Michigan Water Resource Recovery Utility of the Future

MWEA 2017 Annual Conference

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Outline

• Background
• MDEQ and MWEA Partnership
• Key Initiatives
  ▫ MI WRRF Leadership Summit & Vision Document
  ▫ WRRF Recycling Metrics & Energy Survey
• Call to Action
  ▫ Outreach
Background

- MWEA Annual Conference - 2015
- Ed McCormick – Utility of the Future
- Governors Recycling Goal
- Bill Creal – Recycling Metrics
Who is embracing this?

- **Energy Reduction**
  - Linden Plant
  - Grand Rapids
  - Wyoming
  - Delhi Township
  - City of Warren
  - City of Monroe
  - Bay County
  - City of Clare
  - City of Flint
  - City of Frankenmuth
  - Saginaw Charter Township
Who is embracing this?

- **Energy Production**
  - Grandville
  - Delhi
  - Midland
  - Flint

- **Waste Heat Recovery**
  - Grand Rapids
  - Grandville

- **Name Changes**
  - East Lansing
  - Grand Rapids
  - Linden Plant, Dist #3
MDEQ - MWEA Partnership
MDEQ Grant to MWEA

Signed at 2016 WWAdCon
Grant Tasks

1. Grant Management
2. Recycling Metrics & Baselines, Energy Survey
3. Literature Review
4. WRRF Leadership Summit
5. Summit Recap and Vision Document
6. Recognition Program Recommendations
7. Outreach Program
WRRF Leadership Summit

Conducted on April 8, 2016

Presentations Available at MWEA Website
WRFF Leadership Summit
Summit Organization

• **Morning Session:**
  ▫ Presentation of Vison
  ▫ Description of WRUOF
  ▫ Presentations on Utility of the Future Topics, Metrics, Etc. (*All on MWEA Website*)
Summit Organization

- Focus Groups
- Report out of Focus Groups
Leadership Summit Take-Away’s

- Significant Investment Needed
- There are many drivers for Change
  - Discharge Limits
  - Aging Work Force
  - Variability of Costs
- Need for increasingly high skill level for operations
- Funding difficult to obtain.
- There is vision and enthusiasm.
Leadership Summit Take-Away’s

• Technologies exist but may not be familiar
• Standards for regulating new technologies may not exist.
• Innovation is viewed by many as being difficult and frustrating.

• The primary barriers to innovation appear to be the effort required to have new ideas adopted, the associated regulatory risks, and lack of funding.
Work Product

• Summary of Water Resource Recovery Leadership Summit
• A Vision for the Transformation of Michigan’s Wastewater Industry to WRRFs
• Recycling Metrics
• Energy Survey and Energy Baseline
• Review of Existing Literature
WEF Recognizes 61 Utilities for Exceptional Performance

September 14, 2016

Achievements, WEF Resources & Efforts
Reduced Operating Cost

Energy Efficiency

and

Energy Recovery

Grand Rapids Energy Recovery
Improve the Environment

http://grcity.us/enterprise-services/Environment-Services/Pages/River-of-Dreams-Rain-Garden.aspx
Resiliency to storms and other events

Energy Generation

Grandville Digester Gas to Energy

Photo Credit: Moore & Bruggink
Integrated Facility

Grandville Digester Blower Energy Complex

Photo Credit: Moore & Bruggink, Inc.
Support for New Projects

Community partnering and engagement

Delhi Charter Township

Ref: Sandra Diorka, Delhi Charter Township
Community involvement helped a Connecticut water authority create a unique building and a landscape with educational and functional values.
Plan for Succession

Organizational Culture prepares staff for advancement

Photo Credit: Michigan WEA Staff
Putting byproducts to good use

Beneficial Biosolids Reuse

Nutrient & Materials Recovery

Partnerships

GLWA Owned – NEFCO Operated Biosolids Drying Facility
Call to Action

- Change the name of your facility to a WRRF
- “Utility of the Future – Today” Application
- Establish the right culture
- Offer tours
- Get involved in community events
- Obtain a copy of WEF “Energy Roadmap”
- Focus on Efficiency and Production of Energy
- Beneficial use of solids
Thank you

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