Delaware County Regional Sewer District

Biosolids Master Plan

Pre-Proposal Conference

Introductions

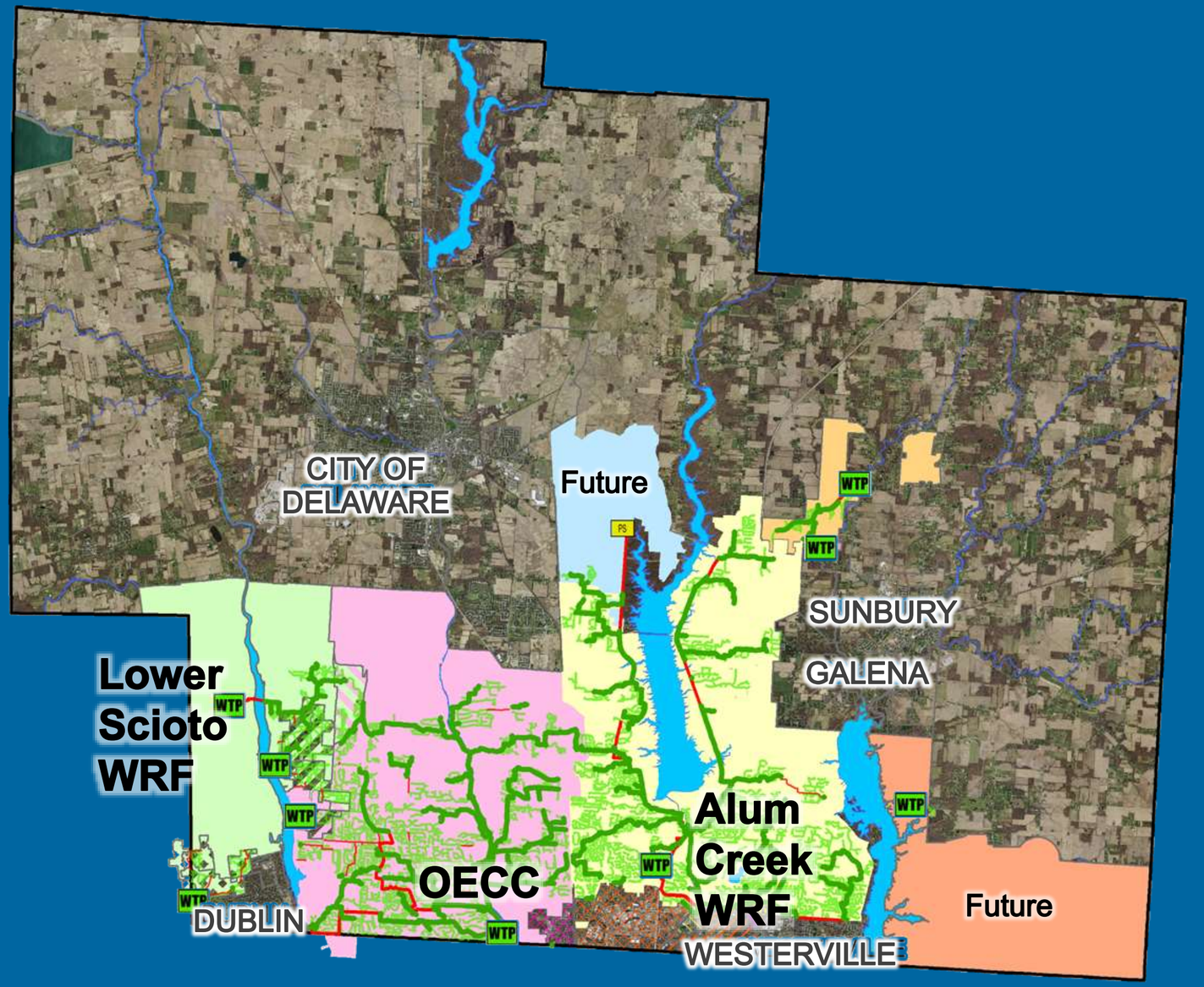
- Erik McPeek, Deputy Director of Operations
- Jason Watts, Operations Superintendent
- Julie McGill, Staff Engineer

Agenda

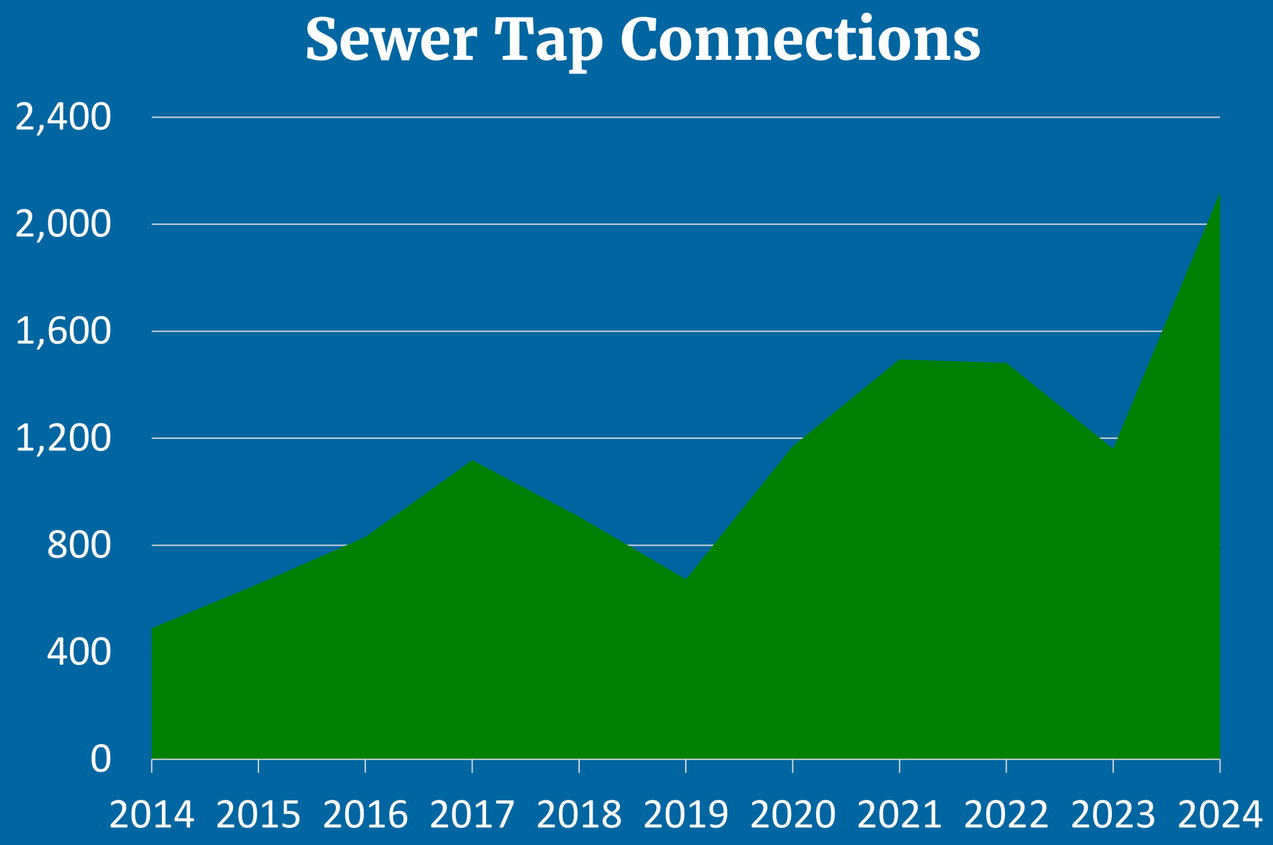
- Background
- Project Objectives & Scope
- Existing Biosolids Facilities
- Questions

DCRSD Highlights

- 43,700 Users = 127,000 Residents
- 9 Wastewater Treatment Facilities
  - Alum Creek WRF: 10 MGD
  - OECC: 6 MGD
  - Lower Scioto: 1.4 MGD
- 32 Pump Stations
- 550 Miles of Sewer



Regional Sewer District Growth



2024 taps: **2,120**

2025 taps thru April: **614**

Project Objectives

- Comprehensive strategy for the processing and management of biosolids from all DCRSD treatment facilities
- Identify and evaluate all available options for dewatering, handling, transport, and disposal
- Recommend equipment and improvements
- 30% design of immediate recommendations with intent to advance to Part 2 Detailed Design

Project Considerations

At a minimum:

- Site conditions
- Costs
- Regulatory uncertainty (PFAS)
- Anticipated growth
- Operations and maintenance
- Odor control

Existing Biosolids Facilities:

ALUM CREEK WATER RECLAMATION FACILITY

ACWRF Sludge Storage

- Aerobic digestion & land application discontinued in 2007
- All 9 tanks retrofitted with diffusers since 2015
- Currently use 3 tanks for WAS storage

ACWRF Sludge Storage

- 3.4 million gal liquid sludge hauled annually from package plants
- 10% hauled by contractors
- Liquid hauling will drop to 1.7 million gal after 2025 Scioto Reserve WRF decommissioning

ACWRF Dewatering

- Waste activated sludge (WAS) is dewatered with 2-meter Komline-Sanderson belt filter press
- Thickener on the left is unused and inoperative

ACWRF Dewatering

- Belt filter press is 25 years old
- Can also be used for thickening
- Dewatered cake is 13-15% solids

ACWRF Conveyor

- Dewatered cake is conveyed by Serpentix conveyor directly to adjacent truck loading facility
- No cake storage available on site

ACWRF Truck Loading & Disposal

- Truck must be moved for even loading
- No scales
- Average 9 loads per week
- Disposal at Crawford County Landfill

Existing Biosolids Facilities:

OLENTANGY ENVIRONMENTAL CONTROL CENTER

OECC Sludge Storage

- 12 Sludge storage tanks, no digestion
- Tanks can also be used as equalization storage

OECC Rotary Drum Thickener (RDT)

- Wasting is continuous to RDT
- Up to 4% solids discharged into thickened waste activated sludge tanks

Rotary Drum Thickeners

OECC
TWAS Storage

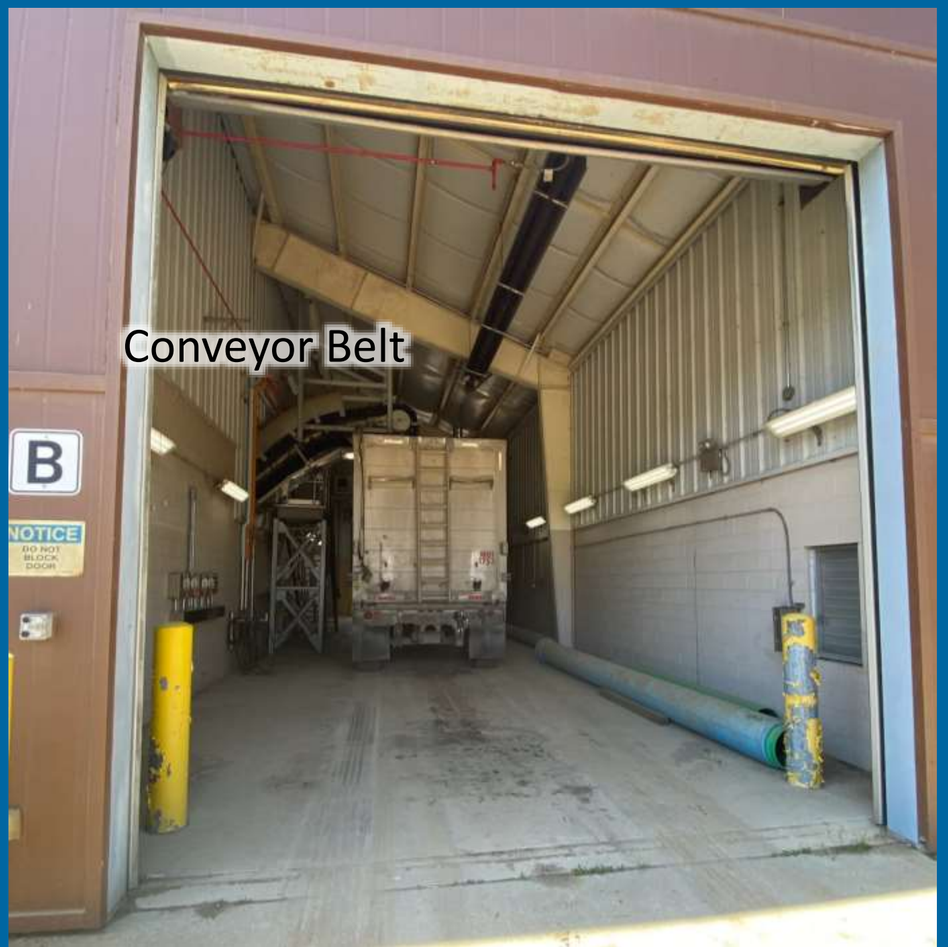
- Two thickened waste activated sludge (TWAS) tanks available
- Normally one tank in service
- TWAS tanks mixed with mixer, no air

OECC Dewatering

- Original Andritz centrifuge added in 2009
- Second centrifuge added in 2025 for redundancy
- Makes an average of 19-20% cake

OECC Truck Loading

- No cake storage at facility
- Centrifuge discharges onto conveyor and into trailer
- All biosolids hauled by a contractor, 3 loads per week, to landfill



Existing Biosolids Facilities:

LOWER SCIOTO WATER RECLAMATION FACILITY

LSWRF Sludge Storage

- Built in 2007
- Began operation in 2017
- WAS is pumped to two aerobic covered digesters
- Additional biosolids can be brought for digestion and dewatering, but are not currently

LSWRF Dewatering

- Centrisys centrifuge
- Cake averages about 21% solids

LSWRF Truck Loading

- One load approx. every two weeks, hauled by the County
- Currently dispose of 274 wet tons per year
- Flow will more than double after Scioto Reserve WRF is taken offline

Existing Biosolids Facilities:

NORTHSTAR WATER RECLAMATION FACILITY

Northstar WRF

- Constructed in 2007, ADF 0.08MGD
- Currently has about 600,000 gallons of sludge hauled away to ACWRF annually

Northstar WRF

- Currently equipped for sludge dewatering with an Andritz centrifuge
- This centrifuge has never been in regular operation

Andritz Centrifuge

Northstar WRF

- A pleated conveyor belt lifts sludge to open air truck bay

Northstar WRF

- Truck bay will be enclosed and a photoionization odor control system will be installed as part of current upgrade

Questions