



300 E. Locust Street, Ste. 100
Des Moines, Iowa 50309
515-244-0021

MEMORANDUM

DATE: April 19, 2021

TO: MWA Board Members

CC: MWA Staff

FROM: Michael McCoy, Executive Director

RE: Wednesday, April 21, 2021, Board Meeting

.....
This month's board meeting is scheduled for Wednesday, April 21, 2021, at 5:45 pm in the board room at Central Office (300 East Locust Street, Ste. 100, Des Moines, Iowa). If you have questions about any items listed below, please call me at 323.6535 (w) or 707.3869 (c). I look forward to seeing you on Wednesday.

The following numbered items correspond with the number of the item on the agenda:

Consent Agenda Items for Approval

8. Resolution 04-21-03 - Approval of Extension to the Municipal Solid Waste agreement with Ankeny Sanitation, Inc. – Action for Approval
This extension is the second of the three optional one-year extensions for the municipal solid waste services provided by Ankeny Sanitation, Inc. (ASI) to the cities of Bondurant, Clive, Grimes, Johnston, Norwalk, Polk City, and Windsor Heights.

Regular Agenda Items for Approval

9. Resolution 04-21-04 - Approval of Windrow Turner for Compost Production – Action for Approval
The windrow turner will increase efficiencies and allow staff to produce a higher volume of compost at a faster rate.
10. Resolution 04-21-05 – Approval of Material Recovery Facility (MRF) Change Order to add Enclosures for Compressor Units – Action Item
A change order for MWA's Material Recovery Facility which involves adding enclosures for compressor units recommended for the optical sorters.
11. Presentation: Transfer Station Feasibility Study – Presentation
The study evaluated locations of cities vs. the MWA Material Recovery Facility and cost to move material. This is the first checkpoint in the study to discuss results and determine next steps.



**Board of Directors
2021 Calendar Year**

Ron Pogge
Chair

David Gisch
Vice-Chair

Dean O'Connor
Altoona

Mark Holm
Ankeny

Wes Enos
Bondurant

John Edwards
Clive

Joe Gatto
Des Moines

Steve Allen
Elkhart

David Gisch
Grimes

Tom Cope
Johnston

Bill Roberts
Mitchellville

Ed Kuhl
Norwalk

Dean Cooper
Pleasant Hill

Rob Sarchet
Polk City

Tom Hockensmith
Polk County

Gerald Lane
Runnells

Ron Pogge
Urbandale

Steve Gaer
West Des Moines

Susan Skeries
Windsor Heights

Michael McCoy
Executive Director

**Metro Waste Authority
Board Meeting
April 21, 2021**

MWA Central Office
300 E. Locust Street, Ste. 100, Des Moines, Iowa 50309
5:45 pm

Members of the public wishing to attend this meeting in person may do so at the MWA Central Office, where seats will be arranged to allow for social distancing. Masks will be available and are mandatory for public guests. Additional CDC recommendations will be implemented.

Agenda

1. Call to Order, Roll Call
2. Approval of Regular Agenda
3. Public Forum

CONSENT AGENDA

The following are routine items enacted by one roll call vote without separate discussion unless someone, Board or Public, requests an item be removed for consideration:

4. Approval of Consent Agenda – Items 4 through 8
5. Consideration of Minutes March 17, 2021, Metro Waste Authority Board Meeting – Action for Approval
6. Resolution – 04-21-01 - Consideration of February 2021, Financial Statements – Action to Receive and File
7. Resolution - 04-21-02 – Consideration of March 2021, Monthly Expenditures – Action for Approval
8. Resolution 04-21-03 – Approval of Extension to the Municipal Solid Waste Agreement with ASI, Inc. - Action for Approval

END CONSENT AGENDA

Regular Agenda Items for Approval – Items 9 through 10

9. Resolution 04-21-04 – Approval of Windrow Turner for Compost Production - Action for Approval
10. Resolution 04-21-05 – Approval of Material Recovery Facility (MRF) Change Order to add Enclosures for Compressor Units - Action Item
11. Presentation – Transfer Station Feasibility Study
12. Director's Report
13. Chair's Report

14. General Board Discussion and Other Business

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15. Correspondence

16. Adjournment

May Executive/Finance Meeting: May 5, 2021, MWA Central Office, 300 E. Locust Street, Ste 100, Des Moines, Iowa 50309, 12:00 pm.

May Board Meeting: May 19, 2021, MWA Central Office, 300 E. Locust Street, Ste. 100, Des Moines, Iowa 50309, 5:45 pm.



300 E. Locust Street, Ste. 100
Des Moines, Iowa 50309
515-244-0021

March 17, 2021, Unofficial Metro Waste Authority Board Meeting Minutes

1. Call to Order

The meeting was held at Metro Waste Authority's Central Office. Ron Pogge, chair, called the March 17, 2021, Metro Waste Authority Board Meeting to order at 5:57 pm. A quorum was present.

Roll Call – MWA Board Representatives/Alternates in Attendance

Wes Enos, Bondurant
John Edwards, Clive
David Gisch, Grimes
Tom Cope, Johnston
Bill Roberts, Mitchellville
Ed Kuhl, Norwalk
Rob Sarchet, Polk City
Gerald Lane, Runnells
Ron Pogge, Urbandale
Bret Hodne, West Des Moines
Susan Skeries, Windsor Heights

2. Approval of Regular Agenda

Moved by Clive, seconded by West Des Moines, to approve the March 17, 2021, board meeting agenda as presented. Motion carried unanimously by voice vote.

3. Public Forum

There were no requests to address the Board.

CONSENT AGENDA

The following are routine items enacted by one roll call vote without separate discussion unless someone, Board or Public, requests that an item be removed for consideration:

4. Approval of Consent Agenda – Items 4 through 9

Moved by Clive, seconded by West Des Moines, to approve the Consent Agenda, items 4 through 9. Motion carried unanimously by voice vote.

5. Consideration of Minutes of February 17, 2021, Metro Waste Authority Board Meeting – Action for Approval

6. Resolution 03-21-01 - Consideration of January 2021, Financial Statement - Action to Receive and File

7. Resolution 03-21-01 - Consideration of February 2021, Monthly Expenditures - Action for Approval

8. Resolution 03-21-03 - Approval of Extension to the Municipal Solid Waste Agreement for West Des Moines – Action for Approval
9. Resolution 03-21-04 - Approval of Waste Management Compost It! Contract Extension – Action to Receive and File

END CONSENT AGENDA

Regular Agenda Items for Approval – Item 10

10. Resolution 03-21-05 - Approval of Curb It! Recycling Rate Increase - Action Item
Motion to table resolution 03-21-05 – Approval of Curb It! Recycling Rate Increase by Johnston. Absent to second the motion. Motion did not pass to table resolution 03-21-05 – Approval of Curb It! Recycling Rate Increase.

Moved by Grimes, seconded by Norwalk, to approve Resolution 03-21-05. Motion carried by voice vote with Johnston opposing. Voice roll call was not taken.

11. Director's Report

Michael McCoy, executive director, shared informational presentations will appear as part of the regular agenda going forward. A video tour of Metro Northwest Transfer Station was shown.

McCoy reported the first Grimes second Saturday event March 8, 2021, was a success. At the events, residents can drop off garbage, hazardous waste, recycling, or buy compost. These events will continue through November.

Emily Dobbins, human resources manager, presented on a new employee relations tool. Jake Christensen, Christensen Development, discussed a change order for MWA's Material Recovery Facility that will be on the agenda for April. The change order involves adding enclosers for compressor units required for the optical sorters.

Kyle Fischer, hazardous waste facility manager, presented about the hazardous waste services MWA provides for 20 counties throughout Central Iowa.

Leslie Irlbeck, deputy director, shared the educational design for the MRF, including engagement with exhibit designer Split Rock.

The April executive finance meeting will be held at Central Office (300 E. Locust Street, Ste. 100, Des Moines, Iowa) on Wednesday, April 7, 2021, at 12:00 pm.

The April board meeting will be held at Central Office (300 E. Locust Street, Ste. 100, Des Moines, Iowa) on Wednesday, April 21, 2021, at 5:45 pm.

12. Chair's Report
No Report.
13. General Board Discussion and Other Business
No report.
14. Adjournment

Moved by Clive, seconded by West Des Moines, to adjourn the March 17, 2021, board meeting. Motion carried unanimously by voice vote. Meeting adjourned at 6:51 pm.

Michael McCoy, Executive Director

Ron Pogge, Chair

**METRO WASTE AUTHORITY
BILLS PAID IN MARCH 2021**

Vendor Name	Services Provided	Amount
ABM PARKING	Parking	6,000.00
ACTERRA GROUP, INC.	Computer supplies/maint/fees	3,113.00
ADVENTURE LIGHTING	Electrical supplies	96.72
AFLAC	Insurance premium	476.64
ALLENDER BUTZKE ENGINEERS, INC.	Engineering fees	5,900.74
AMERICAN EXPRESS	Waste/Yard collection expense	363,869.92
AMERICAN MARKING, INC.	Office supplies	30.50
AMERICAN SECURITY	Security	1,030.00
ANKENY SANITATION	Waste/drop off/contract expens	204,274.85
ARAMARK UNIFORM SERVICES, INC.	Rags/mats/supplies	1,151.90
ARCHITECTURAL WALL SYSTEMS, LLC	MRF	24,722.55
A-TEC RECYCLING, INC.	Contract disposal	1,598.28
ATLANTIC BOTTLING COMPANY	Office supplies	94.68
AUREON COMMUNICATIONS	Telephone expense	8,616.32
BEE LINE BLUE	MRF	8,764.16
BLACKHAWK AUTOMATIC SPRINKLERS	Health/safety	221.00
BONDURANT, CITY OF	Utilities	19,971.12
BOOT BARN	Health/safety	399.26
CAMP TOWNSHIP FIRE DEPT. - HOST FEES	Host fees	2,010.06
CAPITAL CITY EQUIPMENT CO.	Equipment/parts/labor	3,252.19
CENTRAL UNITED LIFE INSURANCE	Life insurance	548.98
CHRISTENSEN DEVELOPMENT 1 LLC	Consulting fees	10,000.00
CLEAN DES MOINES, INC.	Janitorial services	1,104.00
CLEAN HARBORS ENV. SERVICE INC	Contract disposal	2,275.66
COMMONWEALTH ELECTRIC COMPANY	Site maintenance	1,216.52
COMPETITIVE EDGE	Public information/promotion	10,402.49
CONSTRUCTION & AGGREGATE PRODUCTS	Leachate maintenance/collectio	1,290.00
CORNERSTONE GOVERNMENT AFFAIRS	Lobbyist fees	6,250.00
CPI TECHNOLOGIES, LLC	Phone system	75.00
CRYSTAL CLEAR	Office supplies	31.00
CUTLER, SUSAN	Mileage/expenses	16.80
DEMARANVILLE INSTLLATION	Annual fire sprinkler inspection	225.00
DES MOINES MOBILE WASH, INC	Preventive maintenance	2,300.00
DES MOINES REGISTER, THE	Advertising	579.48
DES MOINES WATER WORKS	Utilities	1,213.76
DEX MEDIA EAST	Advertising	2,340.00
DIAM PEST CONTROL	Pest control	158.00
DRAKE UNIVERSITY	Consulting fees	654.43
ELITE GLASS	Glass top for desk	205.00
EPG COMPANIES INC.	Leachate collection	15,961.00
EXCEL MECHANICAL CO., INC.	MRF	102,755.80
EXPRESS LAUNDRY	Floor mats	125.00
FASTENAL COMPANY	Health/safety	488.91
FOX VALLEY FIRE & SAFETY CO INC	Parts/labor	7,781.70
FREIGHTLINER OF DES MOINES, INC	Parts	595,871.18
GENERAL FIRE AND SAFETY	Annual fire extinguisher inspection	95.85
GEOFF DICKSON	Health/safety	206.49
GEOFF DICKSON	Office supplies	82.39
GO GREEN ENVIRONMENTAL SERVICES, LLC	Parts/labor/preventive maint	500.00
GRAHAM CONSTRUCTION CO.	MRF	138,038.22
GRAPHITE CONSTRUCTION GROUP INC	MRF	249,087.89
GRIMES, CITY OF	Utilities	125.00
GRP & ASSOCIATES	Contract disposal	1,064.00

HEAVY HIGHWAY FRINGE BENEFIT ADMINISTRATION CO.	Medical insurance	720.00
HILLTOP TIRE SERVICE	Equipment maintenance	18.50
HOLM'S/AMERICAN RADIATOR LLC	Parts/labor	529.99
HOUSBY HEAVY EQUIPMENT	Parts/labor/preventive maint	2,868.41
HOUSBY MACK, INC.	Parts/labor/preventive maint	4,044.70
HUPP TOYOTALIFT	Equipment maintenance	1,300.50
INTERSTATE ALL BATTERY CENTER	Office supplies	71.00
IOWA DEPARTMENT OF NATURAL RESOURCES	DNR Quarterly Tonnage Fees	377,256.98
IOWA DES MOINES SUPPLY	Janitorial supplies	85.48
IOWA LABORERS' DISTRICT COUNCIL HEALTH & WELFARE FUND	Medical insurance	34,684.44
IOWA TRUCK & TRAILER LLC	Equipment maintenance	87.10
IPERS	Employer's share of IPERS	41,722.96
J PETTIECORD	Equipment rent	325.00
J. A. KING & CO	Site maintenance/parts	2,800.59
JASPER COUNTY TREASURER	Property taxes	4,241.00
JOHNSON CONTROLS SECURITY SOLUTIONS LLC	Alarm/detection monitoring	238.95
KABEL BUSINESS SERVICES	Employee benefit expense	7,500.42
KABEL BUSINESS SERVICES	Service fees	73.20
KOCH BROTHERS	Office supplies	73.88
LUBE-TECH & PARTNERS, LLC	Equipment fuel	20,345.27
MAILFINANCE INC	Mailing expense	1,409.82
MANAGEMENT PROFESSIONALS	Property management fee/site maintenance	2,452.61
MCANINCH	MRF	57,269.81
MCMASTER-CARR SUPPLY CO.	Leachate maintenance/collectio	123.56
MENARDS-ALTOONA	Supplies	615.38
MHC KENWORTH - DES MOINES	Parts/labor/preventive maint	3,262.61
MIDAMERICA RECYCLING	Curbside processing expense	23,858.08
MIDAMERICAN ENERGY	Utilities	18,044.65
MIDWEST WHEEL COMPANIES	Parts	1,089.90
MMC CONTRACTORS IOWA, INC.	Bldg repairs/site maintenance	2,890.33
NATIONAL ELEVATOR INSPECTION	Elevator inspection	80.00
NATIONWIDE OFFICE CLEANERS LLC	Janitorial services	1,007.54
NEWPORT GROUP INC	Consulting fees	335.00
NORWALK CHAMBER OF COMMERCE	Dues/subscription/fee	285.00
ONE SOURCE	Background checks	135.35
O'REILLY AUTO PARTS	Parts/small tools/supplies	649.09
OTIS	Elevator inspection	220.00
PDM	MRF	1,124,008.65
PER MAR	Security	82.50
PFM FINANCIAL ADVISORS LLC	MRF financing	20,000.00
POLK COUNTY TREASURER	Property taxes	90,379.00
POMP'S TIRE SERVICE, INC.	Tire/track repairs	22,362.04
PRAXAIR DISTRIBUTION INC.	Welding supplies	191.60
PREMIER OFFICE EQUIPMENT	Office printing	133.68
PROSPERITY JANITORIAL	Janitorial services	7,052.36
QUICK OIL CO.	Equipment fuel	59,625.45
RED WING SHOE STORE	Health/safety	369.99
RELIANCE STANDARD LIFE	Insurance premium	3,368.48
ROLL-OFFS OF DES MOINES	White goods	200.00
RSM US LLP	Consulting/prof service/dues	13,759.70
RSM US PRODUCT SALES LLC	Computer supplies/maint/fees	5,118.46
S & L WATER COMPANY	Office supplies	79.50
SCOTT'S AUTO GLASS LLC	Parts/labor	250.00
SCS FIELD SERVICES	Engineering services	23,458.73
SECURITY EQUIPMENT INC	Building repairs	823.95
SENECA COMPANIES	Leachate collection	2,467.70
SIOUX CITY TARP, INC	Parts	654.06
SMITH'S SEWER SERVICE INC.	Site maintenance	548.15
SOCIAL SECURITY ADMINISTRATION	Employer's share of FICA	34,425.87

SOUTHEAST POLK COMM SCHOOL-HOST	Host fees	4,020.12
STRAUSS SECURITY SOLUTIONS	Security	298.50
SUMMIT COMPANIES	Fire extinguisher	1,896.00
SWANA	Dues/subscription/fee	223.00
THE HOME DEPOT PRO	Office supplies	49.54
TIFCO INDUSTRIES	Parts/small tools/supplies	615.92
TITAN MACHINERY	Parts	7,614.31
TOMPKINS INDUSTRIES, INC.	Parts	243.97
TRANSPORT REFRIGERATION, INC.	Preventive maintenance	4,392.60
TREASURER STATE OF IOWA	Sales tax	14,693.69
TRUENORTH COMPANIES	Dues/subscription/fee	2,500.00
UNITED SERVICES OF D.M. INC.	Refund	1,782.00
VALLEY ENVIRONMENTAL SERVICES	Contract disposal	253.60
VAN WALL EQUIPMENT	Parts/labor/preventive maint	7,574.28
VANTAGEPOINT TRANSFER AGENTS	Employer's share deferred compensation	9,298.57
VERIZON WIRELESS	Computer supplies/maintenance	405.36
WASTE CONNECTIONS, INC.	Waste collection/tire processi	269,316.02
WASTE MANAGEMENT	Curbside/drop off/waste collection	86.19
WASTE MANAGEMENT (YARD WASTE)	Yard waste collection	14.98
WASTE MANAGEMENT OF IOWA	Curbside/drop off/waste coll	364,178.51
WASTE SOLUTIONS OF IOWA	Building services	736.00
WEST BANK	Credit card payment for misc office and travel expenses	3,677.12
WEST BANK	Service fees	332.11
WRIGHT OUTDOOR SOLUTIONS	Building services	237.00
XENIA RURAL WATER DISTRICT	Utilities	65.20
ZIEGLER, INC.	Part/labor/prev maint/subscrip	417,652.60
GRAND TOTAL		4,942,897.60

The MWA Executive Director and the Finance Administrator certify that the above MWA bills paid are properly due and have been made in accordance with the operating and expenditure processes established by MWA.



Michael McCoy, Executive Director



Joel Etienne, Finance Administrator

Metro Waste Authority Board

Monthly Board Meeting

April 21, 2021

AGENDA ITEM 08

ITEM:

Approval of Extension to the Municipal Solid Waste Agreement for Bondurant, Clive, Grimes, Johnston, Norwalk, Polk City, and Windsor Heights.

SUMMARY:

This extends the municipal solid waste services provided by Ankeny Sanitation, Inc. (ASI) for one year.

DISCUSSION POINTS:

Metro Waste Authority has held this contract with ASI since 2013 for the management of municipal solid waste services in Bondurant, Clive, Grimes, Johnston, Norwalk, Polk City, and Windsor Heights. Through a competitive bidding process, ASI was selected as the qualified vendor for this service and has performed to contract specifications. This extension is the second of the three optional one-year extensions.

STAFF RECOMMENDATION:

Staff recommends approval.

ATTACHMENTS:

Notice of Exercise of Option to Extend Agreement

CONTACTS:

Cassie Riley, community relations manager, 515.323.6502

Metro Waste Authority
Notice of Extension—Agreement for the Collection of Solid Waste

THIS NOTICE OF RENEWAL is made and entered into this ____ day of _____ 2021, by and between Metro Waste Authority, an entity organized pursuant to Section 28E of the Iowa Code, (“MWA”) and Ankeny Sanitation, Inc. (“Contractor.”)

WHEREAS, by agreement dated December 10, 2012, the Contractor and MWA entered into an Agreement for the Collection of Solid Waste (the “Agreement”), as amended, wherein Contractor agreed to collect, transport and dispose at the MWA Landfill or Transfer Station all solid waste material from eligible residences of the Participating Member Communities from July 1, 2013, through June 30, 2021; and

WHEREAS, Section 2 of the Agreement provides that the term for which the Contractor shall provide the Collection Services under this Agreement shall commence on July 1, 2013 (the Commencement Date), and expire on June 30, 2021 (the “Expiration Date”). The Agreement may be extended for up to three (3) one (1) year periods at the sole discretion of MWA; and

WHEREAS, in the event MWA decides to exercise its option to extend the Agreement, it shall give written notice to the Contractor not less than ninety (90) days and not more than one hundred twenty (120) days prior to the expiration of the then current term of this Agreement; and

NOW, THEREFORE, for and in consideration of the mutual covenants given each to the other, the parties hereby acknowledge the following:

1. Pursuant to Section 2 of the Agreement, MWA provides notice of its initial election to extend the term of the Agreement for an additional one year period.
2. The renewal period shall be effective from July 1, 2021 through June 30, 2022.
3. All other terms of the Agreement and any amendments shall remain effective and enforceable as written.

METRO WASTE AUTHORITY:

By: _____
EXECUTIVE DIRECTOR

ANKENY SANITATION, INC.:

By _____

Metro Waste Authority Board
Monthly Board Meeting
April 21, 2021
Agenda Item 09

ITEM:

Approval of Windrow Turner Purchase

SUMMARY:

Backhus A60 Windrow Turner is the bid that best meets operational needs.

DISCUSSION POINTS:

The Backhus A60 Windrow Turner will be an instrumental piece of equipment to increase efficiencies and reduce operational costs related to the production of Grow Gold compost. Metro Waste Authority received three bids: Vermeer CT718 Compost Turner, \$478,080.68; Backhus A60 Windrow Turner, \$535,000; Komptech Torturn X6000, \$677,500.

HISTORY:

The production of compost requires the rows of material to be turned regularly. The current process is very manual, primarily performed using the front bucket of a bulldozer to manually rotate the material. From 2016 to 2020, sales of Grow Gold Compost have increased 75%. Today's demand is outpacing current production practices.

STAFF RECOMMENDATION:

Approval of the purchase of Backhus A60 Windrow Turner for a total of \$535,000.

BUDGET REQUIREMENTS:

The windrow turner is a budgeted item, and the Backhus bid at \$535,000 came in under the budgeted amount by \$65,000.

ATTACHMENTS:

Attachment A: Vermeer Quote

Attachment B: Backhus Quote

Attachment C: Komptech Torturn Quote

CONTACT:

Geoff Dickson, disposal operations manager, 515.323.4447

CT718 COMPOST TURNER

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EASE OF OPERATION. Programmable, preset controls allow users to adjust height in a single touch. Convenient control display shows the sides and rear of the machine through the mounted rearview cameras.



POWER WHERE IT COUNTS.

The mechanical belt-drive system maximizes horsepower efficiency to the drum compared to hydraulic-driven systems. The Flexaire fan automatically adjusts based on temperature, resulting in more available horsepower to the drum.



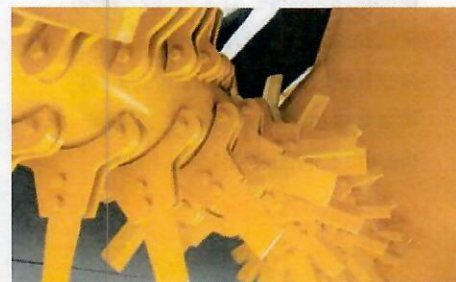
DURABLE WEAR ZONES. Machine tunnel is built with .25" (6.4 mm) steel plates to help protect and extend the life of the high wear zone.



CONQUERS YOUR TERRAIN. Choose between four different drive systems, wheeled or tracked, to help maximize performance based on your specific jobsite demands.



CLEAN JOBSITE. Operator controlled rear curtain helps maintain a clean jobsite while windrow shift is minimized by the curtain keeping material in place.



OPTIMIZED DRUM DESIGN. Long length of flails minimizes material drag to help protect the drum skin. Aggressive design provides aeration and mixing while maintaining efficient porosity.

CT718 COMPOST TURNER

DRIVE SYSTEM

Make and model: Cat C15 Tier 4 Final

Max gross horsepower: 540 hp (403 kW)

Fuel tank capacity: 200 gal (757. L)

Belt drive: Poly chain belt

Clutch: PT Tech clutch

FRAME

Mainframe: Constructed of 8" x 6" x .4" (20.3 cm x 15.2 cm x 1 cm) and 6" x 6" x .25" (15.2 cm x 15.2 cm x .6 cm) steel tube with continuous welding

OPERATING HEIGHT ADJUSTMENT

Operating height adjustment: The machine's operating height is adjusted on each front wheel with independently operated hydraulic cylinders and on the rear wheels with a pair of jointly operated hydraulic cylinders from 0" to 18" (0 cm to 45.7 cm) above ground. User can define automatic height setting which allows for a single touch to lower and raise to the same position.

GROUND DRIVE OPTION ONE

Ground drive type: Independent four-wheel drive system

Ground pressure: 25.3 psi (.17 MPa)

Max transport length: 25' (7.6 m)

Max transport height: 12.5' (3.8 m)

Max transport width: 11.9' (3.6 m)

Weight: 46,500 lb (21,092.1 kg)

GROUND DRIVE OPTION TWO

Ground drive type: Independent two-wheel drive system with two rear wheel casters

Ground pressure: 31.7 psi (.22 MPa)

Max transport length: 32' (9.8 m)

Max transport height: 12.5' (3.8 m)

Max transport width: 11.2' (3.4 m)

Weight: 53,000 lb (24,040.4 kg)

GROUND DRIVE OPTION THREE

Ground drive type: Independent two-wheel drive short-track system with 2 rear-wheel casters

Ground pressure: 24.1 psi (.17 MPa)

Max transport length: 32' (9.8 m)

Max transport height: 12.5' (3.8 m)

Max transport width: 11.2' (3.4 m)

Weight: 56,000 lb (25,401.2 kg)

GROUND DRIVE OPTION FOUR

Ground drive type: Full track

Ground pressure: 15-18 psi (.10-.12 MPa)

Max transport length: 25.8' (7.9 m)

Max transport height: 12.5' (3.8 m)

Max transport width: 11.9' (3.6 m)

Weight: 57,000 lb (25,854.8 kg)

PROCESSING TUNNEL

Windrow height: 7' (2.1 m)

Windrow width: 18' (5.5 m)

Tunnel lining: Fully lined .25" (.6 cm) steel plate

Rubber skirting curtains (thickness): .4" (10.2 mm)

DRUM

Drum diameter (including flails): 44" (111.8 cm)

Drum length: 17.9' (5.5 m)

Number of flails: 102

Flail dimensions: .75" x 4" x 11.6" (1.9 cm x 10.2 cm x 29.5 cm)

CAB

Activated carbon filtration: Aids in removing odors and fumes, as well as dust and dirt particles.

Display type/Gauges: 7" (17.8 cm) color display showing engine and machine information along with fault and diagnostic codes

OPTIONS

Vermeer Confidence Plus® asset protection program

Hard-surfaced flails

Spray bar attachment

Vermeer Freeman Manufacturing, Inc. reserves the right to make changes in engineering, design and specifications; add improvements; or discontinue manufacturing at any time without notice or obligation. Equipment shown is for illustrative purposes only and may display optional accessories or components specific to their global region. Please contact your local Vermeer dealer for more information on machine specifications. Vermeer, the Vermeer logo, Equipped to Do More and Vermeer Confidence Plus are trademarks of Vermeer Manufacturing Company in the U.S. and/or other countries. Cat is a trademark of Caterpillar Inc. © 2017 Vermeer Freeman Manufacturing, Inc. All Rights Reserved. Printed in the USA. Please recycle.

Vermeer



**EQUIPPED TO
DO MORE.**



661 Hwy T 14
Pella, IA 50219
Ph. 641-628-2000 F. 641-628-4283
www.vermeeriowa.com

Quotation

Customer Name: Metro Waste Authority
Address: 300 E Locust St Ste 300
Des Moines, IA 50309

Ship to:

Date: 11/16/2020
Purchase Order #:

Contact: Brian Krueger
Phone: 515-314-1535
Email: bkr@mwatoday.com

Sales Rep.: Cody Mecham
Date needed: TBD

Description:

Specifications: New Vermeer CT718 Compost Turner complete w/:

- *** 540 HP Cat C15 Diesel Engine
- *** PT Tech Clutch
- *** 200 Gallon Fuel Tank
- *** Cab w/Filtered Heat & AC
- *** Deluxe Seat, Operator Presence System, Joysticks
- *** Lights
- *** Front & Rear Containment Curtains
- *** Side & Rearview Camera System
- *** 7" Color Instrument Display
- *** AM/FM/WB/BT Radio
- *** Twisted Flail Helical Drum (420 RPM)
- *** Standard Flails
- *** 4 Wheel Drive Rubber Tire

TOTAL

478,080.68

Options:

- *** Full Track in lieu of 4 Wheel Drive Rubber Tire \$27,845.51
- *** Confidence Plus 3 year w/ Maintenance \$52,545.00
- *** Confidence Plus 2 year w/ Maintenance \$32,841.00
- *** Confidence Plus 3 year no Maintenance \$38,818.00
- *** Confidence Plus 2 year no Maintenance \$24,303.00

Model:

Serial Number:

Trade in Detail:

Hours:

Trade Amount Allowed

Sub Total:

\$ 478,080.68

Freight:

\$ -

Prep:

\$ -

Less Trade-in:

\$ -

Sales Tax:

\$ -

Total Net:

\$ 478,080.68



EQUIPPED TO
DO MORE.

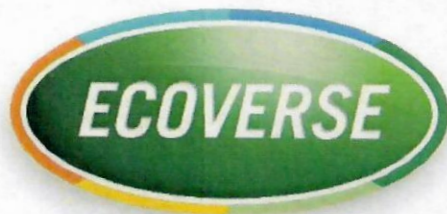
Customer: Metro Waste Authority

By:

Cody Mecham

By:

Quotation valid for 30 days. To order, please sign, date and return to Vermeer Iowa or your Sales Representative.



WITH THE EARTH IN MIND

PROPOSAL #: BK-20429B
PREPARED FOR: Murphy Tractor & Equipment Co.

BACKHUS A60 WINDROW TURNER



Doppstadt

BACKERS

BACKHUS

TIGER DEPACK

ECOSTACK

ECO SIFT

EQUIPMENT SOLUTIONS PROPOSAL

PROPOSAL #: BK-20429B
DATE: October 23, 2020
TO: Murphy Tractor & Equipment Co.
 5375 N Deere Road
 Park City KS 67219

BACKHUS A60 WINDROW TURNER

Windrow

- Windrow Width up to 20'
- Windrow Height up to 8'-11"
- Windrow Cross-section up to: 10.7 yd² per meter, bulk angle approximately 45°
- Track-Clearing Share: 1.1 % of heap cross-section
- Grain Size up to 12"
- Speed: 0 – 130 ft/min, step-lessly controllable (backwards and forwards)
- Turning Capacity: up to 6,000 yd³/h



Engine

- Engine: Cummins
- Model: X12
- Certified EPA Tier V Final
- Maximum Capacity: 400 HP
- Cooling system: Open Core Radiator, with reversing fan

Electrical System

- Batteries: (2) 12 Volt batteries each 180 Ah
- Generator: (3) Phase, 24 Volt, 130 Amp

Fuel Capacity

- Fuel Tank: 198 Gallon
- Security: Locking Fuel Cap

Hydraulics

- Filtration Type: Reflux Suction Filtration, High Pressure Filtration
- Filtration Monitoring: Electronic Level and Filter Status
- Filter Locations: Together for ease of replacement
- Device Monitoring: All hydraulic devices have LED position indicators in cabin
- Security: Locking hydraulic filler cap
- Safety: Low Fluid Shutdown

Rotor

- Shredder drum with double flails
- Rotor Power: Fully Hydraulic
- Rotor Diameter: 55"
- Rotor Speed: 0-200 RPM
- Rotor Speed Adjustment: Infinitely Adjustable
- Rotor Direction: Fully reversible, under load



Undercarriage

- Type: Track drive
- Pad Dimensions: Grouser Track Pads
- Drive Power: Independent Hydraulic Drives in closed circuit, Infinitely adjustable speed control
- Fully interchangeable with BACKHUS wheel undercarriage
- Track clearer operation: Fully independent of turner frame
- Track Clearer Controls: Independently, hydraulically controlled to Raise and Lower, Swing inside and outside as required by the operator



Tailgate

- Type: Steel Construction
- Control: Hydraulic, raised and lowered by operator



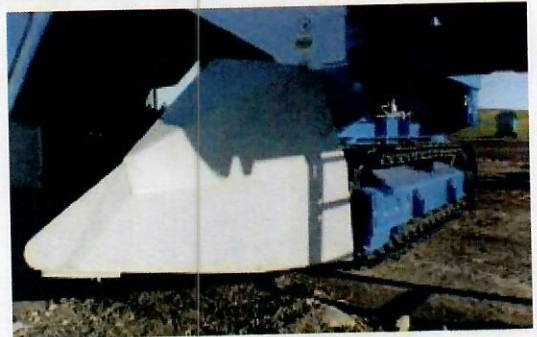
Frame

- Type: Box Construction Type, Portal Frame
- Surface Preparation: Steel Surfaces Blasted to Sa 2 1/2, Coated in accordance to
- DIN 12944-5 Category 2.
- Lacquer Coating: Base coat to be a two-component Epoxidharz-zinc-Phosphate primer, the intermediate coat to be a two-component acrylic Polyurethane protective coat, and the finishing lacquer to be a two-component acrylic Polyurethane protective coat.
- Coating Thickness: Extra Thick 240 Microns to prevent damage due to corrosive environment.



Cabin

- Cabin Type: Panoramic, Mounted on Centerline of machine
- Cabin Filtration: Two pocket-type filters (525 x 280 x 100) guarantee a separation efficiency of 96 %.
- Acoustics: According to DIN ISO 6393 and 6394
- Air Conditioning: Automatic / Electronic Temperature Control, Separate fan controls. A/C unit specially designed for use in a pressurized environment.
- Heat: Warm Air Heating with multi level fan
- Radio: AM/FM Stereo with (2) Speakers, CD player, and Bluetooth phone connection
- Machine Controls: Ergonomically Designed, Smooth, one lever joystick steering
- Lighting: (4) Halogen Headlamps on cab roof, (2) Halogen Lamps on front of turner, (2) Halogen Lamps on back of turner
- Air ride seat for operator comfort
- Panel: 12" Touchscreen Operators Panel
- Acoustic Warnings: Machine "Start Up", warning, "Back Up" warning
- First Aid Kit: According to DIM 131 57 C
- Tool Box: Containing basic tools required for maintenance of turner
- Jump Seat: To facilitate safe training



General Dimensions

- Dimensions in Working Position:
 - Depth: 19'-8"
 - Width: 22'
 - Height: 16'-6"

- Dimensions in Transporting Position:
 - Depth: 9'-8"
 - Width: 29'-6"
 - Height: 11'-2"
- Weight: 45,000 lbs (approximately)

Power Transmission

The hydraulic system is constructed in a series of separate circuits which are constructed from high-grade (machinery quality) components. Hydraulic cylinder functions are electrically triggered and the switched condition of each magnetic valve is displayed in the cab by LEDs. The hydraulic system features reflux suction filtration with electronic level and filtration status monitoring. The fully hydraulic rotor-drive system in a fully closed system and provides power transmission with a high efficiency of approximately 85%. Through high-pressure axial-piston variable displacement pumps and high-pressure radial piston engines a full load torque is generated.

Rotor

The rotor can be hydraulically lifted at infinitely variable increments up to 14". This allows driving out of the windrow easily. This also makes it possible to turn material on uneven surfaces, and to transport the machine on a center-axle trailer. Since only the rotor is lifted no material gets into the tracks. A rotor height level indicator indicates the rotor position to the driver. The large 47" rotor diameter offers a high degree of protection from entanglement. If desired the rotation direction of the rotor can be reversed. Even at full load torque the number of rotor revolutions can be easily adjusted from 0 – 200 RPM to match changes in material density by simply turning the control switch. Thus, wear is remarkably reduced.

The rotor is positioned near the rear of the machine which allows the composting material to be freely thrown out of the machine and forms new fluffy, oxygen-enriched windrows.

Engine Cooling System

The cooling system for the engine and hydraulics is designed for operation in extreme conditions (Open Core radiator). The cooling-air induction takes in very little dirt and dust. The radiator is simply cleaned by means of an automatic reversing fan.

Hydraulic Cooling System

The hydraulic system is equipped with a totally separate cooler, which is located outside the engine compartment on the left side of the turner. The hydraulic cooler is simply cleaned by means of an automatic reversing fan.

Tools (Type and Kind)

The bolted tools are constructed from wear resistant, high-alloy, heat-treated boron steel. Installed around the rotor are the throwing tools and in the middle of the drum are located the throwing rakes. Due to their arrangement material contact with the drum is minimized. As a result, wear and energy consumption are greatly reduced. At the same time the best possible material mixture and optimum displacement of the windrows is attained. For turning soils and other abrasive materials the tools are available with wearing protection.

The bolted tools can be exchanged quickly and easily with only an impact wrench, and their patented fixture assures no "throwing" as is commonly experienced in flail type turners.

Frame / Lacquer Coating

The turner consists of a portal frame in box design. The construction is based on a frame calculation according to the finite element method (FEM) with which the stress limit is simulated. In conjunction with high-grade blister steel a long operating life is guaranteed.

All frame and bonnet parts are sandblasted according to SA 2.5. Thus they are perfectly pre-treated for lacquering. The base coat is a two-component Epoxidharz-zinc-phosphate primer, the intermediate coat is a two-component acrylic Polyurethane protective coat, and the finishing lacquer is a two-component acrylic Polyurethane protective coat. The thickness of the different coats is controlled through state-of-the-art technology. The area of the undercarriage and various mounting parts are lacquered in mint green (RAL

6029), the frame and the bonnets are lacquered in golden yellow (RAL 1004). This color coating guarantees reliable corrosion protection even in ammonia-rich environments.

Systems Operational Monitoring Unit

A Systems Operational Monitoring Unit alarms the driver both visually and acoustically when a problem occurs which could influence production or cause damage to the machine.

Crawler Drive and Track Clearers

Because of the small area taken up by the tracks the windrow is picked up the complete width of the rotor. Thus, the forces applied to the turner while feeding through the material is reduced to a minimum. Specially constructed track clearers pick up the material in front of the crawler tracks and drop it onto the windrow in the area of the tunnel. This allows the windrows to be set up "toe-to-toe" without the need for space between the windrows. The track clearers adjust hydraulically for pad unevenness and thus create a clear base which allows for optimum traction. For transportation the plow shifters swing inside the tunnel hydraulically.

Panoramic Cabin

The centric positioned cab provides a perfect panoramic 360° view which assures the operator is always able to see the material, and be aware of outside influences. The conveniently located cabin door, offers comfort of entry, locking security, and is easily reached by wide slip resistant steps. All controls inside the cabin are ergonomically arranged and clearly labeled. The air ride large operator's seat adjusts to provide optimum operator comfort. For transport the cab is easily removed, lowered and rotated 90° where it locks into transport position without the need for any special tools.

Stereo Radio - The cab is equipped with an AM/FM stereo, CD player, (2) stereo loudspeakers and Bluetooth phone connection.

Air Ride Operators Seat - The Ergonomic Operators Seat and Control Panels are mounted on an air ride suspension for operator comfort.

Cabin Ventilation / Filtration - The standard machine is equipped with a cabin ventilation system (G4 [EU 4] according to EN 779 standard [DIN 24185]). Two pocket-type filters (525 x 280 x 100) guarantee a separation efficiency of 96 %.

Operator Display – 12" Touchscreen Display provides real time monitoring of all equipment functions, Interactive Troubleshooting, and all turner Manuals and Drawings are preloaded onto the display.

Climate Control - The cab comes equipped with an air conditioner which allows the temperature to be preset. This A/C is especially designed for high pressure cabins to condition the circulating air. The cab is also equipped with an electrical heater which provides a quick warm-up of the cabin air.

Cabin Equipment - When the key is turned on an acoustical signal is emitted to warn people standing outside that the machine will be starting. Besides this operation warning system the machine is equipped with an acoustic warning system for reverse drive. There is a first-aid kit according to DIN 131 57 C inside the cabin.

Rotating Safety Beacon - A rotating amber beacon is located on top of the cabin to alert persons standing nearby.

Flood Lamps - Halogen lamps installed in front and at the rear of the machine ensure good working conditions even in case of poor visibility. The flood lamps are mounted in shock proof mountings. There are (4) Halogen headlights mounted in the cabin roof, (2) Halogen headlights in front, (2) Halogen headlights in back.



Jump Seat - This cabin is equipped with a jump seat which provides extra comfort when training, or if additional persons are needed in the cabin.

First Aid Kit - There is a first-aid kit according to DIN 131 57 C located under the jump seat.

BTC (Backhus Track Control)

This turner is equipped with an electronic drive control. In combination with an electric joystick it controls the rate of feed, depending on the load of rotor and engine. During the working process the joystick is used for steering correction only. The automatic drive control ensures good controllability and maximum working capacity.

Included Options

Mirrors - Heated mirrors with remote control

Armored Drum Tools - These tools are coated with an abrasion resistant material which will greatly improve the tool wear life.

Rubber track pads

1,000 Hour Machine Filter Kit

Spare set of Armored Drum Tools

Final Price for BACKHUS A60 Windrow Turner	\$535,000.00
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Available Options

• Irrigation connection:	\$ 8,897.00
• Diesel Powered Hose Reel:	\$97,327.00
• Telematics:	\$ 2,600.00
• Wiper left/Right	\$2,701.00
• Wiper Rear	\$1,038.00
• Diesel/Hydraulic Heater	\$9,782.00
• Dust Curtain	\$17,886.00

Payment Terms: Payment in Full or Approved Financing Prior to Shipment of Machinery.

Delivery Terms: F.O.B. Des Moines, Iowa

Taxes: All local, state and federal taxes are the responsibility of the customer.

Terms / Warranty: 1-year or 1,000 hour machine warranty.

See included Ecoverse General Terms & Conditions of Sale.

I, the undersigned, being authorized to sign on behalf of my company, agree to and authorize the purchase of the above detailed equipment under the noted and included terms & conditions.

On behalf of Murphy Tractor & Equipment Co.

Date

Presented and accepted by:

On behalf of Ecoverse

Date

Notes:



147 N. Jonathan Blvd.
Chaska, MN 55318

**KOMPTECH TOPTURN X6000 - New
PROPOSAL
April 8, 2021**

**To: Metro Waste Authority
300 E Locus St. #100
Des Moines, IA 50309**

Komptech Topturn X6000 - New

- Engine: CAT C9.3B Tier 4
- Track Model
- Windrow Width: 20'4"
- Windrow Height: 8'6"
- Drum Diameter: 4'7"
- Central Lubrication
- Protective Ventilation
- Preparation for Irrigation Device
- 360° Camera
- Extended Plows
- Max Drum rpms: 0-195
- Max throughput: 6,540 cubic yards/hour (depending on material)
- Warranty – 2 Years or 2,000 Hours
- Delivery & Training – Included

TOTAL PRICE-----\$677,500.00

OPTION HOSE REEL PRICE-----\$50,000.00

The above equipment is upon availability.

Proposal By: Brad Kiecker, Sales Manager
612-889-7883

Metro Waste Authority Board**Monthly Board Meeting****April 21, 2021****AGENDA ITEM 10**

ITEM:

Approval to purchase a premanufactured enclosure to protect the compressors that drive the optical sorters in the Material Recovery Facility.

SUMMARY:

CP and ISG are recommending an enclosure to house the compressors to extend the life of the units. Fibers and dust in the air from recycling processing can negatively impact the life of compressors. In addition, compressors generate significant heat. The enclosure and associated venting would allow the heat to be re-directed during cold months to help warm the building or be removed from the building during warmer months. The enclosure will be sized to accommodate up to three compressors to allow for potential future growth.

DISCUSSION POINTS:

The compressors are integral to the operation of the optical sorters used in processing recyclables. The ability to limit down-time of the compressors, and prolong the lifespan, allows for maximized operational efficiencies.

STAFF RECOMMENDATION:

Staff recommends approval.

BUDGET REQUIREMENTS:

The enclosure and air ventilation system cost \$116,000. The MRF bidding process was below budget, so some of the savings would be re-directed toward this opportunity to extend the longevity and limit down time for the system.

CONTACTS:

Michael McCoy, executive director, 515.323.6535

Metro Waste Authority Board
Monthly Board Meeting
April 21, 2021
AGENDA ITEM 11

ITEM:

Presentation of Transfer Station Feasibility Study: phase one

SUMMARY:

J.R. Miller and Associates (JRMA) was hired to study the need for a new recycling only transfer station to haul material to the new Metro Waste Authority Material Recovery Facility being constructed in Grimes. The study included a transportation focused financial model and potential site and facility layouts if the need for a new facility was established. Through their analysis, it became apparent that a recycling only transfer station is not necessary at this time.

Potential future areas of study would consider the need for a transfer station with both solid waste and recyclable handling due to the age and size of the current Metro Central Transfer Station.

DISCUSSION POINTS:

A cover letter and executive summary have been provided by JRMA and a presentation of the findings will be provided at the Board Meeting on April 21, 2021.

STAFF RECOMMENDATION:

J.R. Miller & Associates has determined that a recycling only transfer station is not necessary at this time. Staff concurs.

ATTACHMENTS:

Cover letter and executive summary.

CONTACTS:

Michael McCoy, executive director, 515.323.6535

April 15, 2021

Michael McCoy
Executive Director
Metro Waste Authority
Des Moines, IA 50369-1864

RE: **Recycling Transfer Station Study – Executive Summary**

Dear Michael:

JRMA appreciates the opportunity to have provided consulting services to review and analyze the potential need for a new transfer station to deliver recyclables to the Metro Waste Authority (MWA) material recovery facility (MRF) being constructed in Grimes.

The executive summary, on the following pages, includes key information on the transportation costing model developed to analyze the need for a new transfer station. Additional detail and background information will be provided at the MWA Board Meeting on April 21, 2021. As was discussed with MWA staff, the finance committee and yourself, the new MWA MRF in Grimes will result in a modest hauling costs savings for MWA's overall service area. This costs savings is for hauling costs only and does not include the additional avoided costs of siting and constructing a new transfer station. At this time, we do not recommend a new recycling only transfer station be built to receive and transport materials to the new MRF.

Sincerely,

J.R. MILLER & ASSOCIATES, INC.
Architects and Engineers

A handwritten signature in blue ink, appearing to read "Brett Wolfe".

Brett Wolfe, PE
Project Manager, Senior Facility Advisor

Background

J.R. Miller and Associates (JRMA) was hired by Metro Waste Authority (WMA) to investigate the need for a new transfer station to transport recyclables from member jurisdictions (and Des Moines) to the new material recovery facility (MRF) in Grimes, IA. The primary component of the study was a transportation model to determine the hauling costs for each of the member communities. JRMA's original work scope also included preliminary facility sizing and the development of a conceptual site and facility layout for the potential new transfer station.

The scope of work included regular progress checks with MWA staff. Upon completion of the transportation model, JRMA presented our original findings to answer questions, receive feedback and discuss next steps on the project. The document represents a high-level summary of those findings and will be discussed in further detail at the MWA board meeting on April 21, 2021.

Transportation Model Data Inputs

The transportation model was developed by Chris Bell, who has developed numerous system costing, rate analysis, cost of service and related financial models for both public and private solid waste clients. The initial process in the study was for the JRMA Team to evaluate a number of key pieces of data obtained from MWA, the City of Des Moines and historic recycling data. The following key data was collected, reviewed for consistency with industry norms and then input into the transportation model to determine approximate hauling costs across the 22 member agencies and the City of Des Moines.

Model Data and Input Sources:

<u>Model Data</u>	<u>MWA</u>	<u>Des Moines</u>	<u>Data Source</u>
Annual Recycle Tons	18,701	9,355	Mid America – June 2019 to May 2020
Annual Loads	4,750	1,724	Mid America – June 2019 to May 2020
Processing Cost per Ton	\$38.22	\$39.26	Mid America – June 2019 to May 2020
Collection Cost per Hour	\$95	\$110.63	WM / City of Des Moines
Total Households (HH)	99,380	64,500	MWA / City of Des Moines
Annual Pounds per HH	376	290	(Recycle Tons x 2000) / Households
Average Route Payload	3.94	5.43	Recycle Tons / Annual Loads

Model Methodology and Annual Transportation Costs

As stated previously, MWA's 22 participating communities and the City of Des Moines were analyzed as part of the transportation model. The current metro area recycling system involves dedicate recycling collection trucks delivering commingled materials to the Mid America MRF located at 2742 East Market St. in Des Moines. The current Mid America facility was used as the "base case" of the model to develop hauling costs comparisons for three separate scenarios/options.

A geographic central point for each city was established utilizing Google maps to measure the approximate drive time for three distinct scenarios. The three analyzed scenarios included hauling to the existing Mid America facility, the new MRF in Grimes, and a potential new transfer station at the Metro Park East landfill.

The roundtrip drive time for each city was multiplied by the operational cost per truck hour to compute the roundtrip drive costs. Dividing the roundtrip drive cost by the average recycle payload generated the recycling cost per ton. This recycling cost per ton was used to calculate the annual drive time costs for each jurisdiction (cost per ton multiplied by the annual material tons collected from each city).

The following table summarizes the calculation methodology for the City of West Des Moines. Des Moines was analyzed using two centroids to account for part of the city being closer to the new MRF in Grimes and the other part being closer to the existing Mid America facility. The model contains similar calculations for each of the 22 member communities.

<u>Example of Calculations for City of West Des Moines</u>			
<u>Facility</u>	<u>Mid America</u>	<u>MWA MRF</u>	<u>Metro Park East Landfill</u>
Roundtrip Time in Minutes and Hours from the West Des Moines Library	42 minutes or 0.70 hrs.	24 minutes or 0.40 hrs.	72 minutes or 1.20 hrs.
MWA Operational Cost per Hour	\$95.00	\$95.00	\$95.00
Drive Time Cost (Cost x Hours)	\$66.50	\$38.00	\$114.00
Average Tons per Payload	3.94	3.94	3.94
Drive Cost per Ton (Drive Cost / Tons)	\$16.89	\$9.65	\$28.96
Annual Material Tons	3,284.7	3,284.7	3,284.7
Annual Cost	\$55,482	\$31,704	\$95,112

To determine the total overall system cost impact, the model uses \$95 per operation hour, (derived from Waste Management's approximate range) and the average payload of 3.94 tons for all MWA member communities. The model uses \$110.63 per operational hour and an average payload of 5.43 tons for Des Moines. This results in drive costs per minute per ton of \$0.402 and \$0.34 for MWA and Des Moines, respectively. The table on the next page summarizes the net annual savings/cost per jurisdiction to drive to the new MWA MRF vs. driving to the Mid America MRF.

<u>Jurisdiction</u>	<u>Annual Tons</u>	<u>(Savings)</u>	<u>Jurisdiction</u>	<u>Annual Tons</u>	<u>Additional Cost</u>
Urbandale	2,789	\$(33,644)	Des Moines	9,817	\$53,372
West Des Moines	3,285	\$(23,778)	Pleasant Hill	754	\$9,092
Clive	1,285	\$(11,371)	Ankeny	4,019	\$6,465
Grimes	735	\$(11,825)	Altoona	1,091	\$2,633
Johnston	1,527	\$(12,285)	Carlisle	247	\$1,984
Polk City	355	\$(4,000)	Bondurant	515	\$828
Norwalk	771	\$(3,102)	Hartford	67	\$593
Windsor Heights	544	\$(875)	Polk County	355	\$286
Sheldahl	9	\$(60)	Mitchellville	96	\$155
Alleman	30	\$(24)	Others ¹	127	\$714
Totals:	11,330	\$(100,964)	Totals:	17,088	\$76,122
¹ Others include Elkhart, Runnells, Mingo, and Prairie City					

In summary, the net transportation costs computed by the model was an overall system savings of \$24,842 (the sum of \$100,964 in savings and \$76,122 of additional costs) to drive to the new MWA MRF in Grimes instead of the Mid America MRF. The costs to drive to the Metro Park East landfill were considerably higher than driving to the Grimes MRF and also higher than driving to the Mid America MRF.

Conclusions and Recommendation(s)

Through the process of developing, quantifying and then analyzing the transportation costs for recyclables in the Des Moines metropolitan area, the following conclusions and recommendations are submitted for MWA's consideration:

- A recycling only transfer station does not appear to be a good investment for MWA due to only a few communities benefiting from an eastern metro location and because the transportation costs to the new MRF in Grimes will actually result in a modest system-wide costs savings of approximately \$25,000 annually.
- Only five member communities (Altoona, Runnells, Mingo, Mitchellville, and Prairie City) would recognize a transportation costs savings from the construction of a recycling only transfer station at the Metro Park East Landfill. The approximate savings for these five communities is less than \$4000, which is significantly less than the cost of constructing a new transfer facility at the landfill.
- The operational hauling costs are primarily impacted by the time expended per route and the payload of the collection truck. Potential optimization of these two factors, could result in further savings beyond what was calculated in the model.

- Most of the member communities with higher annual weight per household are located in the north and west parts of the metro area and are thus closer to the new MRF in Grimes.
- The analysis of the study did not consider a potential dual use transfer station for both municipal solid waste (MSW) and single stream recycling, which could be a consideration for MWA in the future as existing infrastructure ages and/or population demographics change from their current rates.