that identify material in the MSW by shape, color, and design; and optical sorting that uses a materials chemical fingerprint to allow characterization of the materials. The R&E Board has authorized purchase of a camera and data logging system in 2019 that will be used for identification of waste type and composition. This data can be used going forward to determine what materials continue to remain in the waste stream. However, it is important to note that the technology does have limitations, particularly where the burden depth is such that all items cannot be viewed by the equipment.

ESTIMATED SCHEDULE OF EVENTS
R&E-Related BOND SALE

Date	Action/Event
May 18	MN Legislative session adjourns (R&E will know state bonding amount for REC Enhancements project); Begin process of grant agreement with state (likely MPCA)
May 21	R&E FACILITY & FINANCE COMMITTEE meeting – present information about financing pathway
May 26	WASHINGTON COUNTY BOARD workshop on financing issues related to R&E
May 28	R&E BOARD meeting – R&E Board will make decision about proceeding with project, and • Authorize negotiation and execution of documents for R&E receipt of state bond funds • Approve and recommend county approval of Ramsey County to proceed with issuing GO bonds • Authorize proceeding with development of finance engineering and architecture plans, contingent on sale of bonds
June 22	RBA for first reading of ordinance due to Ramsey County Manager • RBA to set hearing date due to Ramsey County Manager • RBAs due to County Manager in Ramsey County and County administrator in Washington County to: Approve and recommend county approval of Ramsey County to proceed with issuing GO bonds
June 25	R&E BOARD meeting: • Review 2020 and 2021 budgets • Board direction to authorize the JLT to work with the Construction Manager to issue solicitations for prime contractors/equipment
June 30	RAMSEY COUNTY Agenda Review for • First reading of ordinance at Ramsey County Board meeting • Set date for public hearing (No sooner than 10 days after first reading) • Approve and recommend county approval of Ramsey County to proceed with issuing $xxx in GO bonds
July 13	RBA for second reading of ordinance due to Ramsey County Manager RBA for holding public hearing due to Ramsey County Manager
July 14	RAMSEY COUNTY BOARD: • First reading of ordinance at Ramsey County Board meeting • Set date for public hearing (No sooner than 10 days after first reading)

- Approve and recommend county approval of Ramsey County to proceed with issuing GO bonds

WASHINGTON COUNTY BOARD:

- Approve and recommend county approval of Ramsey County to proceed with issuing GO bonds

July 20 RBA for approval of bonding ordinance due to Ramsey County Manager

July 21 Agenda Review for second reading and public hearing RBAs

July 23 R&E BOARD meeting –

- Approval of 2021 budgets
- Approval of 2021 tipping fees
- Labor agreement
- Solicitation for AD facility
- DCB order fulfillment contract
- Transload Agreements
- Approve agreement between Washington County and Ramsey County on joint bonding
- Approve loan agreement between Ramsey County and R&E Board, contingent on sale of bonds
- Approve loan agreement between Washington County and R&E Board, contingent on sale of bonds

July 28 Agenda Review for bonding ordinance RBA

August 4 RAMSEY COUNTY BOARD Meeting

- Second Reading of bonding ordinance
- Hold Public Hearing

August 11 RAMSEY COUNTY BOARD

- Approval of bonding ordinance
- Approve loan agreement between Ramsey County and R&E Board, contingent on sale of bonds
- Approve agreement between Washington County and Ramsey County on joint bonding

WASHINGTON COUNTY BOARD:

- Approve agreement between Washington County and Ramsey County on joint bonding
- Approve loan agreement between Washington County and R&E Board, contingent on sale of bonds

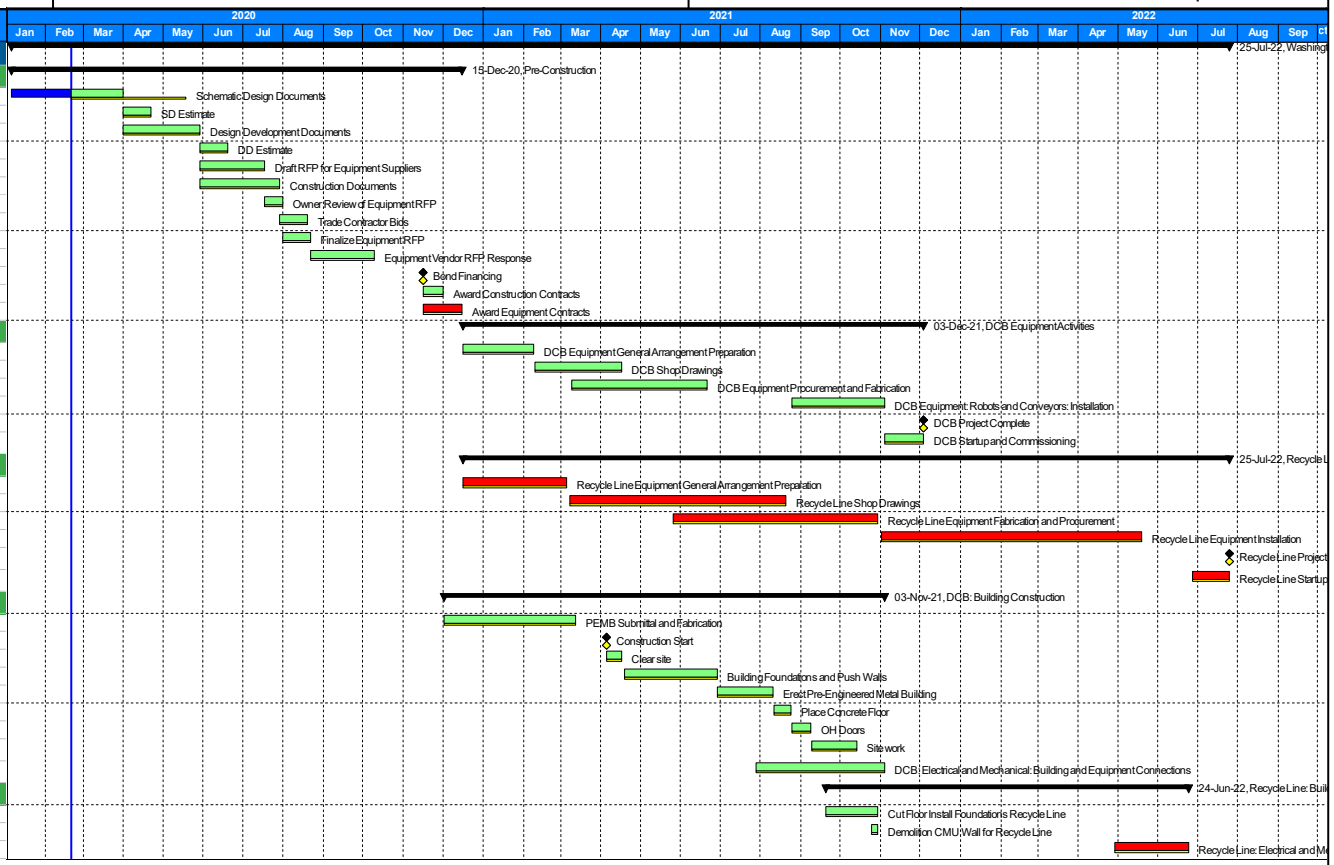
August 14 Begin preparation of draft official statement

August 19	Publication of Ordinance Forty-five (45) day Referendum Petition waiting period starts
Sep. 21	RBA/Resolution authorizing bond sale due to County Manager
Sep. 22	Draft official statement distributed for review internally
Sep. 28	Agenda Review for bond sale authorization resolution
Oct. 3	Ordinance becomes effective Referendum period closes 45 days after Ordinance Publication
Oct. 6	RAMSEY COUNTY BOARD – Approval of resolution authorizing bond sale
Oct. 7	Post final Official Statement on internet Final Preliminary Official Statement delivered to rating agencies
Oct. 15	Rating determination by Moody's and Standard & Poor's
Oct. 1 – Nov. 30	If applicable, state bonding agreements are executed
Oct. 19	Ramsey County takes bids on bonds
Oct 2	RBA awarding sale of bonds Due to Ramsey County Manager
Oct. 12	Agenda Review for awarding sale of bonds RBA
Oct. 20	RAMSEY COUNTY BOARD considers awarding the sale of bonds
Nov. 15	Bond proceeds received
Nov. 15 – Dec. 15	R&E BOARD meeting – Board to approve contracts with initial prime contractors and equipment vendors Start for construction at R&E Center; if applicable: assuming state loan agreements are executed
Dec. 31	End of Budget Year 2020

SUBJECT: *AP Construction Schedule*

30-Apr-20 14:18

Act ID	Activity Name	Dur	Start	Finish
Washington/Ramsey Recyling and Energy		615	06-Jan-20 A	25-Jul-22
Pre-Construction		208	06-Jan-20 A	15-Dec-20
A1000	Schematic Design Documents	62	06-Jan-20 A	31-Mar-20
A1010	SD Estimate	15	31-Mar-20	21-Apr-20
A1020	Design Development Documents	42	31-Mar-20	29-May-20
A1030	DD Estimate	15	29-May-20	19-Jun-20
A1160	Draft RFP for Equipment Suppliers	34	29-May-20	17-Jul-20
A1040	Construction Documents	42	29-May-20	29-Jul-20
A1250	Owner Review of Equipment RFP	10	17-Jul-20	31-Jul-20
A1050	Trade Contractor Bids	15	29-Jul-20	19-Aug-20
A1260	Finalize Equipment RFP	15	31-Jul-20	21-Aug-20
A1270	Equipment Vendor RFP Response	34	21-Aug-20	09-Oct-20
A1130	Bond Financing	0	16-Nov-20*	
A1180	Award Construction Contracts	10	16-Nov-20	01-Dec-20
A1170	Award Equipment Contracts	20	16-Nov-20	15-Dec-20
DCB Equipment Activities		245	16-Dec-20	03-Dec-21
A1300	DCB Equipment General Arrangement Preparation	36	16-Dec-20	08-Feb-21
A1320	DCB Shop Drawings	49	09-Feb-21	16-Apr-21
A1210	DCB Equipment Procurement and Fabrication	74	09-Mar-21	21-Jun-21
A1150	DCB Equipment: Robots and Conveyors: Installation	50	25-Aug-21	03-Nov-21
A1330	DCB Project Complete	0		03-Dec-21
A1380	DCB Startup and Commissioning	20	04-Nov-21	03-Dec-21
Recycle Line Equipment Activities		407	16-Dec-20	25-Jul-22
A1290	Recycle Line Equipment General Arrangement Preparation	55	16-Dec-20	05-Mar-21
A1310	Recycle Line Shop Drawings	118	08-Mar-21	20-Aug-21
A1220	Recycle Line Equipment Fabrication and Procurement	110	26-May-21	29-Oct-21
A1230	Recycle Line Equipment Installation	140	01-Nov-21	19-May-22
A1340	Recycle Line Project Complete	0		25-Jul-22
A1390	Recycle Line Startup and Commissioning	20	27-Jun-22	25-Jul-22
DCB: Building Construction		235	02-Dec-20	03-Nov-21
A1190	PEMB Submittal and Fabrication	70	02-Dec-20	12-Mar-21
A1060	Construction Start	0	05-Apr-21*	
A1070	Clear site	10	05-Apr-21	16-Apr-21
A1080	Building Foundations and Push Walls	50	19-Apr-21	28-Jun-21
A1090	Erect Pre-Engineered Metal Building	30	29-Jun-21	10-Aug-21
A1100	Place Concrete Floor	10	11-Aug-21	24-Aug-21
A1110	OH Doors	10	25-Aug-21	08-Sep-21
A1140	Site work	25	09-Sep-21	13-Oct-21
A1120	DCB: Electrical and Mechanical: Building and Equipment Connections	70	28-Jul-21	03-Nov-21
Recycle Line: Building Construction		195	20-Sep-21	24-Jun-22
A1350	Cut Floor Install Foundations Recycle Line	30	20-Sep-21	29-Oct-21
A1370	Demolition CMU Wall for Recycle Line	5	25-Oct-21	29-Oct-21
A1360	Recycle Line: Electrical and Mechanical Building Work	40	29-Apr-22	24-Jun-22



Primary
Actual Work
Remaining Work
Critical Remaini...
Baseline Milesto...
Milestone

Washington/Ramsey Recyling and Energy

Adolfson & Peterson Construction

Attachment 4: Community Engagement Summary

Decision to Purchase R&E Center

As Ramsey and Washington counties were evaluating the potential purchase of the R&E Center in 2015, they engaged with key stakeholder groups as follows:

- Residents
    - Hosted six open house events, geographically distributed throughout both counties, and numerous one-on-one meeting with members of the community to solicit feedback on the proposed purchase of the R&E Center.
    - Met with 25 members of the League of Local Women Voters to seek input. Attendees expressed support for the project, and no concerns regarding public ownership of the facility.
- Businesses
    - Met with multiple business organizations, including Main Street Stillwater Independent Business Alliance, Latino Economic Development Center, East Side Neighborhood Development Company, White Bear Lake Chamber, and Greater Saint Paul Building Owners and Managers Association, to seek feedback on proposed purchase of the R&E Center.
- Haulers
    - Sent four mailings to all licensed haulers in two counties to inform and seek feedback on the proposed purchase of the R&E Center.
    - Met with nine haulers – including large and small companies – to seek input. Local haulers were supportive of public ownership of the facility as an independent location for waste disposal. One hauler indicated that it would be “catastrophic” to local haulers if the facility were to close.
- Municipalities
    - Met with city managers, city recycling coordinators, Newport mayor and city administrator, and Ramsey County League of Local Government to seek feedback on proposed purchase of R&E Center.
- Other Stakeholders
    - Met with Xcel Energy, Saint Paul Porth Authority, and Great Plains Institute to seek feedback on proposed purchase of R&E Center.

2018-2038 Solid Waste Management Master Plans

Both counties independently engaged their communities in planning their coordinated Solid Waste Management Master Plans. Feedback gathered through engagement efforts described below was valuable in shaping the counties’ plans.

- Residents/Businesses
    - Opportunities for master plan feedback were shared via county websites, social media, and e-newsletters.
    - Ramsey County connected with over 75 community organizations for listening sessions and/or to survey their members. 128 people attending listening sessions, and 565 people completed surveys.
    - Washington County received input from 549 residents via online survey.
    - Washington County received input from 120 businesses via online survey.
    - Interviews were conducted with three multi-unit property managers to seek input.
- Haulers

    - Letters/emails were sent to all licensed haulers seeking input on the master plans. Five haulers were interviewed by phone.
- Municipalities
    - Letters/emails seeking master plan input were sent to city managers/administrators and recycling coordinators.
- Other Stakeholders
    - Ramsey County convened a Solid Waste Advisory Committee, which consisted of 25 members, including residents, industry representatives, and municipal representatives. The group convened four times to offer feedback on the master plan.
    - Washington County convened an Ad Hoc Waste Management Planning Committee, consisting of seven individuals, to provide input. The group met twice to provide feedback.
    - Seven school district representatives were interviewed via phone to seek input.

Waste Designation

In 2016 and 2017, as R&E and the two counties were considering developing waste designation ordinances, they engaged with the community in the following ways:

- Residents
    - The counties and R&E created pages on their websites specific to the topic, where individuals could submit questions and comments. Opportunities to provide input were shared via county social media and e-newsletters.
    - Both counties held public hearings regarding the waste designation plan.
- Haulers
    - An email was sent to all licensed haulers in the two counties, seeking their input on waste designation. Local haulers expressed support for waste designation as a way of leveling the playing field, as some of the larger haulers own their own disposal facilities.
    - All licensed haulers were invited to the public hearing, as well as informational meetings specific to haulers. Three informational meetings were held, with a total of 24 haulers attending. Questions and answers raised at the hauler meetings were posted on the R&E website and emailed to licensed haulers.
    - A draft of the waste delivery agreement was sent to all licensed haulers for feedback. After incorporating changes in response to feedback on the first draft, a second draft of the waste delivery agreement was sent to haulers for feedback.
    - Draft county designation ordinances were also sent to haulers for feedback.
- Municipalities
    - Emails were sent to municipal administrators/managers and city recycling coordinators seeking their input on waste designation and inviting them to the public hearing.
- Other Stakeholders
    - Both counties solicited input from advisory committees. Washington County worked with the Ad Hoc Waste Management Planning Committee it formed to prepare its Solid Waste Management Master Plan in 2012. The committee was made up of six members representing one resident, two haulers, one city, one Newport resident, and one MPCA member. Ramsey County formed an advisory committee to advise specifically on waste designation. The committee was made up of six city representatives, four residents, one member of League of Minnesota Women Voters leadership, and several haulers.

Waste-to-Energy

In surveying residents and businesses, the counties have learned the following on perceptions of waste-to-energy:

- Residents
    - Responses to 2014, 2016, and 2018 Ramsey County residential surveys indicated broad support for waste-to-energy, with 74-88% of respondents stating that they support this method of waste management (9-19% indicated that they didn't know whether they supported waste-to-energy, and 2-6% indicated that they did not support it). Most respondents listed recovering recyclables and then processing trash into a fuel as the best option for waste management.
- Businesses
    - Responses to 2015, 2017, and 2019 Ramsey County businesses surveys indicated broad support for waste-to-energy, with 86-89% of businesses supporting this waste management method (9-11% indicated that they didn't know/care, and 1-3% indicated that they did not support waste-to-energy).
    - 79% of respondents to 2017 Washington County business survey were supportive of waste-to-energy.

System Enhancements - Durable Compostable Bags and Recyclables Recovery

The following input is helping shape plans for system enhancements at the R&E Center:

- Residents
    - Responses to 2014 Ramsey County residential survey indicated support for additional infrastructure to recover recyclables from the trash (83% support) and to recover organics to be converted to biofuels (78% support).
    - 84% of respondents to 2017 Washington County residential survey indicated that they would be willing to separate organic waste if organics collection were offered.
    - Residents were surveyed on the durable compostable bag concept: 132 in-person interviews were conducted in nine community locations, and 2,380 people completed an online survey. 90% indicated that they thought they would participate in the program. Respondents provided feedback on bag distribution and sizing that is shaping program development.
- Haulers
    - All haulers licensed in the two counties were sent a survey to collect feedback on the durable compostable bag concept.
    - Six haulers – representing both large and small companies – were surveyed via phone on the durable compostable bag concept. Overall, they were supportive of the idea and appreciative of the fact that it would not require additional trucks or equipment. Emphasized that education will be a key component of a successful program.
- Transfer stations
    - Met with every transfer station under contract with R&E to discuss the durable compostable bag concept.
- Municipalities
    - All municipalities in the two counties were surveyed to seek input on the durable compostable bag concept. 87% of respondents indicated that they liked the concept; 3% indicated that they disliked the concept. 92% indicated that they'd be willing to partner on outreach and education to support the program.

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TO: Ramsey County
Washington County

FROM: Kathleen Aho, Principal
Elizabeth Bergman, Director
Terri Heaton, Principal

May 12, 2020

RE: Proposed Ramsey/Washington Recycling & Energy Project Financing

Background: Ramsey/Washington Recycling & Energy ("R&E") is governed by the Ramsey/Washington Recycling & Energy Board ("REB") formed under a joint powers agreement between Ramsey County and Washington County. The REB was established to further the recycling and waste management goals of the two counties. The joint powers agreement was amended and restated on September 22, 2015, in part to provide for the acquisition and improvement of an existing facility. In addition to amendments in January 2016 and January 2019, the REB acted to amend the JPA on January 23, 2020 to modify provisions related to the Operating Reserve Fund and create an Enterprise Reserve Fund to facilitate financing of renovation of the administration building and construction of an enclosure for the residue/RDF load-out area.

The facility receives solid waste from the counties and others and processes it into fuel. In late 2015, Ramsey County and Washington County provided $17,812,000 (73%) and $6,588,000 (27%) respectively as loans to the REB for the purchase of the facility. Washington County provided its loan from cash and Ramsey County provided its loan from the issuance of its $17,900,000 General Obligation Solid Waste Facility Revenue Bonds, Series 2016A. (the "Series 2016A Bonds").

Each loan to REB is evidenced by a Loan Agreement between the respective County and REB. The loans are to be repaid by REB on a parity basis, meaning the loans have an equal claim on the net revenues of the facility. Moneys pledged to repayment are solely net revenues of the facility, including any contributions from the Counties' Environmental Charge (CEC) revenues.

The loans are repayable January 15 (principal and interest) and July 15 (interest only) each year to and including January 15, 2041. The interest rate on the Washington County loan is equal to the yield on each maturity of the Series 2016A Bonds which ranged from 0.55% in 2017 to 3.25% in 2041. Payments under the Ramsey County loan are equal to the principal and interest due on the Series 2016A Bonds. In the event of a failure to make full payment, and provided that REB pays principal and interest under the two loans on a pro rata basis to the extent of Net Revenues, there is no default and any unpaid amounts are carried forward with interest. The loan agreements terminate upon repayment of the loans in full.

In addition to the loans described above, REB has outstanding loans from the counties for the Bulky Waste Residue Load Out project. These loans are 5-year interest free loans with $307,010 due each year through and including 2023. A 2020 borrowing will require approximately $833,333 in annual debt service from 2024 through and including 2029.

Proposed Project Financings: The REB approved an Enhancements Financing Plan in 2019 that included i) administration building renovations and construction of RDF/residue load-out enclosure ($5,000,000) and ii) installation of an organics collection system and recyclables recovery system ($42,771,450). Financing for the renovations and load-out enclosure will be provided by loans from the counties under the 73%/27% split. Financing for the recycling system improvements is the subject of this memorandum.

The Enhancements Financing Plan anticipates the following:

Summary: R&E Center Enhancement Financing Plan

	Project[1]	Upper Cost Estimate[2]	Funding Source	Timeline
	R&E Center Administration Building Renovation and RDF/Residue Load-out Enclosure	$5,000,000	A loan from the counties to the R&E Board related to the Operating Reserve Fund and to-be-created Enterprise Reserve Fund, coupled with the elimination of the obligation of the counties to maintain the ORF, over ten years	• Loan issued: January - February 2020 • Procurement of vendors: August – December 2019 • Design work: Q1 – Q2, 2020 • Construction begins: Q2 – Q3, 2020
R&E Center Enhancements	Retaining Construction Manager, Architect and Engineer for Preconstruction Design	$2,776,440	1) R&E Facility Budget surplus funds from 2018 – 2019 2) Facility budget funds for 2020	• Procurement of vendors: August – December 2019 • Design work to prepare design ready for construction bidding: January – May 2020 • Preconstruction design ready for bidding: May – June, 2020
	Expansion of the tipping floor and processing line for DCB recovery	$17,896,402	1) Seek state bonding in the amount of $21 Million 2) Finance R&E's share (local match) through a loan from the counties, with counties using GO Bonds[3] 3) Consider outside funding, e.g. Closed Loop Fund	• Bonding application submitted to MMB: June 14, 2019 • 2020 Legislative Session: Feb. – May 2020 • Final decisions on local bonding: following legislative session • Construction: June 2020 to mid-2022 • Operations begin late-2022
	Equipment for recovery of recyclables from MSW	$22,098,608		

Notes:
1. Projects related to the R&E Center, primarily focused on recovering more value from waste. The policy basis, previous commitments and policy approvals from 2015 to present led to the system predesign and analysis presented at the March 2019 R&E Board workshop and led to action at the May 2019 R&E Board meeting stating the intent to proceed.
2. Upper-end cost estimate is "all in," including site capital costs, equipment capital costs, construction manager agency & architect/engineer services.
3. If state bonding does not occur, R&E and the counties will need to decide on local funding amounts and timing.

SOURCE: R&E Enhancements Financing Plan approved August 21, 2019.

REB's finance team represented on March 4, 2020 that REB had requested state financing of up to 50% of the project and that the Governor had included $8 million in his bonding request. Given this information, the resultant share of the project would range from approximately $21.4 million to $42.771 million depending on the outcome of the state funding request. REB has expressed an interest in having the two counties leverage their general obligation credit strength to provide low cost, low covenant, achievable financing for the project.

A number of revenue bond structural elements were discussed at the March meeting and can be found in the financing memo prepared by REB's municipal advisor and dated February 28, 2020. Without restating that full discussion here, when asked the bottom-line question of whether REB could effectively sell a revenue-only issue without any credit support from the counties the answer was no. It was further stated that the existing loans would need to be subordinated to any revenue debt issued. We agree with this assessment for two primary reasons: i) REB itself has a short history as the owner/operator of the facility and ii) the financial performance supported by published audits does not support the net revenue level needed to market stand-alone revenue bonds.

While financial performance improvements over 2016 and 2017 were experienced in 2018 and 2019, without a longer history of sustained financial results that support combined debt service, a stand-alone revenue transaction is probably out of reach. A revenue bond may be able to be structured with added credit support from the counties in the form of a direct revenue pledge for debt service shortfalls or an obligation to refill a debt service reserve fund if shortfalls make draws necessary. Although either of these is possible, neither shelters the counties' financial exposure if revenues are insufficient. If revenue bonds do not offer financial distance for the counties, the question that needs to be asked is if it is worth the additional cost and restrictive covenants of a revenue bond for these projects? Also, the counties have a vested interest in the successful continued efficient operation of R&E and are unlikely to let the facility fail in any event. With the level of need for and commitment to the services R&E provides, general obligation bonds will provide the lowest cost financing to a facility that is essential to safekeeping residents' health and environment.

Cooperative Funding Alternatives: Assuming general obligation bonds are issued, the counties have the options of issuing separate bonds secured by their respective credits (both Aaa/AAA) or having one county issue the bonds and enter into a financing agreement with the other that provides for the second's share of the debt service. Either is an acceptable approach. To reduce the combined level of administrative effort and post-issuance carrying costs, the latter approach is preferred by both county staffs, with Ramsey County being the issuing entity.

In discussion with bond counsel for each county, the most straightforward means of doing this is similar to the approach used by the Minnesota Public Facilities Authority ("MPFA") when it provides funding for local water and sewer projects. Under its model, the MPFA issues bonds pledging its revenues in support of debt service. Any individual local borrower issues a general obligation bond and in essence "sells" it to MPFA, securing its proportionate share of the debt with its general obligation credit. For the counties, the proposal has been that Ramsey County will issue the total amount of bonds (the "Master Bonds") to include project costs and costs of bond issuance, and Washington County will provide a general obligation debt instrument in favor of Ramsey County that supports its 27% share of the debt service.

Some comments on this financing to consider:

- To the investing public this will be a Ramsey County general obligation bond and Ramsey County will be responsible for post-issuance compliance (arbitrage and continuing disclosure).
- Ramsey County's credit will be the primary subject of the credit rating review for the new bonds.
- To the rating agencies, each debt obligation will be considered in the respective county's rating evaluation. It is possible that after at least three year's audited financials demonstrate that REB net revenues have been sufficient to cover the debt service, the REB debt will be backed out of the analysis. "Considered" does not necessarily mean that it will change either rating, just that it will be a factor in the overall evaluation.
- Each county will need to report their transaction on EMMA. New SEC rules and Washington County's Series 2019A Bonds' continuing disclosure agreement require that material financial obligations be reported.
- Highly unlikely, but if either county misses a debt payment for any reason, including innocent error, the failure will need to be reported on EMMA by that county and disclosed in offering statements for five years. If one county misses its payment (Ramsey County to bond holders or Washington County to Ramsey County), only that county would be required to file. Depending on the rating agency and the cause of the default, it could potentially affect that county's bond rating.

Equipment Financing. A significant amount of the financing is for equipment and special rules related to the term of the financing apply. Bond counsel has determined that all of the proposed costs of the project are eligible capital expenditures which may be financed by bonds. We assume that the revenues pledged for the payment of the bonds, including the revenues of the recycling facility, will produce at least 105% of the debt service on the bonds, therefore there is no state law limitation on the economic life of the bond-financed facilities. The bonds are not expected to be private activity bonds, therefore the 120% test that limits the average maturity of bonds to not more than 120% of the average reasonably expected economic life of the bond-financed property will not apply. Economic life, however, becomes relevant to

the extent any bond-financed equipment or other property is disposed of, and in such case, there is a safe harbor if the weighted average maturity of the bonds financing such equipment or personal property is not greater than 120% of the reasonably expected life of the equipment or personal property.

After consulting depreciable life tables, bond counsel concluded that the economic life of the equipment to be financed with the bonds is 10 years. Accordingly, they recommend that the economic life of the portion of the project constituting the acquisition and installation of the equipment (i.e., not including the North Addition) have a weighted average maturity of up to12 years (which is 120% of the reasonably expected life of the equipment). Given current anticipated interest rates for 20-year Ramsey County general obligation bonds and a level debt service amortization, the average life of the Master Bonds would be less than 12 years. The final Master Bond structure will need to be reviewed with this requirement in mind as alternatives to a level debt amortization are being considered to better reflect project completion and ramp-up.

Additional Covenants. It is typical for revenue obligations to have a number of covenants that provide assurances to the investor. With the increase in the amount of debt outstanding it was felt that two covenants were needed in addition to those in the 2015 loan agreements. Care was taken to be modest in these requests to minimize any impact on revenues or operating flexibility while still providing the counties with some added security.

- Coverage Covenant: In Minnesota, general obligation borrowers have to show 105% coverage in order to avoid levying for debt service. In 2016, Ramsey County avoided having to make a levy by providing the additional 5% from its CEC. The CEC funds of each county are used for other county purposes and to avoid making additional pledges of these or other funds of the counties, a 105% coverage requirement will be requested. By imposing a coverage requirement, it is not the counties' intent to require permanent payments in excess of the debt service on the Master Bonds. A number of options are under consideration to achieve the objective of the counties to marginalize the impact on REB, comply with federal rules that might apply and minimize the likelihood of a levy by either entity.

- Additional Debt Covenant: In addition, the counties will be requesting that future additional debt, either parity or subordinate, require approval by the counties for as long as the loans remain outstanding.

Adequacy of Revenues. The table below shows the last four years' financial performance. The Enhancements Financing Plan indicates that tipping fees were adjusted upward from levels set prior to REB acquiring the facility are reflected in revenue results.

	2016	**2017**	**2018**	**2019**
Total Operating Revenues	$ 32,702,600	$ 34,462,856	$37,485,892	$38,274,130
Total Operating Expenses	33,833,683	35,631,092	35,438,727	37,701,363
Operating Income (Loss)	$(1,131,083)	$(1,168,236)	$ 2,047,165	$ 572,767
Plus:				
Depreciation	2,708,826	2,361,581	2,406,616	2,246,538
Investment Earnings	17,146	62,287	128,349	166,848
Net Revenues Available for Debt Service	$ 1,594,889	$ 1,255,632	$ 4,582,130	2,986,153

SOURCE: R&E Enhancements Financing Plan approved August 21, 2019, preliminary 2019 financial statements.

The current combined debt service due the Counties under the existing loan agreements is approximately $1.7 million annually. Using the table below, a level annual debt service assumption, and a debt service interest rate 2.25%, debt service for the combined loans from the Counties will be about $4.6 million (no state funding), $4.0 million ($8 million state funding), or $3.1 million (50% state funding) assuming an allowance for costs of issuance and 105% coverage. (These numbers will increase by $500,000 in 2024 through 2029, then drop by $833,333, reflecting repayment of the smaller loans.) Historic net revenues do not support this level of debt service, but significant changes are anticipated in the future by REB.

Estimated Annual Debt Service*
(numbers in thousands)

Project Cost →	$42,771	$34,771	$21,386
Rate ↓			
2.00%	$2,794	$2,271	$1,397
2.25%	$2,862	$2,327	$1,431
2.50%	$2,931	$2,382	$1,465
2.75%	$3,000	$2,439	$1,500
3.00%	$3,071	$2,496	$1,535

Assumes 1.05x coverage and an allowance for costs of issuance.

We have not been asked to project the sustained ability or inability of REB to meet increased debt payments and other obligations over the next 20 years. This work has been done by the REB's municipal advisor. Projections of debt service at varying state contribution levels have been calculated with tonnage sustained at 450,000 tons/year, most expenses increased by 2% or 3% annually, recovery revenues ramping up to $2.4 million annually following project completion, and expense reductions of $1.45 million inflating annually (NSP fuel supply agreement and landfill expense) beginning upon project completion.

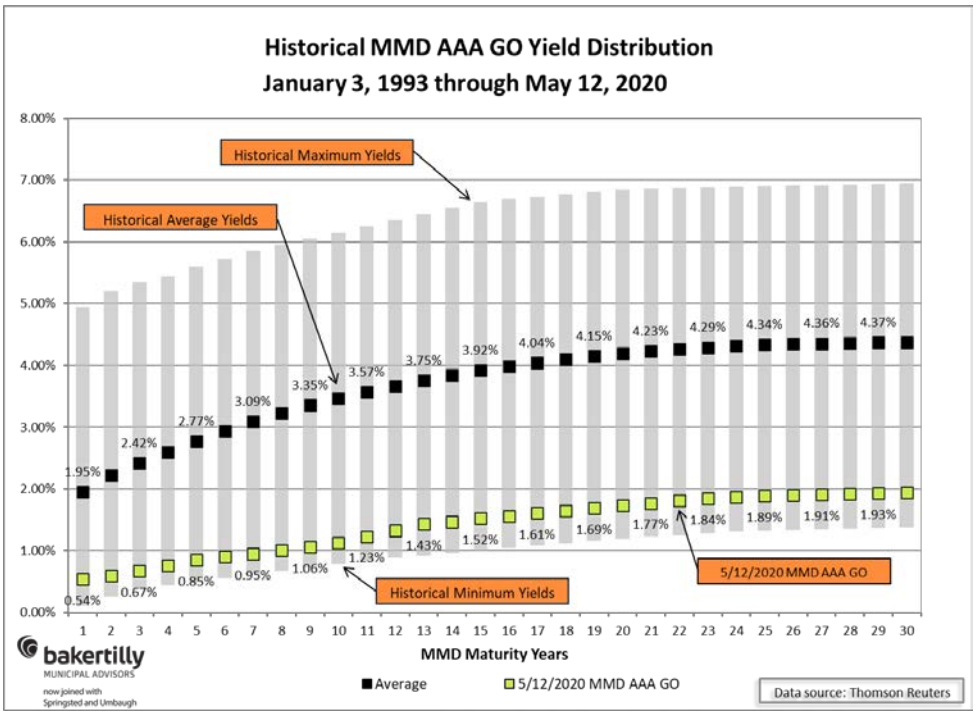
County staff has engaged R&E staff in discussion of the effects of the pandemic on tonnage and has also been provided with cash flows to test sensitivity.

Other Financing Considerations

Green Bonds. Ramsey County's 2016A Bonds were issued as Green Bonds. Green Bonds are bonds issued under voluntary process guidelines developed to help the debt markets identify projects that contribute to environmental sustainability. Eligible Green Project categories are limited but include "pollution prevention and control (including reduction of air emissions, greenhouse gas control, soil remediation, waste prevention, waste reduction, waste recycling and energy/emission-efficient waste to energy." While it is still not apparent that the Green Bond designation lowers borrowing rates, there are some that feel that it does expand investor interest and might have marginal benefits. The Green Bond Principles are reviewed each year and staff will be investigating the current requirements of the designation to determine if it is reasonable to designate the Master Bonds as a Green Bond and the cost/benefit of maintaining any continuing disclosure requirements or measures to support the designation.

Market Conditions. Over the last several weeks, the disruption to daily life caused by the COVID-19 virus has been mirrored in the markets, including the municipal market. Trusted courses of access to capital had been significantly impaired and interest rates had been volatile but are now relatively stable. Still, the municipal market is not functioning as it has in the past and is somewhat unpredictable as it responds to new announcements or actions related to COVID-19. While wild swings in rate levels have not been seen recently, certain credits are not finding buyers. At this writing, we do not expect this to be the case with high quality credits such as Ramsey County or Washington County general obligations. Rates

remain at historically low levels where access has been available. (See "Historical MMD AAA GO Yield Distribution" graph that follows.)



We will keep you apprised of market conditions, but at this time they need to remain a key part of the planning process. Expenditure commitments should not be made until a financing source is secured. Also, some events have caused disruption in the ability of bonds to be sold competitively. Alternative vehicles exist and if needed, will be identified for the Counties' consideration. As stated previously, at this time we do not anticipate a problem with the counties' ability to issue general obligation debt.

Summary. In conclusion, this letter outlines the considerations and options that were considered as a financing team in developing a financing strategy. The financing strategy includes a general obligation bond issued by Ramsey County with a supporting general obligation note issued to Ramsey County by Washington County for Washington County's share is the preferred avenue for financing this project. Both counties want to wait until the legislative session has ended and funding levels by the state are known before asking their separate County Boards to approve bonding. A time schedule has been developed jointly with R&E staff that will allow for county deliberations, procedural steps in issuance (which include a 45 day petition period as part of Ramsey County's ordinance process) and delivery of proceeds in November.

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RAMSEY/WASHINGTON
RECYCLING & ENERGY
CONNECTING VALUE TO WASTE

R&E BOARD FACILITY & FINANCE COMMITTEE MEETING DATE:		May 21, 2020		**AGENDA ITEM:**		VI.a.
SUBJECT:	Facility Update					
TYPE OF ITEM:	☒	INFORMATION	☐	POLICY DISCUSSION	☐	ACTION
SUBMITTED BY:	Ryan Tritz, R&E Center Manager					

FACILITY & FINANCE COMMITTEE ACTION REQUESTED:

For information only.

EXECUTIVE SUMMARY:

Staff will provide an update on R&E Center operations.

ATTACHMENTS:

None.

FINANCIAL IMPLICATIONS:

None.

AUTHORIZED SIGNATURES		**DATE**
JOINT LEADERSHIP TEAM	Z Hansen Nicole Stewart Dushani Dye	5/15/20