



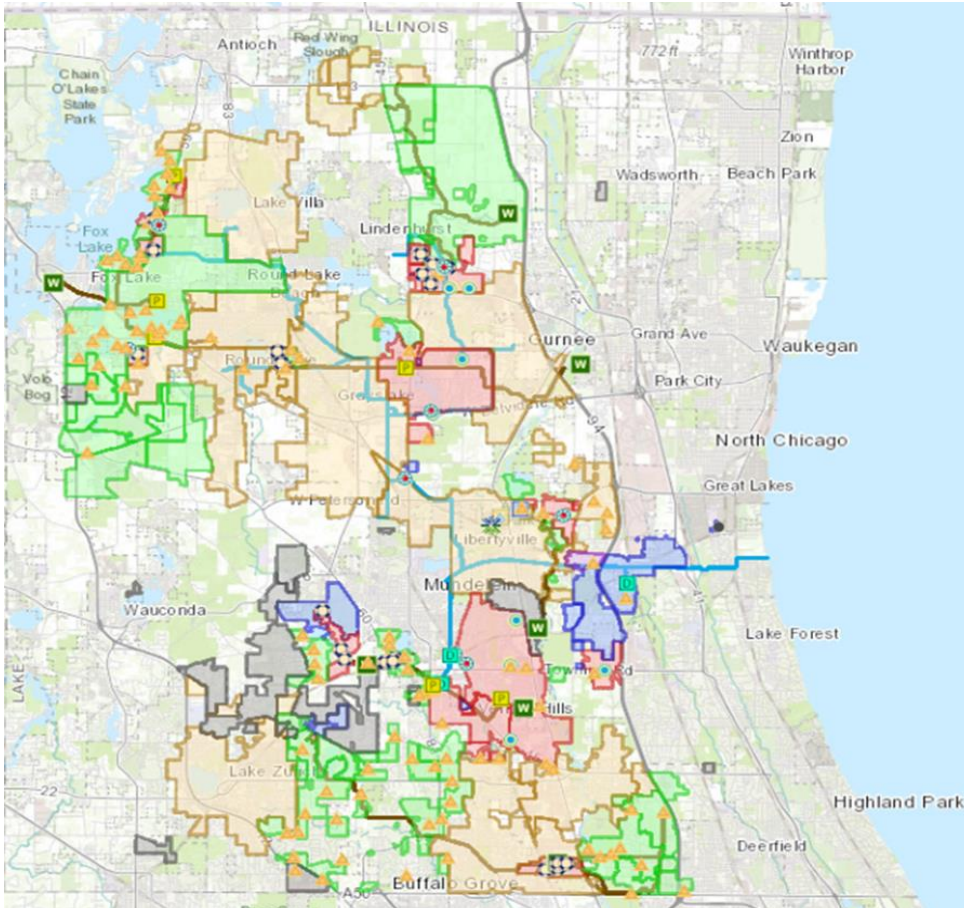
Lake County Public Works Annual Update

Austin McFarlane
Interim Director

April 07, 2021

Public Works Mission: Deliver exceptional, financially sustainable, reliable, drinking water and wastewater services in a safe manner, ensuring high quality service, public health and environmental stewardship.

Services Provided Through a Network of Systems



- A. Continued essential services to > 40% of County residents**
- B. 13 Water Systems**
 - Ground and Surface water
 - 8 towers and 9 reservoirs
- C. 3 Wastewater Reclamation Facilities**
 - 107 lift stations
 - 5 pump stations
 - 7 regional interceptor sewers
 - 7 sanitary sewer systems

Accomplishments

A. Successful Revenue Bond Refinancing

- \$3M Debt Service Savings
- Savings used for projects that will benefit community

B. Plant of the Year Nomination

- Des Plaines River WRF
- Safety, Plant Performance, New Technology



Accomplishments

C. Lab – Inductively Coupled Plasma Mass Spectrometry (ICPMS)

- New metal analyzer (Cu, Pb, Zn, Ni, Ag, etc.,)
- Meets the low detection limit for lead in drinking water
- Cost savings
- Pending IEPA approval – May 2021



A. Equipment Review

- Aeration mixers – New Century Town WRF
- Replace Sulzer with Flygt
- Potential savings

Brand	Kilowatt Hour Cost	Average KWH Per Day	Average Cost Per Day to Operate	Average Cost Per Year to Operate
Sulzer Mixer	\$.80	86.24	\$68.992	\$25,182.08
Flygt #4230 Mixer	\$.80	41.29	\$33.032	\$12,056.68

Potential Yearly Energy Savings	\$13,125.40
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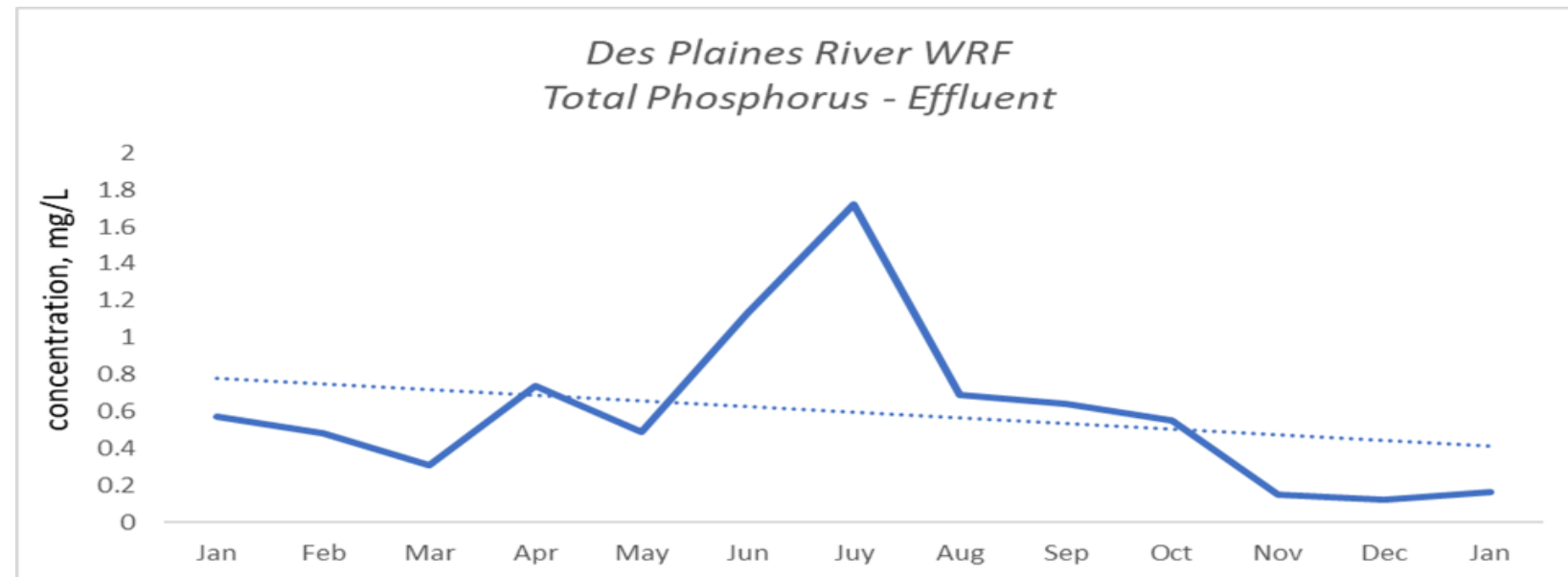


B. Process Review (Molasses Use)

a) Molasses results

b) Benefits:

1. Meet future permit limit
2. \$M construction cost savings
3. 50% reduction in phosphorus discharge



Regulations & Compliance

A. IEPA – NPDES Permits

- 1. Pretreatment**
- 2. Total Phosphorus, Residual Chlorine**
- 3. NARP – Nutrient Assessment Reduction Plan**

B. System Performance

- 1. All drinking water samples (chemical and biological)
100% compliance**
- 2. All wastewater permit related samples – no violation
100% compliance**

Capital Improvement Plan

Project Description	Project Type	Construction Year	Programmed Cost
Midland Dr. Force Main	Preservation	2020	\$1M - \$5M
Hawthorn Tower Rehab.	Preservation	2020	<\$1M
Vernon Hills Electrical Rehab.	Modernization	2020	\$1M - \$5M
SEC DPR Siphon Lining	Preservation	2021	<\$1M
Wilson/Rollins Drop Chamber Lining	Preservation	2021	\$1M - \$5M
Sunset Drive Gravity Sewer	Preservation	2021	<\$1M

Capital Improvement Plan

Project Description	Project Type	Construction Year	Programmed Cost
Brooks Farm Water Tower Rehab.	Preservation	2021	<\$1M
Hawthorn Fashion Square Watermain Replacement	Preservation	2021	\$1M - \$5M
Pekara Water Main Replacement	Preservation	2021	<\$1M
Wilson & Rollins Road Sewer Lining	Preservation	2021	<\$1M
IL Rt. 83 Force Main Realignment	Preservation	2021	<\$1M



Questions?