Biosolids Management Study
Biosolids Management Study: History

1930's Nitrohumus

1979 Metrogro

1993 Metrogro Storage

2005 Metromix
Biosolids Management Study: Land Use
Biosolids Management Study: Climate Change
Biosolids Management Study: Goals

Drivers and Model Inputs:
- Performance
- Costs
- Energy/Emissions
- Product Quality
- Feed Solids
- Transport/Hauling
- Regulatory Compliance

Biosolids Market and Regulatory Analysis

Biosolids Onsite Technologies

Narrow the World of Alternatives

High-Level Screening Analysis

Shortlist of Conceptual Alternatives

Economic Evaluation

TBL Evaluation

Refine the Preferred Conceptual Alternative

Alternatives Analysis Matrix with Implementation Recommendations

Visioning Plan
Biosolids Management Study: Plan

- **Baseline (2018)**
  - 0-5% Class A Cake Customer Pickup
  - 95-100% Class B Liquid Land Application

- **Install More Dewatering Units**
  - 30% Class A Cake
  - 70% Class B Liquid

- **Increase Cake Production**
  - 70% Class A Cake
  - 30% Class B Liquid

- **Generate Compost**
  - 10% Class A Cake
  - 30% Class A Compost
  - 60% Class B Liquid

- **Shift to Drying**
  - 100% Class A Pellet

- **Shift Toward Emerging Market**
  - 70% Class A Cake
  - 15% Emerging Market
  - 15% Class B Liquid Land App.
Biosolids Management Study: Timeline

**TASKS**

**A. Understanding the Issues**  
January 1—February 28, 2020
- Data Management Assessment
- Biosolids Application Assessment
- Biosolids Infrastructure Assessment

**B. Confirm Goals & Develop Evaluation Metrics**  
February 28—March 20, 2020
- Vision, Triggers & Drivers Evaluation

**C. Alternatives Evaluation**  
March 20—July 10, 2020
- Nutrient Management & Market Analysis
- Data Management & Geospatial Mapping
- Biosolids Processing Technology
- Evaluation of Nutrient Management & Market Alternatives
- Evaluation of Data Management & Geospatial Mapping Solutions
- Evaluation of Biosolids Processing Technology Options

**D. Plan Delivery**  
July 10—September 1, 2020
- Nutrient Management & Market Analysis
- Data Management & Geospatial Mapping
- Biosolids Processing Technology

*Madison Metropolitan Sewerage District*
Biosolids Management Study: Solicitation

- 18 consulting firms contacted
- 8 firms attended a pre-proposal meeting
- 4 proposals received
- Team of MSA and Black and Veatch selected
Biosolids Management Study: Recommendation

Awarding the professional services project to MSA:

Amount of $187,496 with a total authorization not-to-exceed $206,245 (10% contingency)
Questions?