

Information Item:
Update on Land Application
Communications Materials for Dakota
County

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Environment Committee: September 14, 2021



Topics

- Land Application Program Overview
- Program Partner Outreach and Feedback
- Key Messages
- Program Investment
- Communications Materials

Land Application Program Overview

History

- EPA and MPCA regulations are protective of human health and the environment
- 1979 EPA adopts regulations
- 1982 MPCA adopts regulations
- 1982 MCES receives MPCA approval and begins land application



Land Application Program Overview



Annual Production and Land Use

- Land apply in spring and fall
- 15,000 tons biosolids annually
- 500 acres per year
- 1,600 acres enrolled in MCES program

Program Partner Outreach

- Interviews: 13 by phone
- Date: August 5 - 23, 2021
- Purpose:
 - Hear feedback on the Land Application Program
 - Offer program information
- Feedback will ultimately improve the Land Application Program and enhance communications with customers and community partners
- Interviewees:
 - Leaders within the six Dakota County townships where MCES has land applied most recently
 - Farmers who participate in the MCES Biosolids Land Application Program

Program Partner Feedback

Townships

- Understand need to recycle biosolids and think MCES is responsive to concerns
- Concerned about odors, road impacts, and what is in biosolids
- Want to understand how MCES practices protect human health and the environment and what is being done to understand the long-term impacts of land application in the community



Program Partner Feedback



MCES Program Partner: Joe Meyers
Photo Credit: HDR, Jessilyn Marth

Farmers

- Supportive of and familiar with the program
- Most concerned about compaction
- Would like more information to share with neighbors and local officials
- Interested in increased involvement from MCES:
 - Incorporation
 - Crop Consultant

Key Messages

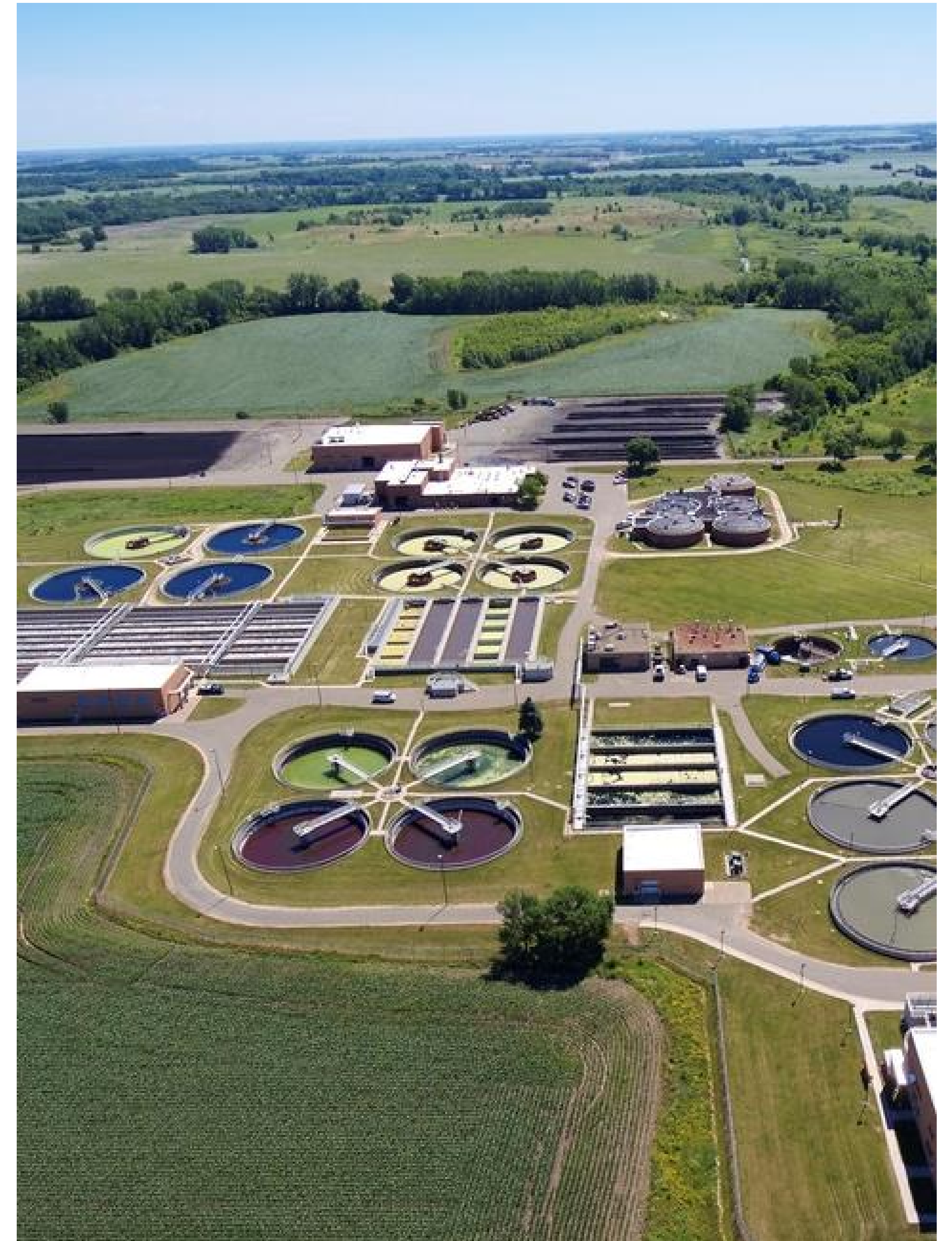
- 1) Biosolids are a valuable renewable resource produced at wastewater treatment plants that should be recycled.
- 2) Land application at the Empire Wastewater Treatment Plant benefits Dakota County and Empire Township.
- 3) Biosolids production and land application are highly regulated to be protective of public health and the environment.
- 4) MCES is committed to investing in and improving the land application program.
- 5) Collaborating with communities, watersheds, and industries to reduce pollutants at the source is often the most cost effective and efficient way to address regional water quality challenges.

Program Investment

Objectives/Goals

- Increase solids digestion and pad storage capacity
- Add combined heat/power system to convert digester gas to electricity
- Renew boiler system

Schedule




Communications Materials

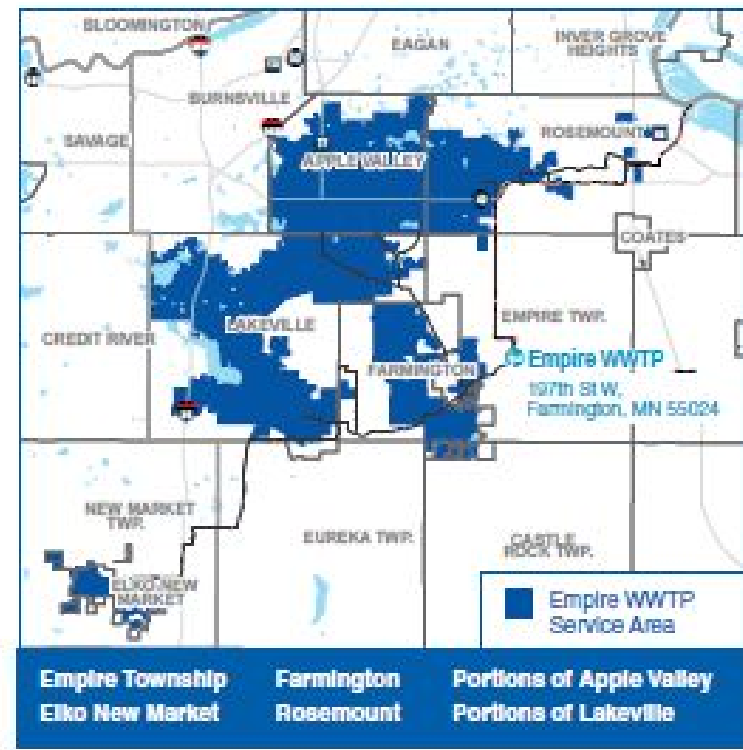
- Website – metro council.org/landapp
- Program Resources
 - Empire WWTP Overview
 - Land Application Program
 - Long Term Stewards Together
 - PFAS Fact Sheet

METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES (MCES)

EMPIRE WASTEWATER TREATMENT PLANT

Land Application Program






Empire Township
Elko New Market

Farmington
Rosemount

Portions of Apple Valley
Portions of Lakeville

Biosolids produced at the Empire Wastewater Treatment Plant can be used by local farmers to improve soil health and promote plant growth. Land application services are free to farmers enrolled in the program.




"We've used the product as the first-year treatment and utilized the nitrogen value, which reduces our costs. And in the fall [application] years, it's helped raise our phosphorous levels. So, it's been a cost value for us."

— Paul Beskau, Marsha Township

Biosolids land application is a common practice. Nationwide, over 50% of **biosolids** are land applied¹ and more than 98% of Minnesota's wastewater treatment plants land apply².


Learn more:
epa.gov/biosolids pca.state.mn.us/water/biosolids
¹USEPA, 2019, ²MPCA, 2014



Biosolids are stored onsite until they can be land applied spring or fall.

Key Steps


- ✓ Test **biosolids** before application
- ✓ Select farm fields and determine application rate
- ✓ Notify neighbors and community leaders



MCES works with farmers and community leaders to deliver **biosolids** to MPCA approved fields in Dakota County.

Key Steps

- ✓ Control dust on delivery routes
- ✓ Repair and level roads



MCES applies **biosolids** before planting (spring) or after harvest (fall), and farmers incorporate **biosolids** into the soil.

Key Steps

- ✓ Submit annual reports to MPCA to confirm best management practices are followed.

What is in **biosolids?** Beneficial elements in **biosolids** increase crop yield, improve drought tolerance, and reduce the need for commercial fertilizers:

<p>Carbon</p> <ul style="list-style-type: none"> ✓ Holds nutrients near the soil surface ✓ Improves overall soil health ✓ Retains water, reduces runoff, and prevents erosion 	<p>Nitrogen Phosphorus Potassium</p> <ul style="list-style-type: none"> ✓ Slow-release organic nitrogen, phosphorus, and potassium are fertilizers 	<p>Copper Nickel Zinc</p> <ul style="list-style-type: none"> ✓ Trace elements essential for plant growth and development
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Throughout this process MCES:

- Manages odors associated with **biosolids** to be a good neighbor
- Works with farmers to minimize compaction
- Monitors weather conditions

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Questions

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