



**Celebrating 100 Years of
Milorganite®: A Brief History and
Look to the Future**



Agenda

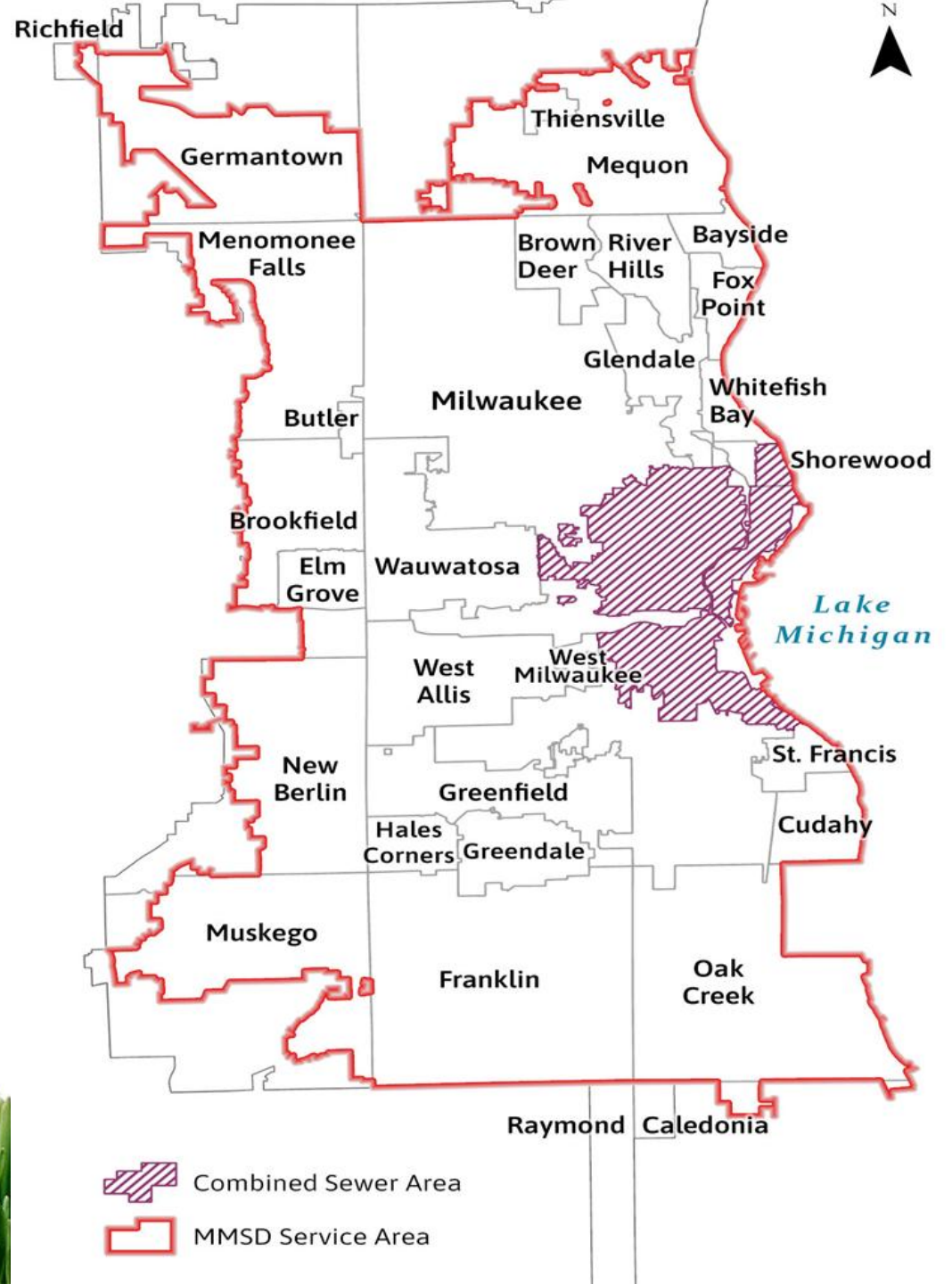
- ❖ About MMSD
- ❖ History of Milorganite
- ❖ Impact on the Industry
- ❖ Where are we today
- ❖ Future of Milorganite



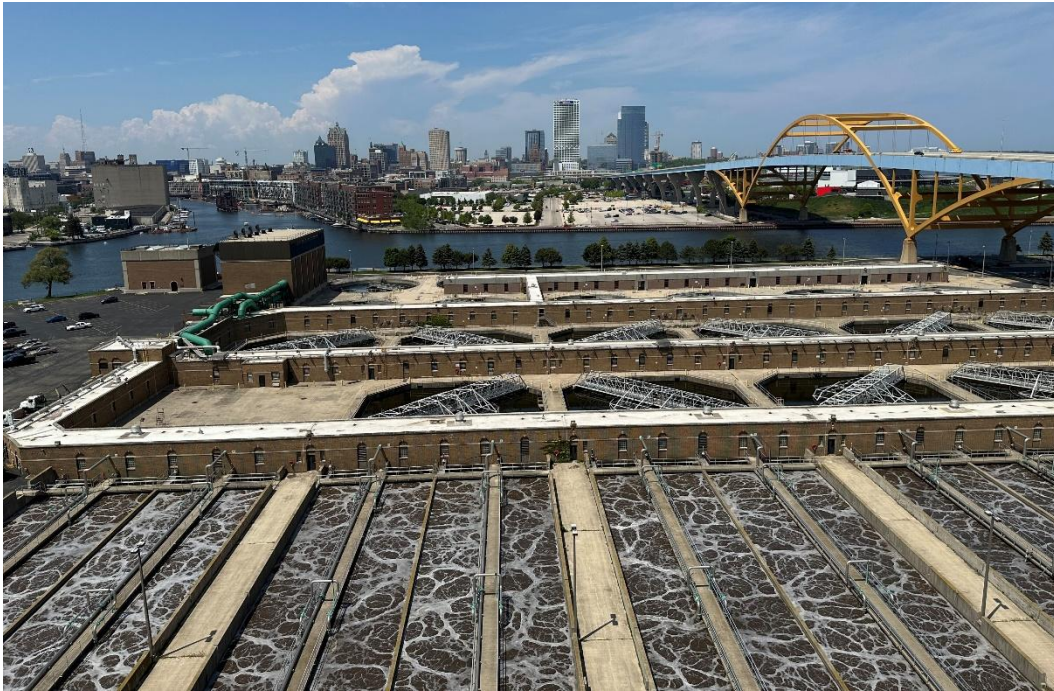


About MMSD

- ❖ Over 1 Million Customers
- ❖ 29 Municipalities
- ❖ 423 Square Mile Planning Area



What We Do



Water Reclamation



Flood Management

Jones Island 1900 vs 1920



- ❖ 1913 City of Milwaukee creates Sewerage Commission
- ❖ 1915 Sewerage Commission tests “activated sludge process” at JI
- ❖ 1925 JI Water Reclamation Facility opens



Milwaukee-Organic-Nitrogen



*First Prize was awarded to McIver and Son of Charleston. South Carolina



History of Milorganite

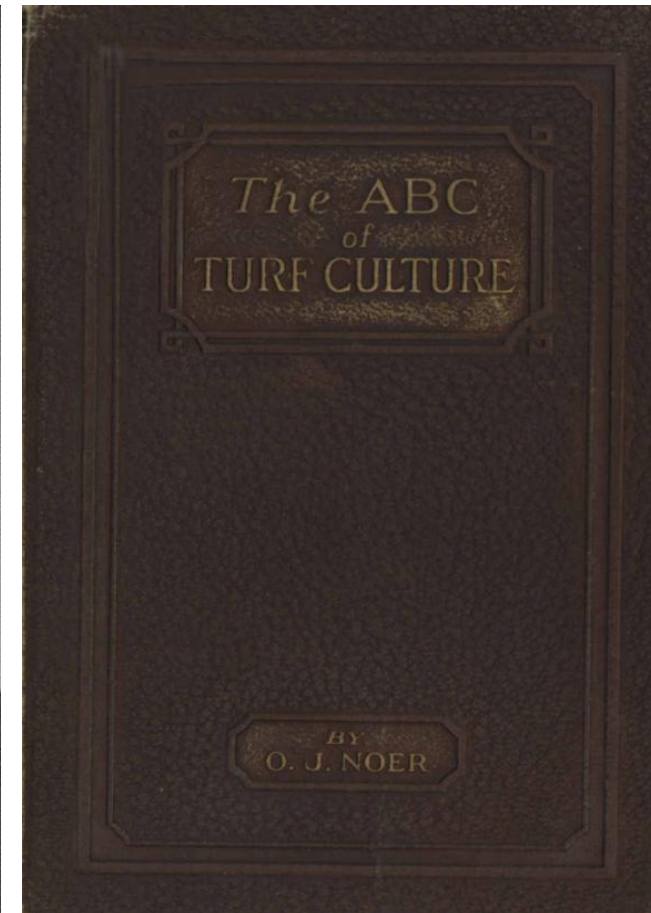
- ❖ Demand to improve water quality
- ❖ OJ Noer & the activated sludge process
- ❖ What's in a name?
- ❖ Research builds trust
- ❖ A star is BORN!!!!
- ❖ From the fairways to the cul-de-sac's





O.J. NOER “Mr. Turf” 1890 - 1966

- ❖ 1923 fellowship UW Madison College of Ag
- ❖ Head of Milwaukee Sewage Commission Turf Bureau 1926-1960
- ❖ Crops to Turf



Research Creates Customers



- ❖ OJ Noer Turfgrass Research Facility
- ❖ Noer Collection- Michigan State University
 - ❖ Over 14,000 slides



**FIRST
CARLOAD**

MILORGANITE

MILWAUKEE'S
AMMONIATE
FERTILIZER

PRODUCED AT
SEWAGE DISPOSAL PLANT
MILWAUKEE WIS.

AND
OMAHA
30684

CAPACITY 80000 LBS
LOAD LIMIT 84500 LBS
LIGHT WT 41500 LBS 5-5 7-25

First railcar Feb 10th, 1926

25lb. \$1.25 50lb. \$1.75 100lb. \$3.00

MILORGANITE

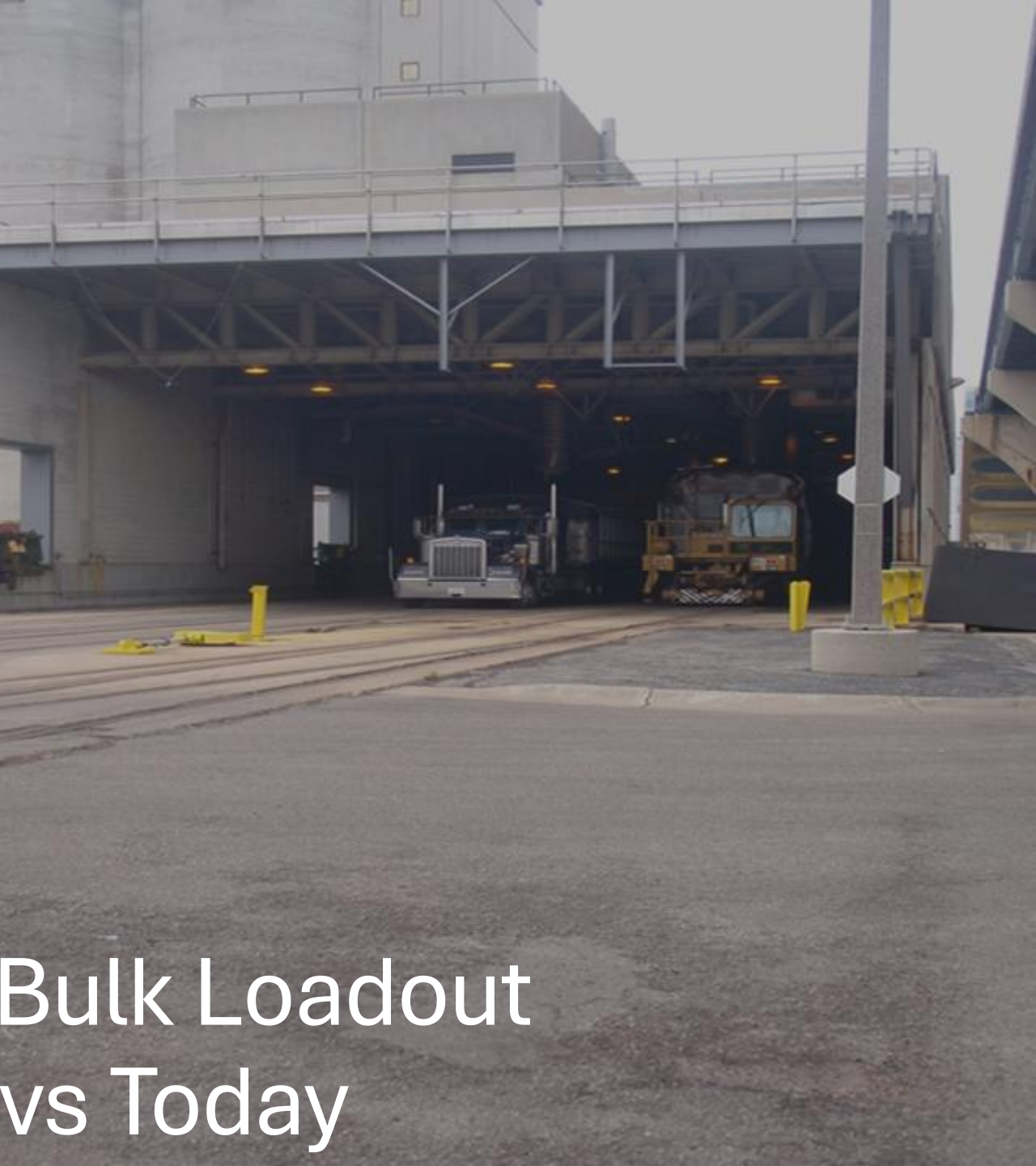
THE IDEAL FERTILIZER

RECOMMENDED BY THE
MILWAUKEE
NEWBRASS
COMMISSION



Chicago World's Fair 1933





Milorganite Bulk Loadout
1930's vs Today



Then and now... PACKAGING FACILITIES



Milorganite Poem

MILWAUKEE MAKES MILORGANITE FAMOUS!!!

*Milwaukee is the land of cheer
German cooking, ale and beer;
They eat and drink from Morn till night,
And then they make MILORGANITE!!!*

*Their ball team is quite their pride,
It's fame has traveled far and wide.
The grandstand has a place in sight
Where they can go and make MILORGANITE!!!*

*After the game they go to dinner,
It does not matter whose the winner;
And after sleeping through the night,
Start making more MILORGANITE!!!*

*I state without equivocation,
This chore has keen cooperation;
It's manufacture is an art,
Where everybody does his part.*

*Old men, young men, perfumed ladies,
Boys and girls and even babies;
Grunt and strain and do what's right,
To pile up more MILORGANITE!!!*

*You make it — we sell it — if it's not good —
Author — unknown then it's your own fault!!!*



"STRIKE THREE!!!"



The
more
YOU
eat

The
more
WE
get!!!



MILWAUKEE'S
GEMUETLICHKEIT TRIO



JONES ISLAND SEWAGE
PLANT

daily production — 205 tons!!!

MOONLIGHT, MILORGANITE & YOU



Don Nedobeck's North Water Street Tavern Band

I went up to Milwaukee
To see my baby there
She worked down on Jones Island
Her aroma was so rare
It seems the fertilizer
Is the tantalizer
That keeps me coming back for more

I've got those old Milwaukee pack 'em up Milorganite Blues

My baby's name is Busia
From Poland she did come
To work out on Jones Island
Amid the sludge and scum
She wears a bright babushka
And patent overshoes
She's a real hot mama for sure

That's why she keeps me wailing those old Milorganite blues

Now Busia's still a lady
Not some ordinary dame
And when she goes to work
It's fertilizer that's her game
But when we get romantic
She whispers things organic
I guess I'll have to pay all my dues
To end this plaintive wailing
And lose those old Milorganite blues

I've got those old Milwaukee pack 'em up Milorganite blues

Milorganite Bagged Products



32lb Bag

- ❖ Most Popular Product
- ❖ Sold in Retail stores nationwide
- ❖ Covers 2,500 sq. ft.
- ❖ Feeds for 8 weeks



5lb Bag

- ❖ Ideal for Gardens, vegetables, and small containers

50lb Bag

- ❖ Professional Product
- ❖ Smaller granule
- ❖ Most common for Golf Courses, Landscapers



Milorganite Operations



Wastewater
Treatment
Plant



Distributors



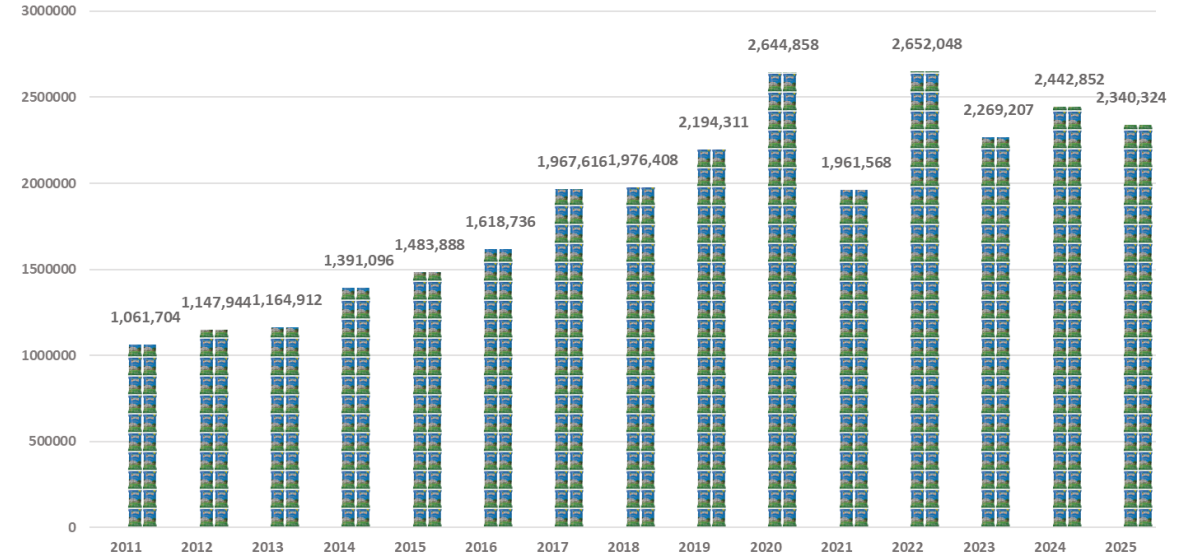
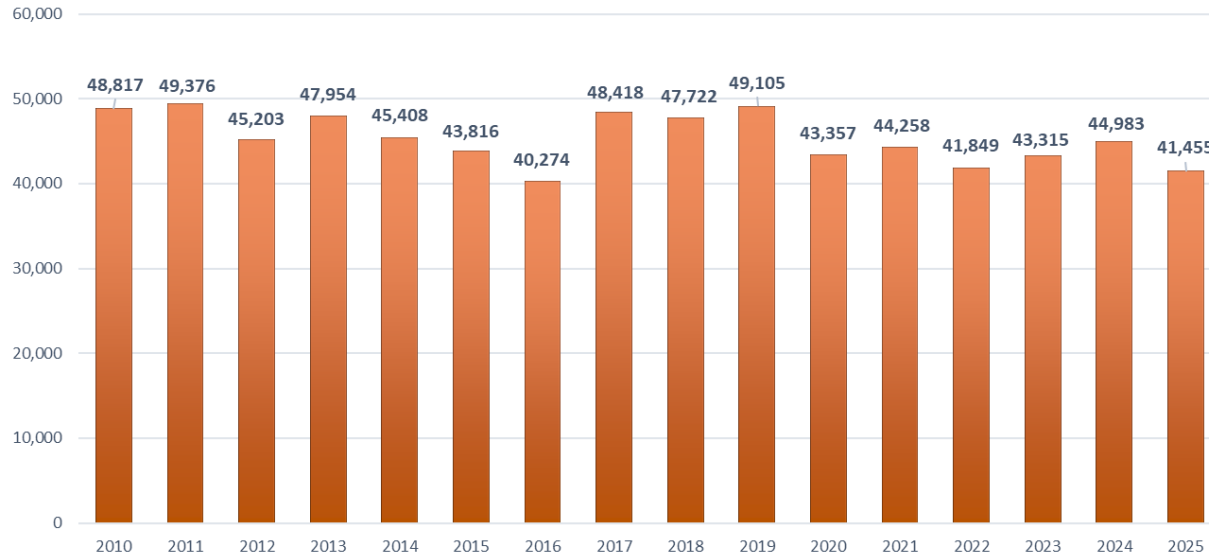
Outsourced
Packaging



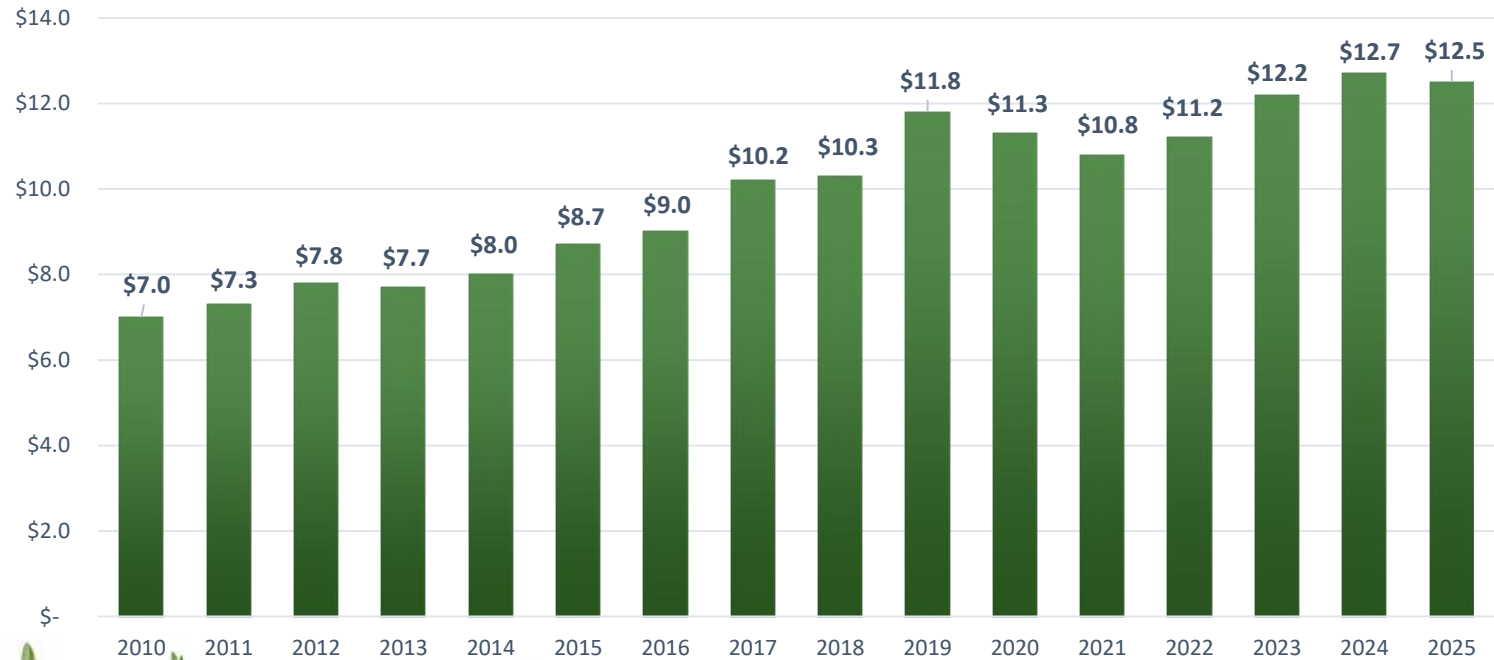
Milorganite



Milorganite Tons Produced & Retail Bags Packed

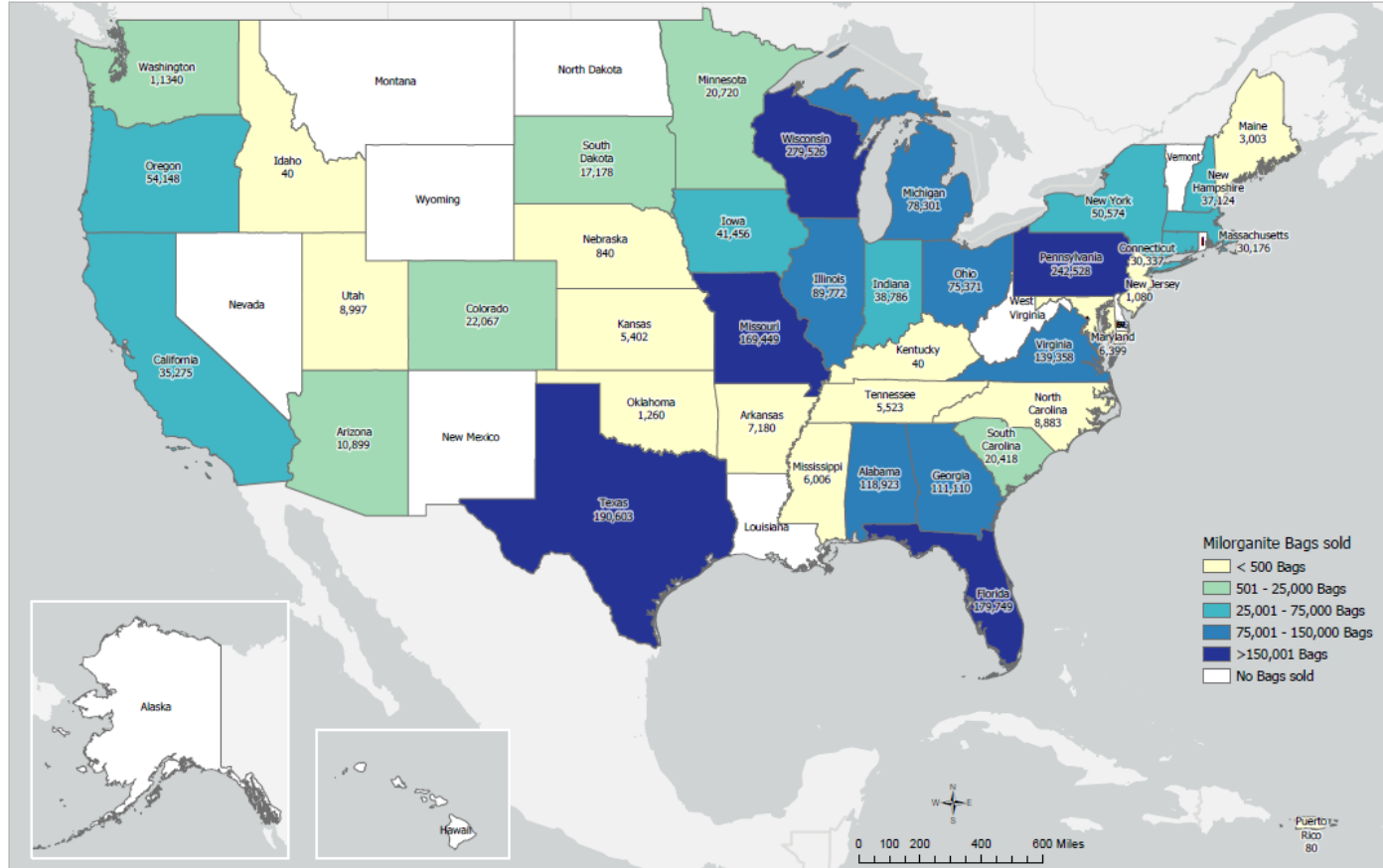


Milorganite Net Revenue (Millions)



Where Can You Find Milorganite?

+8.7k retailers nationwide



2025: 2.3 Million Bags Shipped



Milorganite Marketing

- ❖ Transition from Traditional to Digital Marketing
 - ❖ Website, social media, email newsletter
- ❖ Influencer Marketing
 - ❖ National Brand Partners
 - ❖ User Generated Content



*"I have been using Milorganite for several years now and continue to have the best lawn in my neighborhood. Soil samples are consistent year after year."
Allen - Lyman, SC*

New Website AI Agent “Milo”



Type your question or click the  icon to talk



- ❖ Help Answer Customer Questions
- ❖ Improve Customer Experience
- ❖ Reduce Customer Calls and Inquiries

The Future of Milorganite



- ❖ Commitment to Environmental Stewardship

 - ❖ Transition to Paper Bags

- ❖ Challenges:

 - ❖ Packaging Equipment

 - ❖ Regulatory – PFAS and other CECs

 - ❖ Retailer Pricing

- ❖ Opportunities:

 - ❖ E-commerce

 - ❖ New Dryers

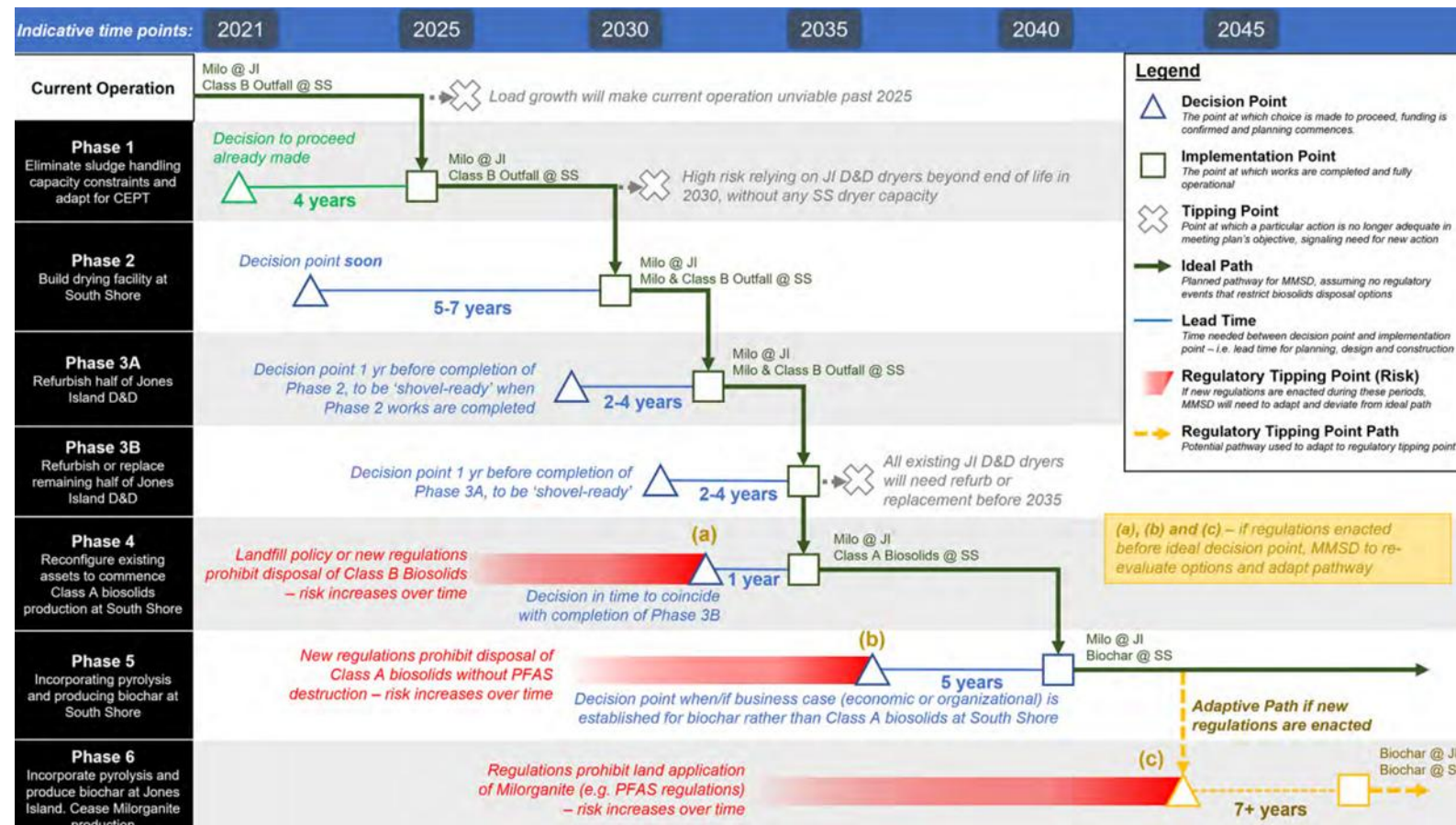
 - ❖ 4-5k tons of Chaff



Biosolids Advanced Facilities Plan



- ❖ MMSD's Biosolids Advanced Facilities Plan (BAFP) goals:
 - ❖ What is the best way to make **Milorganite®**?
 - ❖ What drivers influence the long-term viability of Milorganite?
 - ❖ How can MMSD adapt to changing drivers?





Dryer Technology Assessment Planning Study

- ❖ Phase 2 of BAFP – Alleviate loadings to Jones Island Water Reclamation Facility by constructing a drying facility at South Shore Water Reclamation Facility
- ❖ This Project will identify dryer manufacturer models and required ancillary equipment to support the future SSWRF Dewatering and Drying Facility while meeting Milorganite Specs
- ❖ Benefits:
 - ❖ Expand total dewatering and drying capacity with partial redundancy
 - ❖ More resilient Class B secondary outfall
 - ❖ Improved operational and energy efficiency





Research

- ❖ Pyrolysis Research
- ❖ Water Research Foundation
 - ❖ 5211: Understanding The Value Proposition for Thermal Process to Mitigate PFAS
 - ❖ 5286: Identification and Valuation of Innovative Wastewater Residual Products Beyond Biosolids
 - ❖ 5370: Comprehensive Evaluation of Biosolids Drying Technologies
 - ❖ 5384: The Impact of Dryer Type on Biosolids PFAS Removal
- ❖ PFAS Crop Uptake Study
- ❖ Advanced biosolids technology evaluation
- ❖ Chaff in concrete
- ❖ Chaff reintroduction in Milorganite process





Shout Outs!

Jackie Burnett - Production & Inventory Specialist

Bajio Symoungkoun - Production & Inventory Specialist

Katelyn Reimer - Strategic Account Specialist

Jaime Staufenbeil - Sales and Operations Manager / Agronomist

Steve Unger - Contract Compliance Administrator

Taylor Lee-Clarahan - Senior Digital Marketing Specialist

Erin Haubert - Marketing Manager

Emily Van Deraa - Senior Staff Attorney

MMSD Central Lab

Operations and Maintenance Teams



THANK YOU!

Jaime Staufenbeil
Agronomist & Sales and Ops Manager
jstaufe@mmsd.com

Matt Magruder
Environmental Research Manager
mmagruder@mmsd.com

