

Waste Disposal In The Planning Region

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Presentation Outline

- Part 1: Planning Region Waste Disposal (FY2024 Data)
- Part 2: Muskegon County Landfill
- Part 3: Landfills and the MMP process

Part 1: Planning Region Waste Disposal (FY2024 Data)

What Does Each County Generate and Where Does It Go?

EGLE Report Data – FY2024

EGLE MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Legislative Report

**REPORT OF SOLID WASTE
LANDFILLED IN MICHIGAN**

Report Period:
Fiscal Year 2024

Authority:
MCL 324.11512(24)

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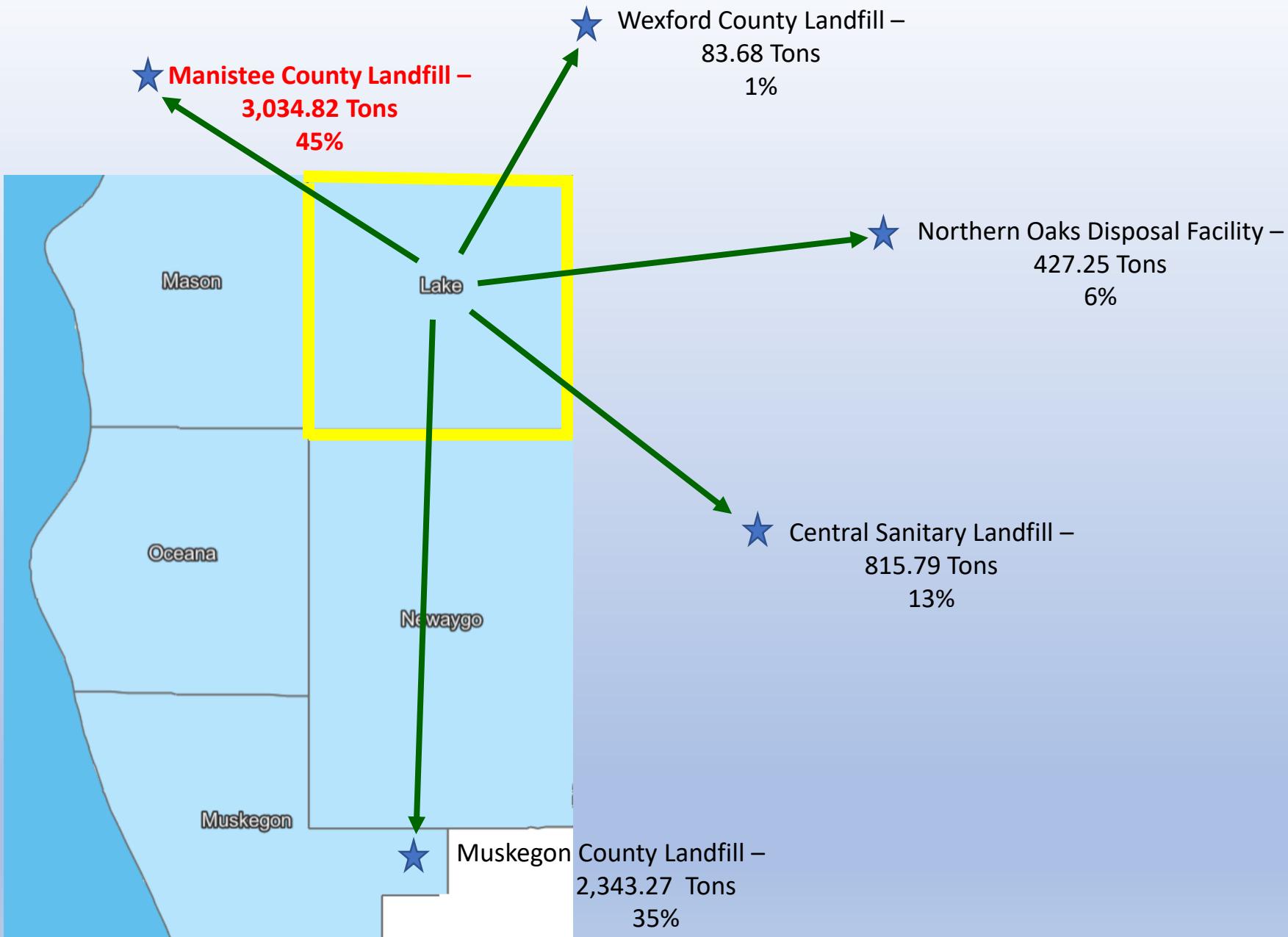
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<https://www.michigan.gov/egle/-/media/Project/Websites/egle/Documents/Legislative/MMD/Part-115/Report-FY24-Landfilled-Solid-Waste.pdf?rev=b1a8a575d427406f8a4ad4fb4de0ff47&hash=430D8389FB9BEE4BA4AA6D076DCC50F7>

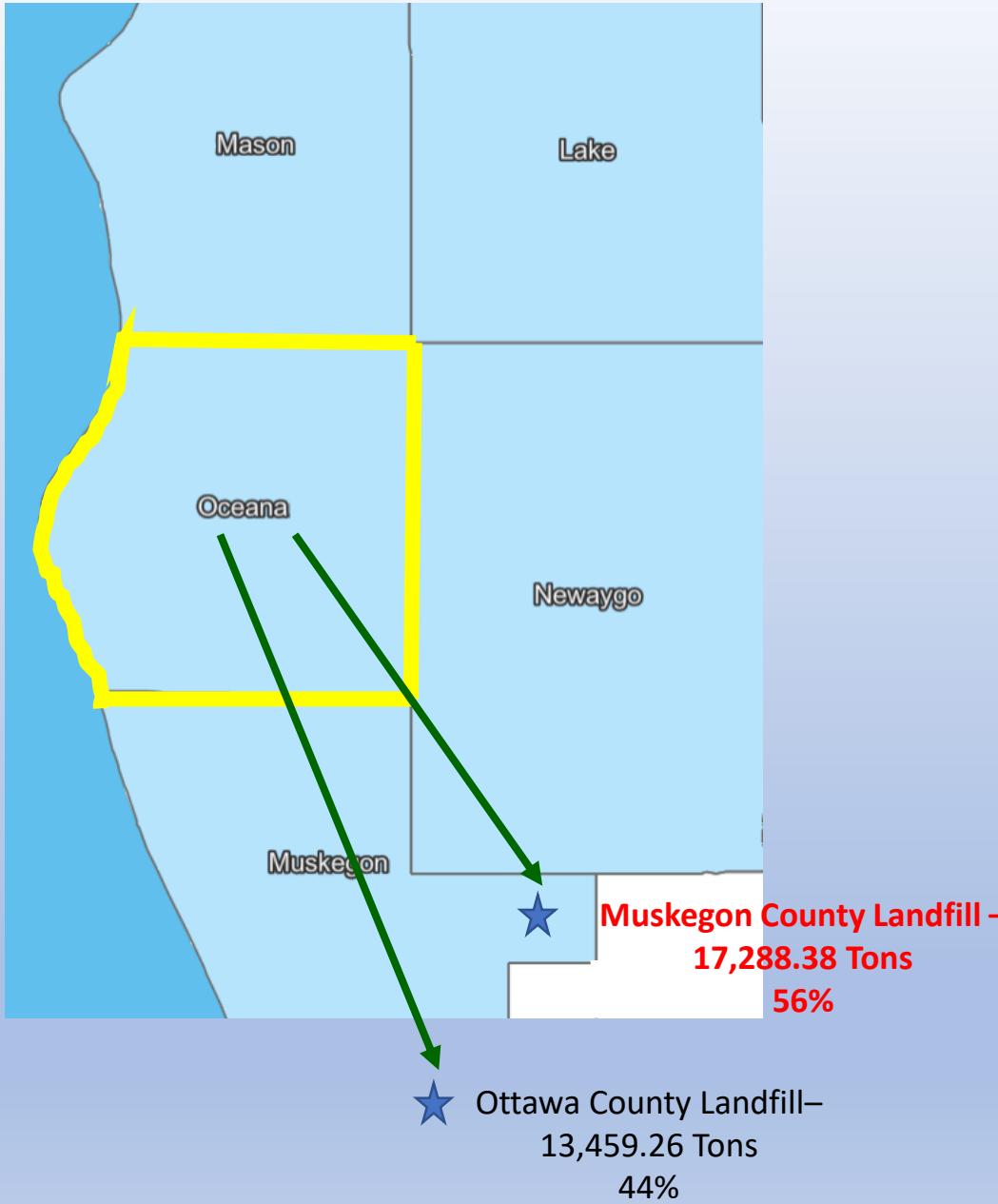
LAKE COUNTY

Total Waste Disposed FY 2024 –
6,704.81 Tons



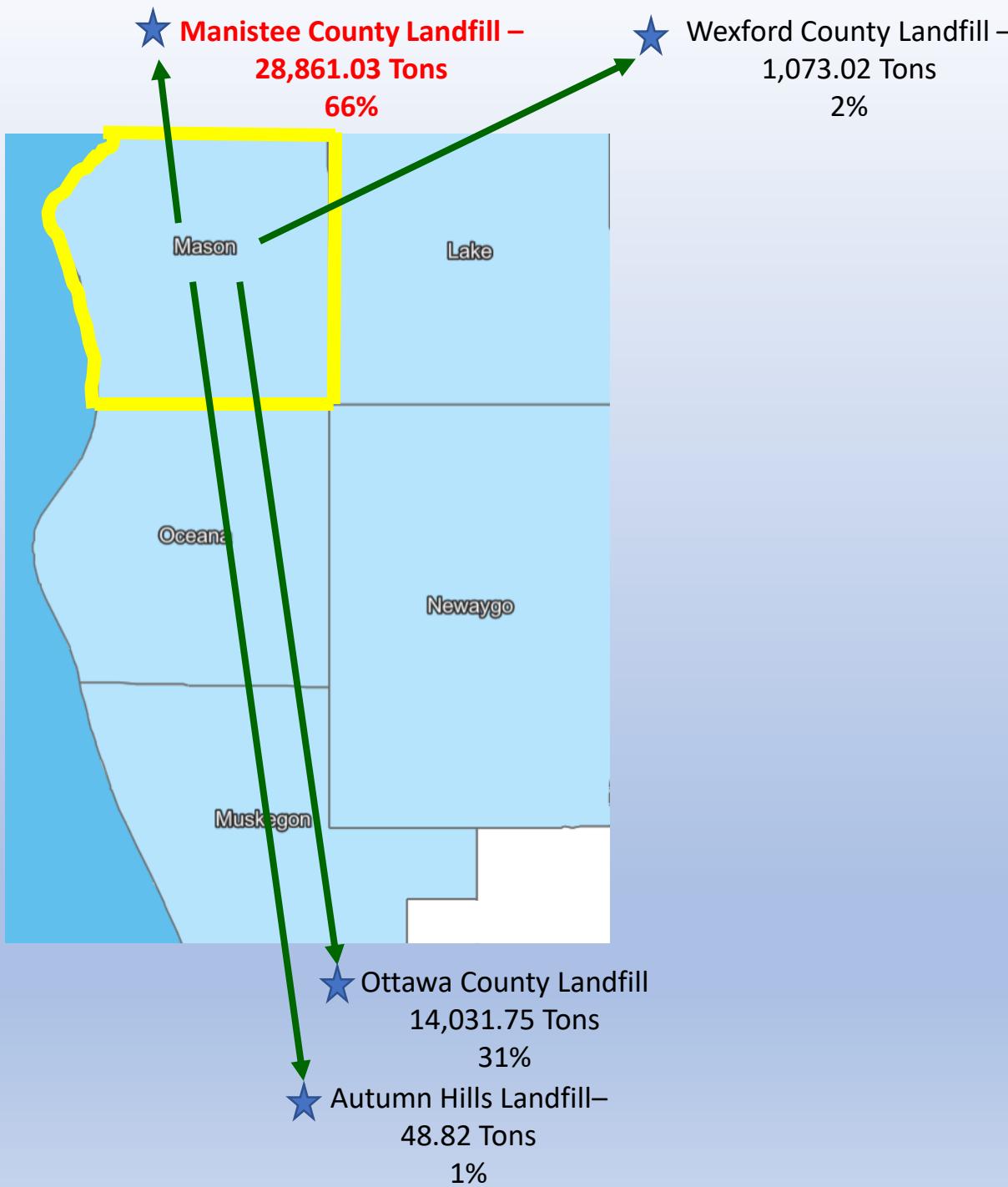
OCEANA COUNTY

Total Waste Disposed FY 2024 –
30,911.17 Tons



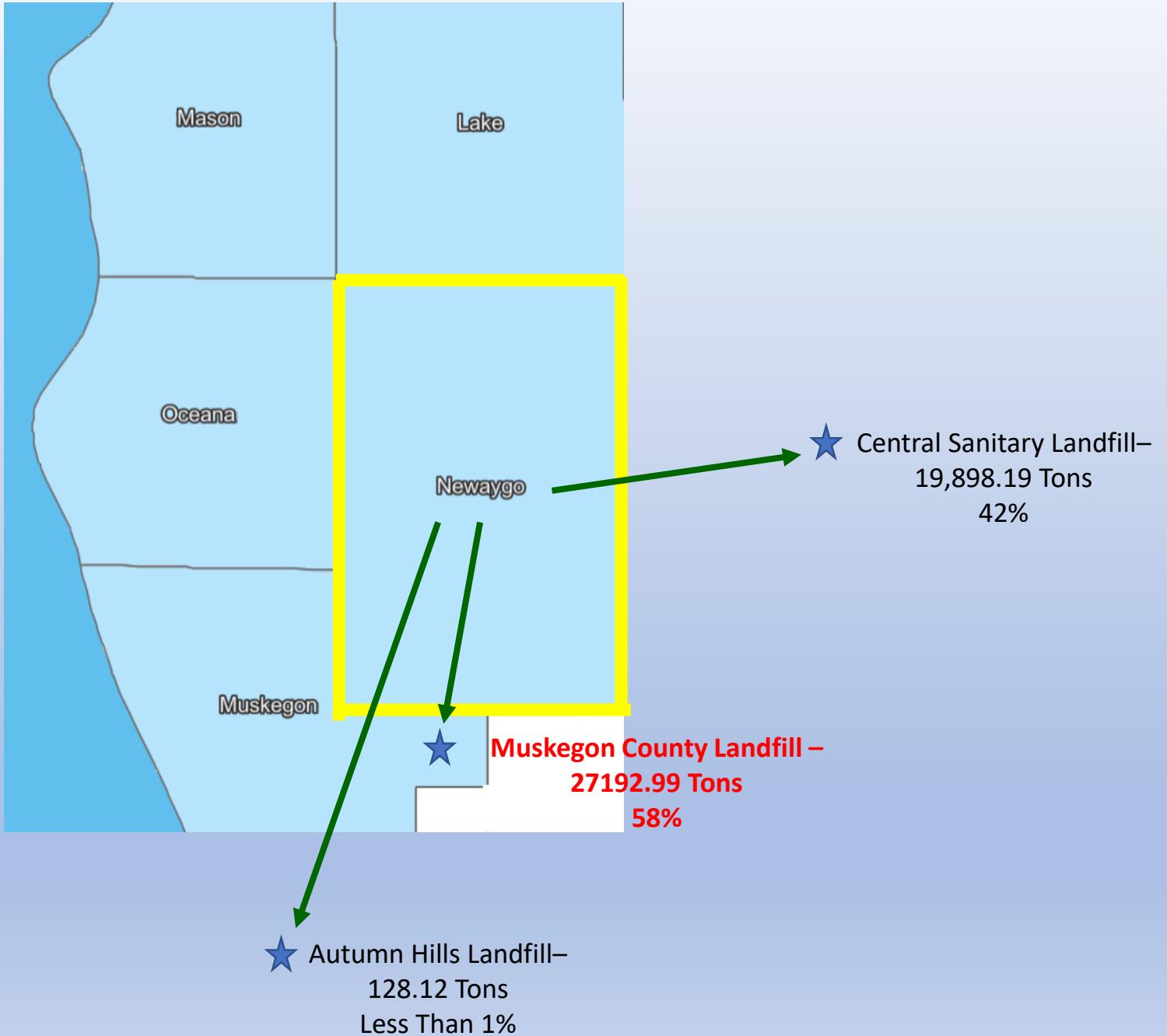
MASON COUNTY

Total Waste Disposed FY 2024 –
44,014.62 Tons



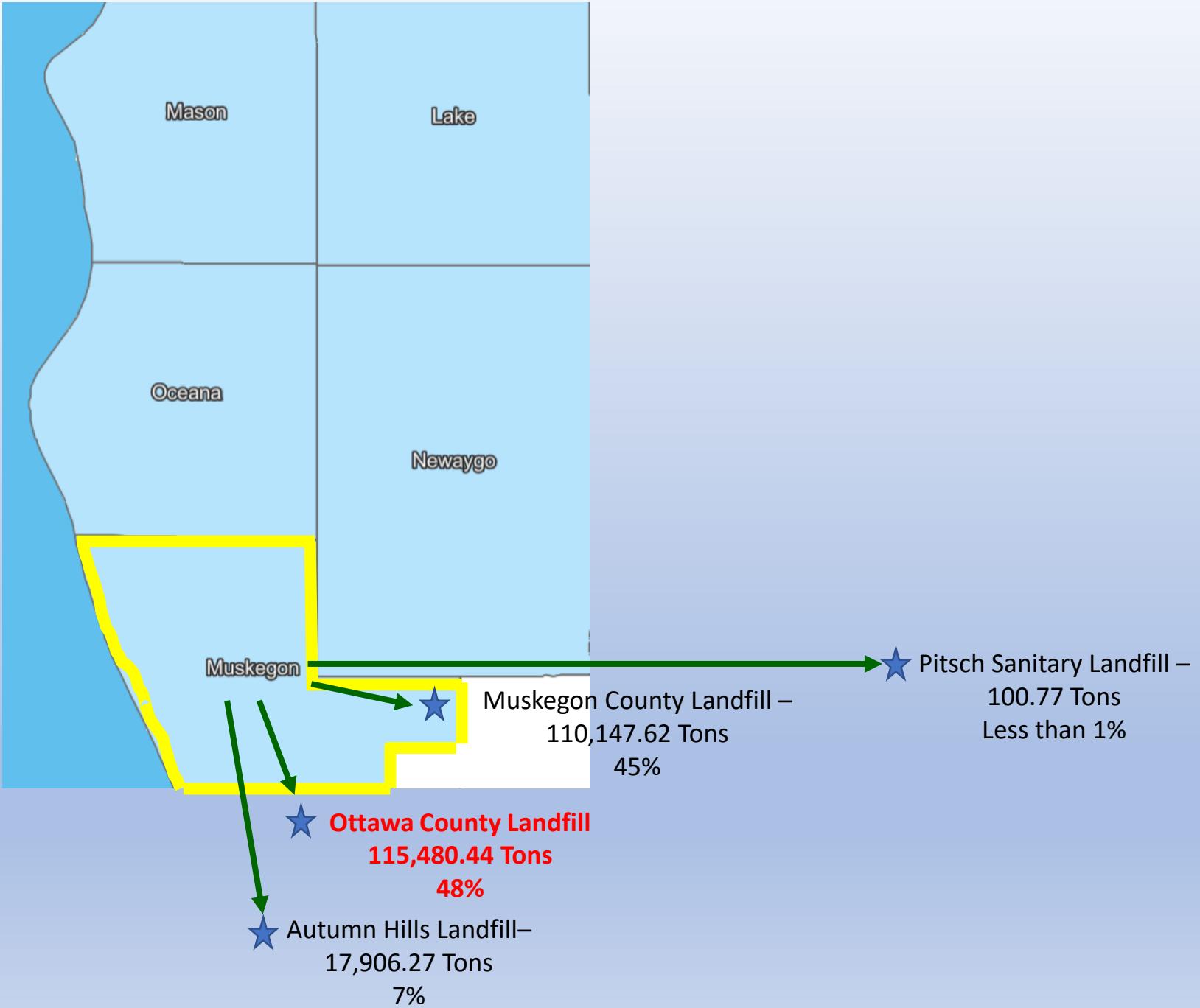
NEWAYGO COUNTY

Total Waste Disposed FY 2024 –
47,313.69 Tons



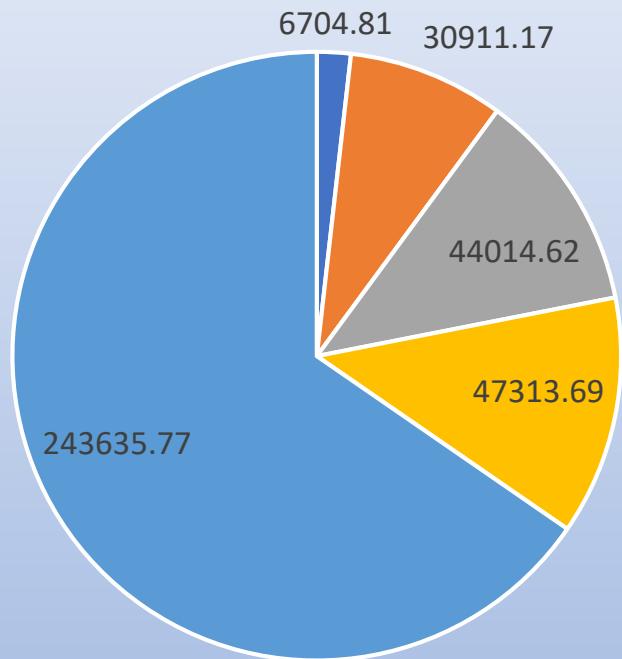
MUSKEGON COUNTY

Total Waste Disposed FY 2024 –
243,635.77 Tons

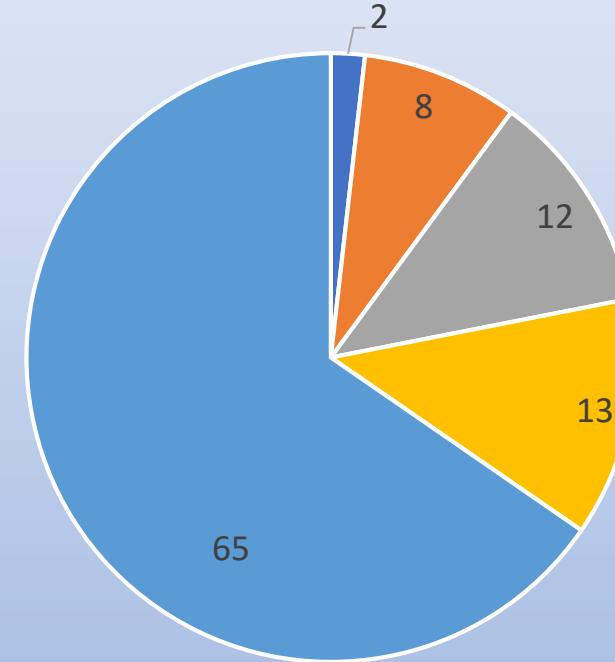


FY2024 Planning Area Waste Generation

Total Disposal Weight



Percent Waste Disposal



■ Lake ■ Oceana ■ Mason ■ Newaygo ■ Muskegon

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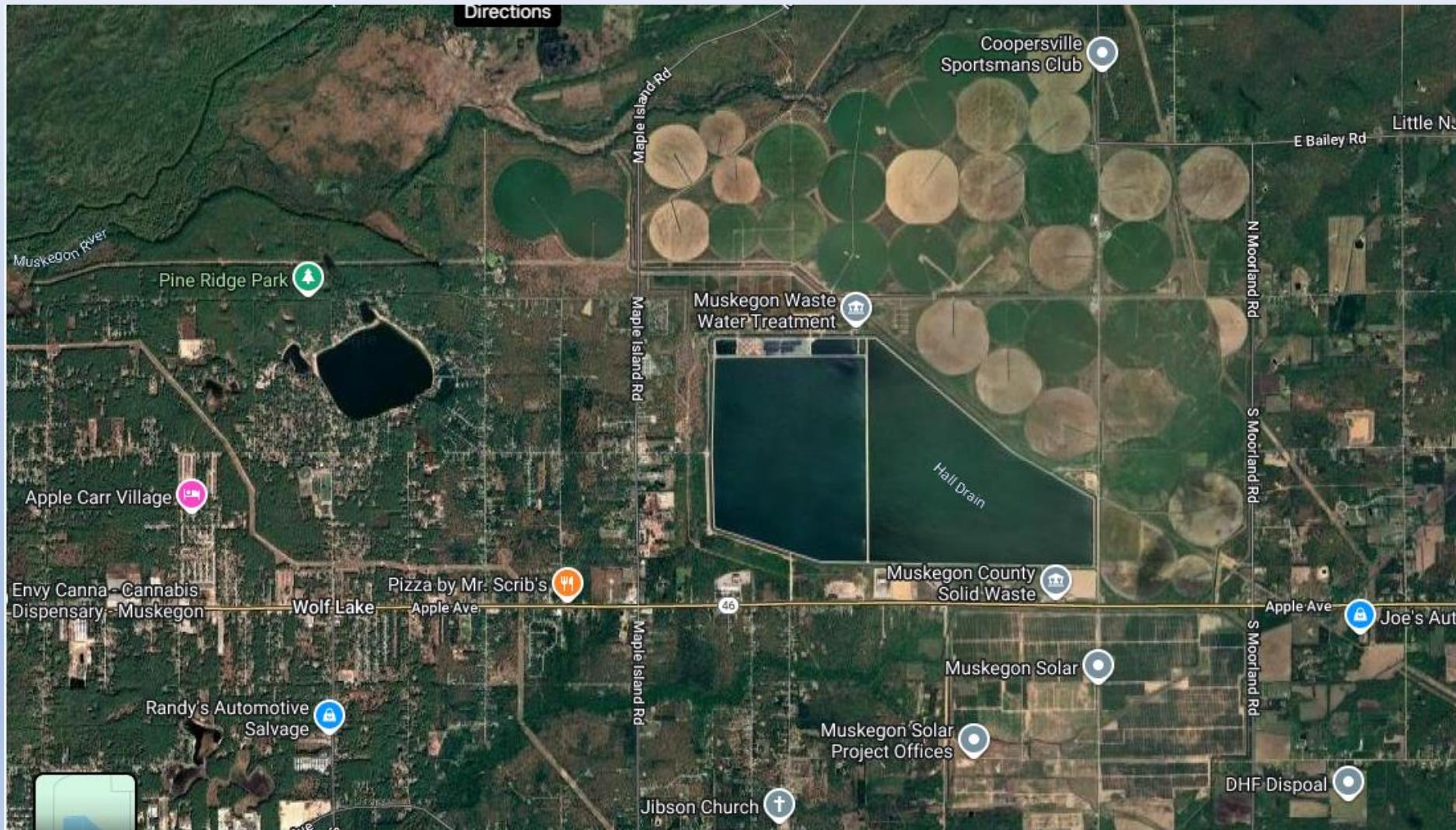
FY 2024 Waste Information

- Planning Region generated 372,580 tons of the 24,136,620 tons disposed in Michigan, or 1.5 percent of total disposal.
- There was an overall increase in solid waste disposal in Michigan of 5.43 percent.
- Waste from Michigan residents and businesses increased by 1,295,799.83 tons.
- Imported waste decreased by 52,172.37 tons.
- Total imported solid waste is approximately 18.97 percent of all waste disposed in Michigan landfills.
- 4,467,253.17 tons of waste were disposed from other states and Canada in Michigan landfills.
- The largest source of waste imported into Michigan continues to be from Canada at 14.35 percent of all waste disposed of in Michigan landfills.
- Michigan landfills have a total of approximately 21 years of remaining disposal capacity at the end of FY 2024

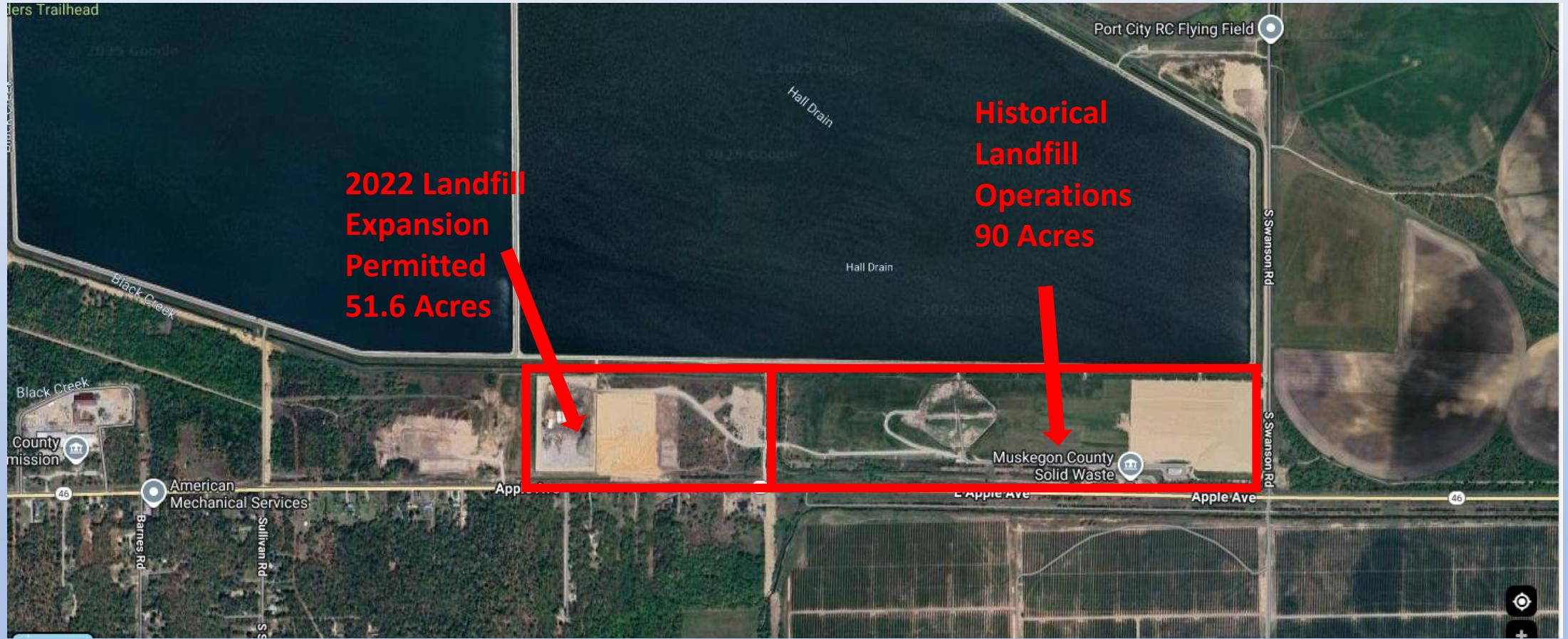
Part 2: Muskegon County Landfill

An Overview of the Active Type II Landfill

Site Location – 9366 Apple Avenue

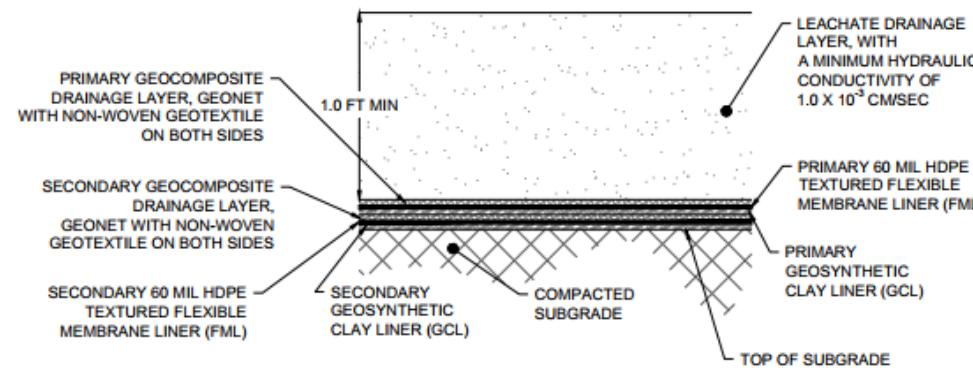


Moorland and Egelston Township

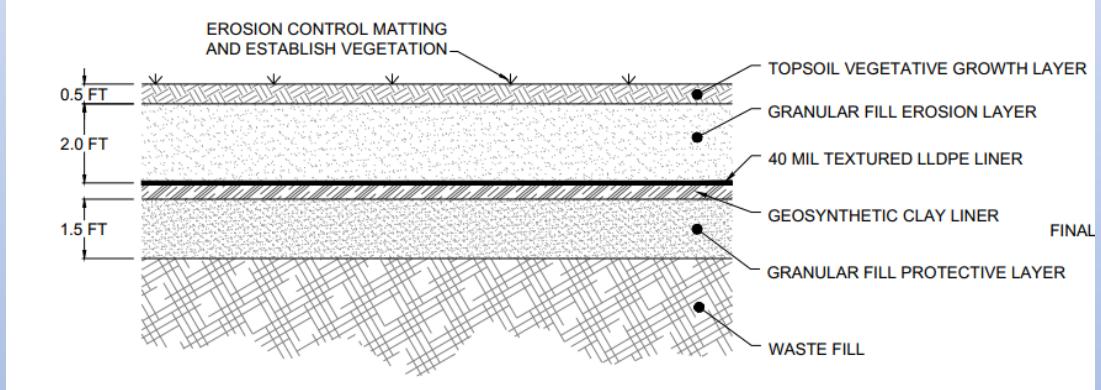


Modern Sanitary Landfill Design Standards

Double Composite Liner System With Leak Detection



Composite Capping System



Modern Sanitary Landfill Design Standards

Double Composite Liner System With Leak Detection



Composite Capping System



Expansion Cell 6 Construction

Base Geosynthetics Nearing Completion



Leachate Collection System Complete



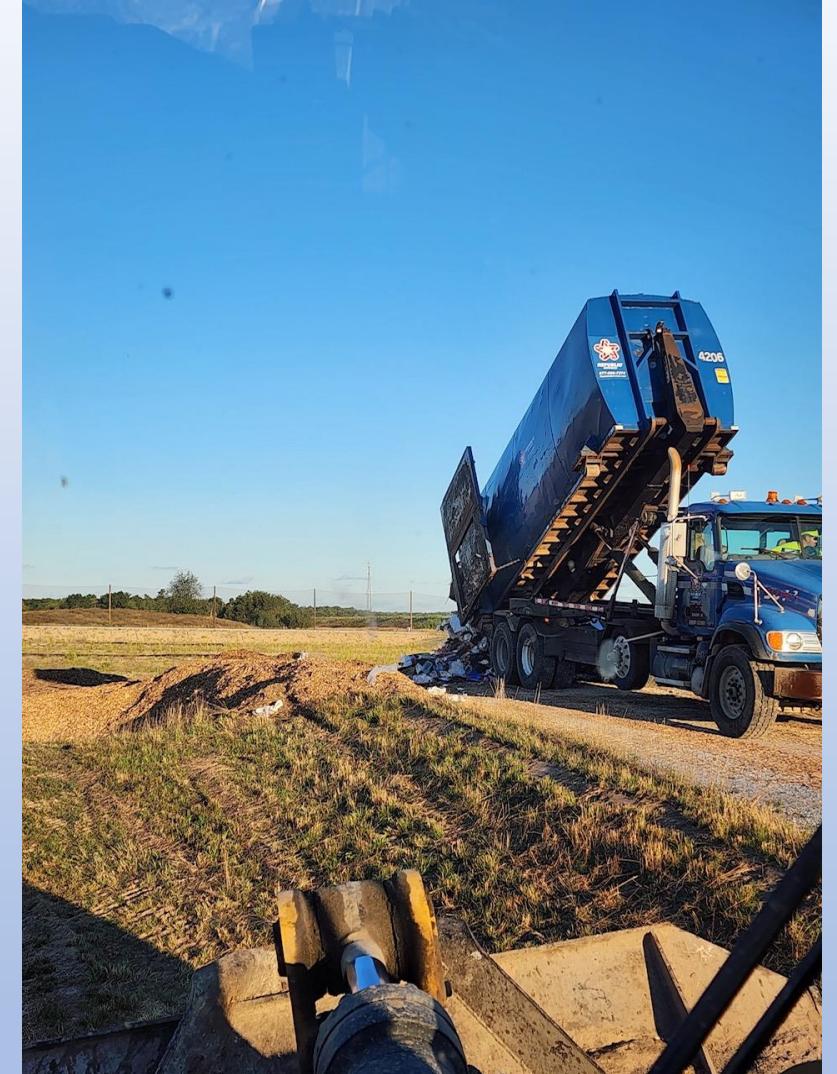
Waste Disposal Process

- Weight in on scale
- Drop material at transfer station
or
- Proceed to active landfill and
discharge load at active face
- Return to scale
- Receive ticket for disposal



Waste Disposal Process

- Deliver load to active cell
- Compact the waste materials
- Cover with soil, alternate daily cover, or tarping system



Modern Landfills:

- Protect groundwater
- Collect leachate
- Sequester materials from the environment
- Collect landfill gas for destruction or reuse



Muskegon County Landfill Waste Hauling Info

- The County does not have any hauling operations
- The County depends on waste haulers to deliver materials for disposal
- Most Muskegon County haulers have entered into a Type II Hauler Delivery Agreement
- Other Haulers operate with gate rate disposal fees and no delivery obligations

Muskegon County Landfill

Total waste received by origin FY 2024

164,557.32 Tons

- Origin of Waste Received Details:

| | | |
|-------------------|-----------------|-----|
| • Lake County | 2,343.27 Tons | 1% |
| • Muskegon County | 110,147.62 Tons | 67% |
| • Newaygo County | 27,192.99 Tons | 17% |
| • Oceana County | 17,288.38 Tons | 11% |
| • Ottawa County | 7,585.06 Tons | 4% |

Muskegon County Landfill

Total waste received by waste type FY 2024

164,557.32 tons

| • Type of Waste Received Details: | | |
|-----------------------------------|-----------------|-----|
| • Municipal & Commercial Waste | 100,905.27 Tons | 61% |
| • Industrial Waste | 1,792.33 Tons | 1% |
| • Construction & Demolition | 30,038.06 Tons | 18% |
| • Alternate Daily Cover | 31,680.72 Tons | 19% |
| • Other | 140.94 Tons | <1% |

Muskegon County Landfill Expansion Projected Lifespan

| | FY2024 | FY2025 |
|--------------------------|-----------|-----------|
| Airspace Used (CYD) | 161,656 | 277,149 |
| Airspace Remaining (CYD) | 4,569,913 | 4,292,764 |
| Tonnage Received | 164,557 | 200,705 |
| Life Remaining (Years) | 19 | 15 |
| Citizen Trips | 12,176 | 12,397 |

Part 3: Landfills and the MMP Process

A landfill supervisor perspective

Modern Sanitary Landfill

- The backbone to any Materials Management Plan
- Maintenance of adequate airspace is still important
- Most landfill diversion techniques still require disposal
- There is currently no cost effective replacement to the Modern Sanitary Landfill
- Landfills are considered a good PFAS sequestration option
- Landfills don't rely on any other waste management operation to function properly

A Landfill Supervisor Conclusions

- The MMP process should welcome the inclusion of Landfills
- The MMP should not place undo burden on landfills
- As population increases the amount of required landfill airspace will increase, even with increased diversion
- It can be difficult to get the general public to follow source separation requirements, which contaminates loads and results in disposal
- Landfill material diversion is valuable and should be pursued to the extent possible – while always maintaining a proper place for the material to go.

QUESTIONS?