



City of Clintonville WWTP

Wisconsin Wastewater Operators Association

Lake Michigan District Winter Meeting

February 18, 2016

Presented by Phil Korth



History

- ❖ Facility Plan in 1986
- ❖ Design of Major Upgrade in 1988
- ❖ Construction Complete in 1989
- ❖ No Significant Upgrades or Modifications Since 1989

≡ Design Capacity

- ❖ Annual Average Flow Rate – 0.636 MGD
- ❖ Peak Hour Flow Rate – 3.419 MGD
- ❖ BOD₅ Loading – 2,751 lbs/day
- ❖ TSS Loading – 3,191 lbs/day

☰ Current Conditions

- ❖ Annual Average Flow Rate – 0.595 MGD
- ❖ Peak Hour Flow Rate – 2.082 MGD
- ❖ BOD₅ Loading – 1,442 lbs/day
- ❖ TSS Loading – 1,689 lbs/day



Current Effluent

❖ BOD ₅ mg/l	6.2
❖ TSS mg/l	3.8
❖ Ammonia mg/l	0.9
❖ Phosphorus mg/l	0.6



Effluent Limits

❖ Parameter	Monthly Average
❖ BOD ₅ and TSS	30 mg/l
❖ Ammonia	11 – 18 mg/l
❖ Phosphorus	1.0 mg/l
❖ Seasonal Disinfection	

≡ Future Effluent Limits

- ❖ No Change to BOD, TSS and Ammonia
- ❖ Water Quality Based Phosphorus Limit will be 0.47 mg/l

Existing WWTP

- ❖ Raw Wastewater Pumping
- ❖ Fine Screen
- ❖ Grit Removal
- ❖ Oxidation Ditch Activated Sludge
- ❖ Final Clarifiers
- ❖ UV Disinfection

Existing WWTP

- ❖ WAS from Oxidation Ditch
- ❖ Dissolved Air Flotation Sludge Thickening
- ❖ Remote Liquid Sludge Storage Tank
 - ▶ On Airport Property – Need to Relocate



Need For Project

- ❖ Replace Aging Equipment
 - ▶ Oxidation Ditch
 - ▶ Final Clarifiers (Plus New Dome Covers)
 - ▶ Influent Screen
 - ▶ Process Pumps
 - ▶ Chemical Feed Pumps
 - ▶ Polymer Feed for DAF system

≡ Need For Project

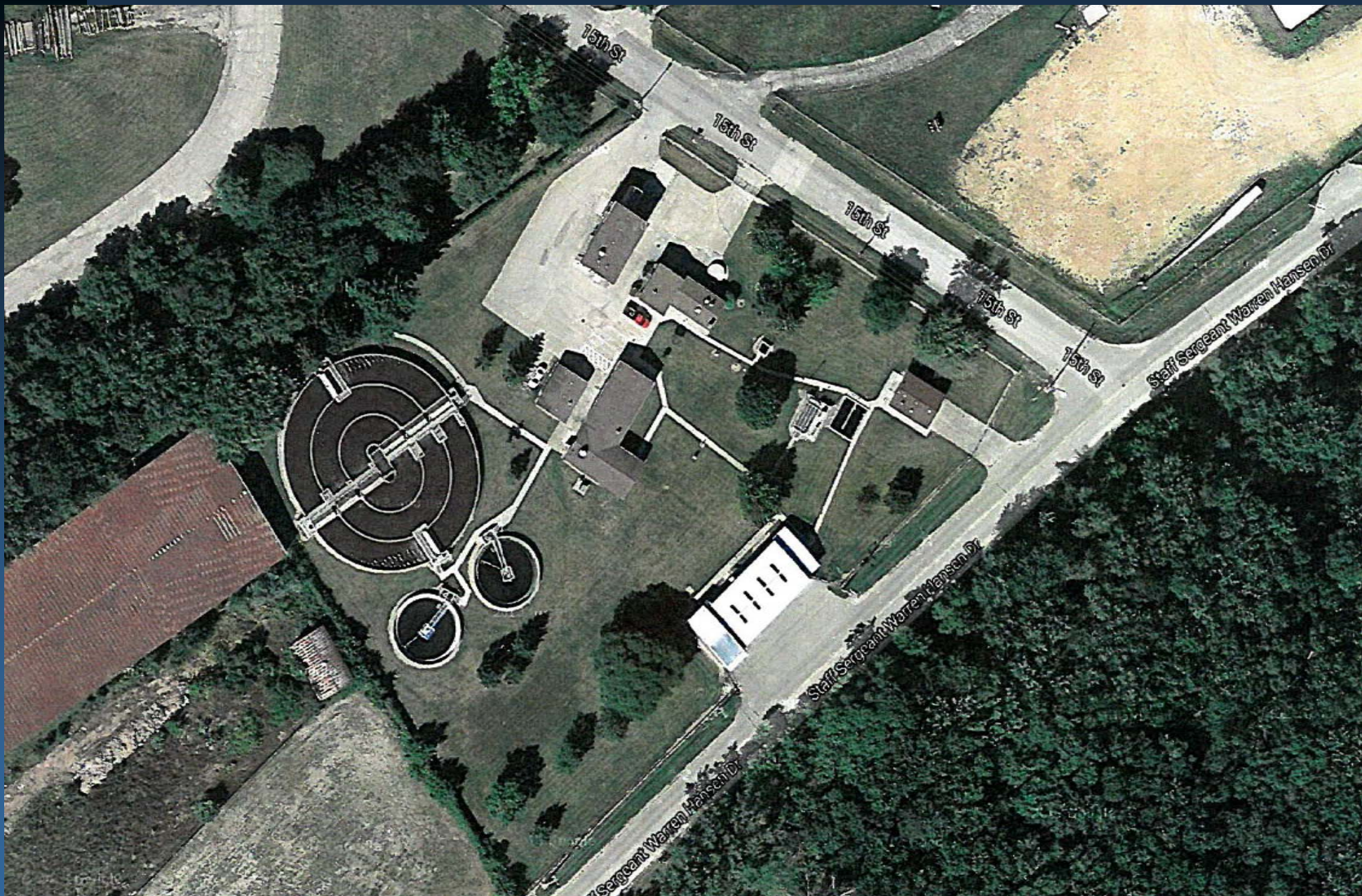
- ❖ New Structures

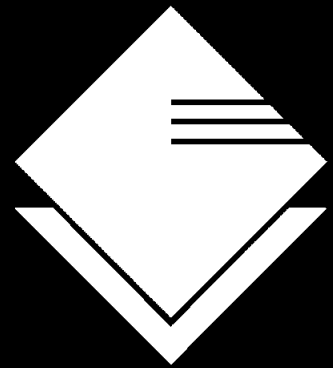
- ▶ Selector Tank for Bio-P Removal
- ▶ Influent Lift Station With Screen Preceding Pumps
- ▶ Sludge Storage Tank and Mixing System

- ❖ Upgrade Existing Structures

- ▶ Mechanical/Plumbing/Electrical/Architectural
 - ◆ Four Main Process Buildings

- ❖ SCADA





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