

**MEMORANDUM OF UNDERSTANDING
BETWEEN CITY OF BLOOMINGTON UTILITIES**

And

**MONROE COUNTY SOLID WASTE MANAGEMENT DISTRICT TO SPLIT COSTS
OF RESOURCE RECOVERY PROGRAM FEASIBILITY STUDY**

THIS MEMORANDUM OF UNDERSTANDING is entered into by and between the City of Bloomington by its Utilities Department (“CBU”) acting through its Utilities Service Board (“USB”), and the County of Monroe, Indiana by its Monroe County Solid Waste Management District (“MCSWMD”), acting through its Executive Commission (“Commission”).

WHEREAS, CBU and MCSWMD wish to conduct a feasibility study on resource recovery including anaerobic digestion, the feedstock market, residual biosolid beneficial reuse, residual liquid sidestream effects, biogas utilization, funding mechanisms, resource recovery scope refinement, preliminary design and cost estimating, financial modeling, triple bottom line analysis and deliverables for the purpose of determining whether such solid waste treatment methods would best serve the citizens of the City of Bloomington and Monroe County; and

WHEREAS, CBU sought proposals for a feasibility study and intends to employ the professional financing services of Energy Power Partners (“EPP”), a private market fund management company specializing in long-term equity investments in the renewable energy market with a focus on decentralized generation and carbon neutral fuels; and

WHEREAS, CBU and MCSWMD wish to share the costs of the feasibility study in a fifty/fifty equal sharing of all costs associated with the employment of EPP and wish to formalize the sharing of said costs by a Memorandum of Understanding.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

1. CBU shall contract with and employ the professional services of EPP to conduct a feasibility study to determine the feasibility of switching CBU’s solid waste treatment process from aerobic to anaerobic digestion and to determine the costs and benefits of such a switch including the feedstock market, residual biosolid beneficial reuse, residual liquid sidestream effects, biogas utilization, funding mechanisms, resource recovery scope refinement, preliminary design and cost estimating, financial modeling, triple bottom line analysis and deliverables for the purpose of determining whether such solid waste treatment methods would best serve the citizens of the City of Bloomington and Monroe County.
2. The not to exceed amount of this feasibility study shall be \$129,220.00 as evidenced by the Feasibility Proposal submitted to CBU by EPP which was dated November 3, 2021, is attached hereto, marked as Exhibit “A” and by this reference is incorporated herein.
3. CBU and MCSWMD shall each be responsible for paying one half of the cost of the not to exceed amount of \$129,220.00. Any additional costs that may be incurred by CBU through

any change orders approved by CBU and the USB shall be borne solely by CBU unless any change order and the additional costs associated therewith have been approved by MCSWMD and the Commission.

4. CBU will pay all invoiced amounts to EPP, and MCSWMD shall, upon written notice of invoice amounts, promptly reimburse CBU for one half of the amount invoiced amount of the cost of the work performed by EPP as specified in the scope of work in Exhibit "A".

IN WITNESS WHEREOF, the parties hereto have executed this Memorandum of Understanding which shall become effective as of the date last entered below.

MONROE COUNTY:

CITY OF BLOOMINGTON:

Cheryl Munson, President DATED
Executive Commission of the Monroe
County Solid Waste Management District

Jeff Ehman, President DATED
Utilities Service Board

Tom McGlasson, Director DATED
Monroe County Solid Waste Management
District

Vic Kelson, Director DATED
City of Bloomington Utilities

John Hamilton, Mayor DATED
City of Bloomington

City of Bloomington Utilities Resource Recovery Program Feasibility Proposal

November 3rd, 2021

CONFIDENTIAL PROPOSAL



Prepared
by:

Energy
Power Partners

Renewable Investments With Sustainable Results

In partnership
with:

kokosing 
INDUSTRIAL

 **DONOHUE**

 **MATERIAL
MATTERS, Inc.**

1. Executive Summary

Energy Power Partners (EPP) has been requested by the City of Bloomington Utilities (CBU) to prepare the following feasibility study proposal to assist CBU in assessing the technical, economic, and environmental merits of establishing a resource recovery program to include anaerobic digestion, biosolids reuse and biogas utilization facilities. EPP has established a team of well-qualified firms with local experience to assist in completing the scope.

Energy Power Partners: Industry leading investor in renewable energy projects that owns and operates a portfolio of 48 projects, with 30 of those projects involving biogas and 18 being delivered via public private partnership by EPP staff. EPP will be responsible for managing the overall project and leading the Biogas Utilization, Funding Mechanisms, Financial Modeling and Triple Bottom Line portions of the scope.

Kokosing Industrial: As one of the largest wastewater contractors in the country with deep experience executing projects within Indiana, Kokosing Industrial will assist EPP in managing the project and will be responsible for performing constructability reviews as well as providing cost estimates for various improvements associated with the resource recovery program. Kokosing is known to Bloomington Utilities, having delivered upgrades to the Dillman Road WWTP.

Donahue: A leading wastewater engineering design firm in the Midwest, Donahue has an intimate understanding of CBU's existing wastewater treatment plants and operations. Donahue will be responsible for leading the CBU Anaerobic Digestion, Residual Liquid Sidestream Effects, and Preliminary design scope items.

Material Matters: A consulting and advisory firm with substantial experience throughout the Midwest, including Indiana, in evaluating biosolids beneficial use markets as well as feedstock availability. Material Matters has recently completed a similar study for Indianapolis for beneficial use markets and is well positioned to do the same for Bloomington Utilities. Material Matters will be responsible for leading the Feedstock Market and Residual Biosolids Beneficial Reuse tasks.

2. Proposed Scope

I. Previous Study Review

The EPP team will review existing studies created within the last 10 years related to the topic of resource recovery and anaerobic digester with the purpose of building upon the investment Bloomington has made in those ideas.

- Peer review of previous studies related to Resource Recovery including
 - i. 2019 City Utilities Anaerobic Digestion Task Force Report
 - ii. 2016 ESG Basis of Design

V. Residual Liquid Sidestream Effects

The EPP team will study the liquid sidestream to assess the ability of Blucher Poole to accept additional raw materials.

- High level review of Blucher Pool liquid process and capacity to accept additional nutrients from liquid sidestream associated with anaerobic digester digestate dewatering (Dillman Road biosolids + co-digestion material)
- Identification of sidestream treatment technologies or potential liquids process upgrades should there be limitations with existing plant configuration

VI. Biogas Utilization

In collaboration with Bloomington Utilities, the EPP team will analyze the various biogas utilization options for the resource recovery facility. This effort will identify technology requirements, logistical requirements (interconnection, fuel transport, fleet size etc.), potential cost savings and revenue streams (including environmental attributes). Options for analysis include:

- Boiler fuel
- Combined heat and power (CHP)
- Renewable natural gas (RNG) – pipeline injection
- Renewable natural gas (RNG) – CNG production and fleet fueling

VII. Funding Mechanisms

The EPP team will identify various potential funding mechanisms, facilitated by City of Bloomington staff for public financing options. Analysis will include amount of funding available, cost of capital, qualification requirements across various options:

- i. Public private partnership (P3) with various revenue sharing and payment arrangements
- ii. Traditional public funding for capital costs and maintenance
- iii. Regionalized government stakeholders group (i.e. with County Solid Waste)

VIII. Resource Recovery Scope Refinement

The EPP team will conduct one (1) collaborative workshop with Bloomington Utilities to review findings of Tasks I-VII to establish the following:

- Design basis for Bloomington Utilities sludge loading to anaerobic digesters
- Design basis for any necessary improvements at Blucher Poole and/or Dillman Road required to facilitate sludge delivery and residuals management
- Low – Base – High case for co-digestion feedstock
- Design basis for anaerobic digesters including Bloomington Utilities sludge and expected volumes of feedstock for co-digestion
- Design basis for co-digestion feedstock receiving facilities and equipment needed
- Selection of two (2) alternatives for biogas utilization; design basis for equipment based on expected biogas production associated with Bloomington Utilities sludge and co-digestion material

3. Estimated Schedule

The overall schedule is driven by timing for the Feedstock Market study. Experience has shown that making inquiries to potential feedstock source has a weaker outcome when performed between Thanksgiving and New Year’s Day. Consequently, we are showing the work beginning in January 2022 with the subsequent engineering analysis following.

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Task I: Previous Study Review								
Task II: CBU Anaerobic Digestion								
Task III: Feedstock Market								
Task IV: Residual Biosolids Beneficial Reuse								
Task V: Residual Liquid Sidestream Effects								
Task VI: Biogas Utilization								
Task VII: Funding Mechanisms								
Task VIII: Resource Recovery Scope Refinement								
Task IX: Preliminary Design and Cost Estimating								
Task X: Financial Modeling								
Task XI: Triple Bottom Line Analysis								

4. Pricing

The above scope will be completed for a fixed fee of \$129,220, invoiced monthly based on progress towards completion of the scope. Proposals from subconsultants Material Matters and Donahue are included as attachments. The balance of the pricing is divided equally between EPP and Kokosing.

5. Confidentiality/Business Sensitive Redactions

Within the technical memorandum deliverables, business sensitive information around EPP’s financing approach may be included. In the event that The City of Bloomington desires or is required by public records request to distribute technical memorandums to third parties, EPP reserves the right to work with the City of Bloomington to redact trade secret information, as stated within IC 5-14-3-4(a)(4).

6. Appendix

- Donahue Proposal
- Material Matters Proposal

PART I
PROJECT DESCRIPTION/SCOPE OF SERVICES/TIMING

A. PROJECT DESCRIPTION

Energy Power Partners (EPP) and Kokosing will perform a comprehensive, but high level review of the current Bloomington, IN Wastewater Treatment Plants (WWTPs), Dillman Road and Blucher Poole WWTPs, to evaluate the benefits of anaerobic digestion and resource recovery. The goal of the project is to generate alternate scenarios that create a broad range of options, enabling the City of Bloomington Utilities to weigh the pros and cons of the different approaches. Scenarios will include low, medium, and high estimates of feed stock provided by EPP and sludge from both WWTPs.

Donohue will provide professional engineering services to support the evaluation.

B. SCOPE OF SERVICES

Services to be provided by Donohue for this Project under this Agreement are as follows:

1. Project Management

- a. Assign Richard Claus as the Project Manager who will coordinate Project activities and will be the principal liaison between EPP and Donohue.
- b. Prepare a Project work plan containing the project background, project goals and objectives, task based project scope, project schedule, listing and schedule of deliverables.
- c. Provide monthly progress reports to EPP to document services performed and schedule status. This is typically performed as part of the monthly project invoicing routine.

2. Design Basis Development

- a. Review and analyze existing available data. Work with EPP to obtain from the City of Bloomington Utilities (CBU) existing drawings, monthly reports of operation for the CBU WWTPs, and NPDES Permits. Analyze up to five years of existing operational data for both CBU WWTPs.
- b. Develop a mass balance spreadsheet of the Blucher Poole WWTP process.
- c. Evaluate changes to the Dillman Road sludge stabilization and handling processes and truck transport to the Blucher Poole WWTP.
- d. Analyze impact of sludge handling sidestreams on the Blucher Poole WWTP process.

2. Furnish to Donohue copies of existing documents and data pertinent to Donohue's Scope of Services, including but not limited to and where applicable: design and record drawings for existing facilities; property descriptions, land use restrictions, surveys, geotechnical and environmental studies, or assessments.
3. EPP shall be responsible for all requirements and instructions that it furnishes to Donohue pursuant to this Agreement, and for the accuracy and completeness of all reports, data, programs, and other information furnished by EPP to Donohue pursuant to this Agreement. Donohue may use and rely upon such requirements, instructions, reports, data, programs, and information in performing or furnishing services under this Agreement, subject to any express limitations or reservations provided by Owner to EPP applicable to the furnished items.
4. Provide to Donohue existing information regarding the existence and locations of utilities and underground facilities.
5. Provide Donohue safe access to premises necessary for Donohue to provide the Services.
6. Inform Donohue whenever EPP observes or becomes aware of a Hazardous Environmental Conditions, as defined in Part IV.3. of this Agreement, that may affect Donohue's Scope of Services or time for performance.

**PART III
COMPENSATION, BILLING AND PAYMENT**

- A. Compensation for the work as defined in the Scope of Services (Part I) of this Agreement shall be in accordance with Donohue's standard chargeout rates in effect at the time the Services are performed. Routine expenses will be billed at cost and subconsultant costs, if any, will include a 10% markup. The total cost for these Services and expenses will not exceed \$48,400.00.
- B. Donohue will bill EPP monthly, with net payment due in 30 days.
- C. Donohue will notify EPP if Project scope changes require modifications to the above-stated contract value. Services relative to scope changes will not be initiated without written authorization from EPP.
- D. EPP will pay Donohue within 10 days after receiving payment of invoice from Owner, or no later than 60 days from date of invoice, whichever is sooner.



Rev. October 25, 2021

**Energy Power Partners
High Strength Waste and Biosolids Market Assessment
SCOPE OF WORK**

Task 1 – Collect Background Information

1. Establish Material Matters (MM) internal project team and project set up.
2. Prepare for and participate in Kickoff Conference Call with Energy Power Partners (EPP) and Bloomington to confirm goals for the project, confirm the types of food waste sought, and discuss scope of work priorities, schedule, lines of communication, and contact information.
3. Prepare and provide data request, with information about Bloomington's current solids management program, including tipping/transport fees, location of end use/disposal sites, current contractor, challenges faced, contract requirements, and costs.

Task 2 – Feedstock Market Analysis

Material Matters will perform a high strength waste (HSW) survey to understand the availability of high strength waste surrounding the City of Bloomington to co-digest with the City's solids. The assessment will be accomplished per the following tasks.

Task 1.1 – Gather Information about Competition

1. Identify potential competitors within 100 aerial-miles of the facility. Competition includes:
 - a. Landfills
 - b. Compost facilities
 - c. Anaerobic digesters (municipal or private)
 - d. Incinerators
2. Develop key survey questions for HSW competitors to define:
 - a. Hours of operation and other logistical considerations
 - b. Tipping fees
 - c. Volumes
 - d. Types of HSW accepted
 - e. List of haulers
3. Survey competition via phone calls, and/or other survey tools to collect program information.

Task 1.2 – Conduct Organic Waste Market Survey

1. Identify HSW generators by reviewing NPDES permits, NAICS, and SIC codes; surveying trade groups and organic haulers, accessing previous papers, and the Harris Industrial Survey.
2. Develop key questions for HSW generators to be included in the survey to define:
 - a. The quantity of HSW generated as liquid or solids.



Rev. October 25, 2021

**Energy Power Partners
High Strength Waste and Biosolids Market Assessment
SCOPE OF WORK**

- a. Conduct evaluation of other similar-sized biosolids programs in the region, focusing on:
 - i. Type and classification of biosolids produced,
 - ii. Beneficial use or disposal options currently employed,
 - iii. Current outside-the-gate costs, and
 - iv. Plans for process changes within the next five years.
- b. Prepare initial list of potential markets/outlets for all biosolids products considering bulk agriculture, soil blending, fertilizer blending, specialty markets, landfill, and other potential markets.
- c. Develop survey questions for market phone calls, focusing on:
 - i. Current products used
 - ii. Volume
 - iii. Current pricing
 - iv. Seasonal use
 - v. Storage
 - vi. Preferred/required characteristics
 - vii. Interest in considering a new product.
- d. Conduct phone surveys with potential customers from each market identified.
- e. List advantages, disadvantages, and risks associated with each outlet.
- f. Provide preliminary estimated outside-the-gate expenses and revenues for each potential market/outlet to compare with current practices.
- g. Identify and survey alternative third party contractors as a comparison to current processing and outlets to determine capacity to manage products and production, willingness to provide service for beneficial use, and current location of sites.

Task 4 – Deliverables

1. Prepare a HSW Market Analysis TM
2. Prepare a Biosolids Market Analysis TM
3. Conduct a Market Analysis Workshop (attended in person)

Estimated Billings: \$49,200

Estimated Hours: 452

Estimated Expenses: \$1,620

CAC Monthly Activity Report

Monroe County Solid Waste Management District Citizen's Advisory Committee

November – December 2022

11/17 Regular Meeting

- Update of Biodigester feasibility study provided and brief discussion on regional bio-solid land application users
- Implementation Evaluation & Guidance subcommittee proposal of 5YMP reporting document
- Brief discussion on potential Landfill monetization
- Discussion and support around the Porter County CAC's interest in addressing the 'Ban on Ban' initiative and engaging with them in the near future

CAC Monthly Activity Report

Monroe County Solid Waste Management District Citizen's Advisory Committee December 2022 – January 2023

12/15 Regular Meeting

- Meeting cancelled without objection as no new or outstanding business was proposed for the December agenda. The CAC's next meeting is tentatively scheduled for January 19th at 5:30 p.m., per CAC email correspondence the week of December 26th.

2023 Citizens Advisory Board Annual Appointments

- The week of December 12th, Joe Wynia initiated correspondence via email requiring CAC members to communicate their intentions for continuing service on the committee in 2023 to Tom McGlasson by December 23rd.



MEMORANDUM

TO: MCSWMD Board of Directors
DATE: December 2, 2022
FROM: Tom McGlasson Jr.
SUBJECT: December 2022 Administration Department Board Report

General Updates

- Elisa Pokral attended the Environmental Education Association of Indiana (EEAI) annual conference 11/4 thru 11/6/22.
- Unfortunately, due to the weather, we had to cancel our planned America Recycles Day event at the recycling centers on 11/12/22. The musician scheduled to perform at the sites has committed to performing next year.
- The two (2) new positions approved for 2023, *Waste Reduction Specialist* and *Compliance, HHW & Landfill Support Staff* have been advertised.
- The District will be moving forward with changing its group health insurance renewal date to January 1st. This will actually result in a one percent (1%) decrease on premiums, however individual policy out-of-pocket maximums will increase, beginning on 1/1/2023.

Media Summary for November

- Social Media Outreach
 - Social media posts included: America Recycles Day; Veterans Day; Thanksgiving Holiday; Food Waste Collection; Home Composting; District Education Programs.
- Effectv Summary
 - Television advertising: Recycling Right; Orange Bag Trash; Green Business; Leaf Burning; LEDs & CFLs; Home Composting.
 - Weather Crawl: Facility Schedules; Electronics; Orange Bag Trash; Food Waste Collection.
 - Premium Digital Advertising: Food Waste Collection; Electronics Recycling.
 - Premium Digital is a platform for our infomercials to be viewed through Comcast On-Demand services and internet streaming on any device.
- Radio Summary
 - WHCC: Environmental Challenges & Solutions; Adopt-A-Road; Recycling Right; Electronics Recycling; Reusable Bags; Rural Recycling Centers; Household Hazardous Waste.
- Sponsor of Mind Yo' Business podcast which features two (2) thirty (30) second PSAs per episode.
- Herald-Times article published on 11/25/22 featuring Elisa Pokral and highlighting District education programs and services.

Education and Outreach Summary for October

- Elisa Pokral provided classroom education sessions in the following schools:
 - Rogers Elementary (#2) – 2nd grade; 5 classrooms
 - Marlin Elementary (#2) – 1st grade; 2 classrooms
 - Templeton Elementary (#3) – 3rd & 4th grades; 2 classrooms
 - Highland Park Elementary (#3) – 4th grade; 2 classrooms



MEMORANDUM

TO: MCSWMD Board of Directors
DATE: January 6, 2023
FROM: Tom McGlasson Jr.
SUBJECT: January 2023 Administration Department Board Report

General Update

- Tom McGlasson Jr. toured the Rumpke Resource Recovery Facility site on 12/7/22. Construction is progressing well, the facility will have four (4) dumping areas: glass, source-separated recycling, co-mingled recycling, and waste. Rumpke representatives indicated that they anticipate the facility being ready to open in late March or early April.
- Due to the extreme weather conditions on December 23rd, all District facilities were closed.
- Applications are being received for the Waste Reduction Specialist position, the position will remain open until it is filled.

Media Summary for December

- Social Media Outreach
 - Social media posts included: Holiday Closures; Holiday Tree Recycling; Reducing Waste; Gifting Reuse Tips; Waste Reduction Specialist position; Earth Stewardship; District Services.
- Effectv Summary
 - Television advertising: Food Waste Recovery; Electronics; Orange Bag Trash; Climate Challenge and Solutions; Recycling Right.
 - Weather Crawl: Holiday Tree Recycling; Thank You Recyclers; Food Waste Collection; District Schedule; Bulky Item Disposal; Electronics.
 - Premium Digital Advertising: Food Waste Collection; Recycle Right.
 - Premium Digital is a platform for our infomercials to be viewed through Comcast On-Demand services and internet streaming on any device.
- Radio Summary
 - WHCC: Environmental Challenges & Solutions; Adopt-A-Road; Recycling Right; Electronics Recycling; Reusable Bags; Orange Bag Trash; Household Hazardous Waste.
 - WBIW: Tom McGlasson Jr. was the guest on “Talk of the Town” on 12/12/22 and discussed Holiday Tree Recycling and District programs and services.

Education and Outreach Summary for December

- Elisa Pokral provided classroom education sessions in the following schools:
 - Rogers Elementary (#2) – 2nd grade; 5 classrooms
 - Marlin Elementary (#2) – 1st grade; 2 classrooms
 - Highland Park Elementary (#3) – 4th grade; 2 classrooms
- Elisa Pokral attended the Stormwater Environmental Education Team meeting on 12/12/22

MEMORANDUM

Monroe
County Solid
Waste
Management
District

DATE: 12/01/22
TO: MCSWMD Board of Directors
FROM: Joey Long
SUBJECT: Recycling & Reuse, Hazardous Materials, Rural Recycling Centers Board Report for the month of December 2022.

Recycling & Reuse (04)

- We have worked with Elisa Pokral on signage and dates for Holiday tree recycling.
- Holiday Tree Recycling will be December 26th through January 14th.

Hazardous Materials (05)

- Staff have completed their annual HAZWOPER refresher training.

Rural Recycling Centers (06)

- Rural Recycling sites are operating as normal.

MEMORANDUM

Monroe
County Solid
Waste
Management
District

DATE: 01/04/23
TO: MCSWMD Board of Directors
FROM: Joey Long
SUBJECT: Recycling & Reuse, Hazardous Materials, Rural Recycling Centers Board Report for the month of January 2023.

Recycling & Reuse (04)

- Recycling Center is operating as normal.

Hazardous Materials (05)

- Staff is preparing shipments based on new shipping requirements.

Rural Recycling Centers (06)

- The Ellettsville recycling site office has been remodeled.

Joey L. Long

2022 Trash and Recycling Tonnage and Pulls

12/29/2022

2022 Total Recycling Tons	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals
Cardboard	70.54	55.13	72.34	73.13	68.84	76.76	68.49	75.61	79.17	56.11	69.73		765.85
Mixed Paper/Magazines	14.21	19.46	22.55	18.26	28.87	14.89	19.17	16.13	16.59	21.54	17.71		209.38
Newspaper	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		4.35
Books	2.70	4.73	0.34	0.00	4.39	4.39	2.70	0.00	5.06	0.00	0.00		24.30
Mixed Paper	5.47	4.66	4.05	0.00	4.05	4.05	4.25	0.00	5.87	0.00	0.00		32.40
White Paper	0.41	0.20	1.42	0.00	0.41	1.42	0.41	0.00	0.81	0.00	0.00		5.06
Magazines	2.70	1.80	3.60	0.00	2.25	1.80	1.80	0.00	2.25	0.00	0.00		16.20
Scrap/Steel - BIM	15.22	11.21	23.42	17.31	20.41	23.87	18.26	25.95	17.21	23.35	13.79		209.99
Scrap/Steel - JB	4.35	2.95	2.26	5.54	6.61	9.90	7.68	5.71	6.54	6.79	12.45		70.76
Glass	23.87	21.71	15.61	23.93	57.55	32.71	34.71	37.73	25.99	20.28	20.45		314.54
Plastic 1 - 7	23.96	21.00	28.10	27.38	24.32	31.05	26.39	23.12	27.32	20.90	24.20		277.74
Total	167.77	142.84	173.69	165.54	217.70	200.83	183.85	184.25	186.81	148.97	158.33	0.00	1930.57
2022 Recycling Pulls By Location - Republic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Bethel Ln	10	5	7	6	6	11	4	8	8	11	7		83
Dillman Rd	6	4	8	6	6	13	5	9	11	11	15		94
Ellettsville	11	8	12	13	7	16	10	10	12	16	11		126
Main Recycling Center	11	12	13	14	14	17	15	15	18	20	15		164
Oard Rd.	6	5	5	4	6	11	5	6	6	9	5		68
Total	44	34	45	43	39	68	39	48	55	67	53	0	535
2022 Recycling Pulls By Location - K & S	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Bethel Ln - Glass	1	1	1	1	3	2	1	1	1	2	1		15
Dillman Rd - Glass	0	1	0	1	2	1	1	1	0	0	1		8
Ellettsville - Glass	1	1	1	1	2	1	1	1	1	1	1		12
Main Recycling Center - Glass	1	1	1	1	3	1	2	2	2	1	1		16
Trailer Loads	1	1	1	0	1	1	1	0	2	0	0		8
Oard Rd. - Glass	1	0	0	0	1	1	1	2	0	0	1		7
Total	5	5	4	4	12	7	7	7	6	4	5	0	66
2022 Recycling Tonnage By Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Bethel Ln	27.05	16.99	24.00	25.94	36.41	26.10	17.81	25.76	29.15	28.01	24.53		281.74
Dillman Rd	23.96	17.50	28.93	29.55	36.70	40.69	28.57	30.85	23.95	20.75	32.68		314.12
Ellettsville	37.97	29.59	39.06	44.46	35.38	46.80	38.15	38.66	40.39	35.53	43.35		429.33
Main Recycling Center	46.44	52.86	50.54	51.39	71.92	53.55	68.31	60.87	54.94	51.52	37.05		599.38
Trailer Loads	11.28	11.39	9.41	0.00	11.09	11.66	9.16	0.00	21.53	0.00	0.00		85.50
Oard Rd.	21.07	14.52	21.75	14.21	26.19	22.05	21.86	28.10	16.87	13.15	20.74		220.50
Total	167.77	142.85	173.69	165.54	217.69	200.83	183.86	184.24	186.81	148.97	158.33	0.00	1930.57

2022 Trash and Recycling Tonnage and Pulls

2022 Trash Pulls By Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Bethel Ln	9	6	10	9	9	9	8	9	9	8	8		94
Dillman Rd	8	8	9	8	8	8	8	9	10	9	7		92
Ellettsville	7	7	9	8	7	9	8	8	8	9	9		89
Main Recycling Center	1	1	0	1	1	1	1	0	1	1	1		9
Oard Rd.	8	9	9	8	9	9	9	9	9	10	7		96
Total	33	31	37	34	34	36	34	35	37	37	32	0	380
2022 Trash Tonnage By Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Bethel Ln	35.41	22.34	40.85	33.30	38.85	37.04	32.68	38.91	32.34	29.38	34.57		375.67
Dillman Rd	41.17	35.40	39.83	7.76	46.19	41.07	35.78	47.37	46.72	39.84	34.84		415.97
Ellettsville	40.39	43.31	45.19	40.92	43.22	48.27	43.45	43.04	35.57	44.24	54.20		481.80
Main Recycling Center	1.85	2.15	0.00	2.26	8.46	2.47	0.61	0.00	2.23	1.34	1.78		23.15
Oard Rd.	32.12	29.40	33.06	30.18	37.71	33.39	33.40	34.84	31.77	32.36	28.47		356.70
Total	150.94	132.60	158.93	114.42	174.43	162.24	145.92	164.16	148.63	147.16	153.86	0.00	1653.29
2022 Bulky Pulls By Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Bethel Ln	4	1	5	4	5	2	5	2	5	4	1		38
Dillman Rd	2	3	4	4	4	3	5	4	5	3	5		42
Ellettsville	4	3	4	4	1	4	3	8	3	4	2		40
Oard Rd.	3	2	4	3	4	4	3	4	4	2	4		37
Total	13	9	17	15	14	13	16	18	17	13	12	0	157
2022 Bulky Tonnage By Location	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Bethel Ln	4.99	5.75	8.32	6.34	11.80	4.32	6.57	5.55	6.28	10.53	1.09		71.54
Dillman Rd	3.28	5.88	5.92	7.76	8.03	8.31	8.08	7.23	6.24	3.77	6.86		71.36
Ellettsville	9.45	6.92	8.73	8.63	6.55	14.86	10.35	23.64	9.45	7.77	7.06		113.41
Oard Rd.	7.15	2.26	7.42	5.52	7.67	7.20	5.95	6.22	6.64	4.04	5.97		66.04
Total	24.87	20.81	30.39	28.25	34.05	34.69	30.95	42.64	28.61	26.11	20.98	0.00	322.35

MEMORANDUM

Monroe
County Solid
Waste
Management
District

DATE: December 8, 2022
TO: MCSWMD Board of Directors
FROM: Lee Paulsen
SUBJECT: Landfill and Environmental Compliance November 2022 Board Report

Landfill November 2022:

- ◆ The NPDES Discharge Monitoring Report (DMR) and IDEM Monthly Monitoring Report (MMR) for November 2022 will be submitted prior to the November 28, 2022 deadline.
- ◆ The NPDES Discharge Monitoring Report (DMR) and IDEM Monthly Monitoring Report (MMR) for October 2022 was prepared and submitted by Lee Paulsen on 11-3-22. There were no exceedances or violations.
- ◆ Treatment plant was shut down for the month of November due to dry conditions.
- ◆ November 2022 Groundwater sampling was conducted on 11-1, 11-2, 11-3, 11-7, and 11-9, and 11-10. All the samples have been shipped via FedEx overnight to Pace lab for analysis. Waiting for all the data to submit to AECOM for the statistical analysis.
- ◆ Methane monitoring was conducted on November 16, 2022. The results were submitted to IDEM via electronic mail. All the samples were within acceptable limits.
- ◆ Demolition of the Blue building has begun at the landfill.
- ◆ Anderson Excavating repairs two low settling spots on the North side of the Old Hill. Repaired the gravel roadway from Anderson road to the collection pond. Repaired Methane vents and repaired riprap areas that had eroded.
- ◆ Leachate production is available on the next page.

Environmental Compliance November 2022:

- ◆ Twenty-three (23) new Environmental Compliance Cases were reported for the month of November 2022.
 - Twenty-one (21) Case were Substantiated, Ten (10) roadside cases, Two (2) Illegal Burns, and Eleven (11) private property cases. Eleven (11) are closed and Twelve (12) are still open and pending.
 - November 2022: 280 lbs. trash removed from the roadsides, zero (0) needles, three (3) tire removed from the side of the roads.
- ◆ There are currently fifty-nine (59) open environmental compliance cases.
- ◆ **Total for 2022:**

- 260 total cases. 11 Illegal burn; 71 cases at private properties; and 178 roadside clean-ups.
 - 8260 lbs. trash removed from the sides of the road via compliance cases.
 - Tires: Eighty-five (85) tires removed from the sides of the road; 3 tires on rims.
 - Needles: Three (3) removed from March 1, 2022 to present.

Adopt-A-Road November 2022:

- ◆ For the month of November 2022, there were Two (2) Adopt-A-Road clean-ups completed.
 - IU Student Athletic Board; N. Kinser Street, Between 17th St. and W. Gourley Pike
 - Community Clean-up; Whisnand Road
- ◆ For the month of November 2022 there were approximately Two (2) miles of road that was cleaned.
 - Each clean-up is for an adopted section of road that is approximately one (1) mile in length
- ◆ For the month of November 2022 approximately 40 lbs. of trash and 20 lbs. of recyclables removed from the sides of roads.
 - Weights are estimated based on an average bag weight due to the City of Bloomington collecting a substantial number of the clean-ups for which we cannot get actual weight.
- ◆ **YTD 2022 for the Adopt-A-Road:**
 - 45 clean-ups.
 - 2635 lbs. of trash.
 - 610 lbs. of recyclables.
 - Weights are estimated based on an average bag weight due to the City of Bloomington collecting a substantial number of the clean-ups for which we cannot get actual weights.

MEMORANDUM

Monroe
County Solid
Waste
Management
District

DATE: January 12, 2023
TO: MCSWMD Board of Directors
FROM: Lee Paulsen
SUBJECT: Landfill and Environmental Compliance December 2022 Board Report

Landfill December 2022:

- ◆ The NPDES Discharge Monitoring Report (DMR) and IDEM Monthly Monitoring Report (MMR) for December 2022 will be submitted prior to the January 28, 2023 deadline.
- ◆ The NPDES Discharge Monitoring Report (DMR) and IDEM Monthly Monitoring Report (MMR) for November 2022 was prepared and submitted by Lee Paulsen on 12-1-22. There were no exceedances or violations.
- ◆ Treatment plant was shut down for the month of December due to dry conditions.
- ◆ November 2022 Groundwater sampling data has been forwarded to AECOM for the statistical analysis. We are still waiting at this time for the report from AECOM.
- ◆ Demolition of the Blue building was completed in December 2022.
- ◆ Anderson Excavating cleared brush and scrub vegetation from a drainage area from the sediment pond on the north side of the landfill to the sediment basins just east of the leachate collection pond.
- ◆ Lee went to a training on December 6, 2022.
- ◆ Leachate production is available on the next page.

Environmental Compliance December 2022:

- ◆ Twenty-one (21) new Environmental Compliance Cases were reported for the month of December 2022.
 - Twenty-one (21) Case were Substantiated, Ten (10) roadside cases, One (1) Illegal Burn, and Ten (10) private property cases. Ten (10) are closed and Eleven (11) are still open and pending.
 - December 2022: 240 lbs. trash removed from the roadsides, zero (0) needles, twenty-six (26) tires removed from the side of the roads.
- ◆ There are currently sixty-five (65) open environmental compliance cases.

◆ Total for 2022:

- 280 total cases. 12 Illegal burn; 81 cases at private properties; and 188 roadside clean-ups.
 - 8920 lbs. trash removed from the sides of the road via compliance cases.

- Tires: One hundred thirteen (113) tires removed from the sides of the road; 3 tires on rims.
- Needles: Three (3) removed from March 1, 2022 to present.

Adopt-A-Road December 2022:

- ◆ For the month of December 2022, there were Six (6) Adopt-A-Road clean-ups completed.
 - Sigma Lambda Beta International Fraternity, INC.; Kirkwood Avenue, Between Indiana Ave. and Rogers St.
 - Beta Sigma Psi; 7th Street, Between Rogers St. and Woodlawn Ave.
 - In Memory of Philip H. Thomas; Thomas Road North, Between 3910 N. Thomas Rd and West Vernal Pike
 - Alpha Phi Omega; High Street, Between 3rd St. and Hillside Dr.
 - Community Clean-up; Wisnand Rd.
 - Community Clean-up; Wisnand Rd.

- ◆ For the month of December 2022 there were approximately Six (6) miles of road that was cleaned.
 - Each clean-up is for an adopted section of road that is approximately one (1) mile in length

- ◆ For the month of December 2022 approximately 175 lbs. of trash and 15 lbs. of recyclables removed from the sides of roads.
 - Weights are estimated based on an average bag weight due to the City of Bloomington collecting a substantial number of the clean-ups for which we cannot get actual weight.

- ◆ **YTD 2022 for the Adopt-A-Road:**
 - 52 clean-ups.
 - 2850 lbs. of trash.
 - 705 lbs. of recyclables.
 - Weights are estimated based on an average bag weight due to the City of Bloomington collecting a substantial number of the clean-ups for which we cannot get actual weights.

Monroe County Landfill Leachate Generation and Treatment Data

The below data is for the most recent six (6) months of operation

Month		July '22	August '22	Sept. '22	Oct. '22	Nov. '22	Dec. '23	Total
Temp (° F)	High	97	94	95	80	80	60	
	Low	58	55	32	28	11	-9	
	Avg	78	75	65	53	45	34	
Total Gallons Generated	Hauled Dillman	0	0	0	0	0	0	0
	Hauled Ellettsville	10,000	14,200	0	5,000	0	0	29,200
	Treated	0	0	206,813	0	0	0	206,813
	Total	10,000	14,200	206,813	5,000	0	0	236,013
Precipitation (in)		2.64	1.42	3.31	1.94	0.37	2.45	12.13
Hauling Cost Dillman		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hauling Cost Ellettsville		\$530	\$753	\$753	\$265	\$0	\$0	\$2,301
Disposal Cost Dillman		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Cost		\$530	\$753	\$753	\$265	\$0	\$0	\$2,301
Gallons Per Acre Per Day (GPAD):				22.71				

**AS of February 15 2019, Bynum Fanyo Utilities began hauling leachate per the quote accepted by the Board on 2-14-19 and disposal cost is included in the hauling amount.

For comparison, below is the data for the same six (6) month period from the previous year

Month		July '21	August '21	Sept. '21	Oct. '21	Nov. '21	Dec. '22	Total
Temp (° F)	High	93	97	93	83	73	68	
	Low	49	50	37	35	14	16	
	Avg	73	74	67	61	41	41	
Total Gallons Generated	Hauled Dillman	0	0	0	0	0	0	0
	Hauled Ellettsville	35,000	0	76,800	84,200	153,600	200,000	549,600
	Treated	1,070,106	129,378	28,990	458,200	516,998	555,634	2,759,306
	Total	1,105,106	129,378	105,790	542,400	670,598	755,634	3,308,906
Precipitation (in)		8.85	2.97	6.31	5.88	1.60	4.97	30.58
Hauling Cost Dillman		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hauling Cost Ellettsville		\$1,498	\$0	\$3,500	\$3,604	\$6,756	\$8,560	\$23,918
Disposal Cost Dillman		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Cost		\$1,498	\$0	\$3,500	\$3,604	\$6,756	\$8,560	\$23,918
Gallons Per Acre Per Day (GPAD):				318.45				

Below is the cost savings realized from on-site leachate treatment for the current six (6) month period

Month	Treated	Hauled Dillman	Hauled Ellettsville	Total	Monthly Cost for Hauled	Cost w/o Treatment	Operational Costs	Cost Savings
July '22	0	0	10,000	10,000	\$530	\$428	\$0	-\$102
August '22	0	0	14,200	14,200	\$753	\$608	\$0	-\$145
Sept. '22	206,813	0	0	206,813	\$753	\$8,852	\$4,912	\$3,187
Oct. '22	0	0	5,000	5,000	\$265	\$214	\$0	-\$51
Nov. '22	0	0	0	0	\$0	\$0	\$0	\$0
Dec. '23	0	0	0	0	\$0	\$0	\$0	\$0
Total	206,813	0	29,200	236,013	\$2,301	\$10,101	\$4,912	\$2,889

* Leachate hauling and disposal costs are based on the following rates: as of March 1, 2022

Hauling and Disposal = \$223.00 per 4,200 gallon load

Hauling and Disposal = \$265.00 per 5,000 gallon load

** Temperature data is from the website National Weather Service (www.weather.gov) for zip code 47408