

Middle East Fork WWTP Improvements

Project Description:

Located in Batavia Township. This projects calls for the evaluation and recommendation for improvements to the Middle East Fork WWTP. Areas of evaluation include the fine screens, grit removal, septic receiving station and aeration basin blowers, with the objective of increasing peak wet weather treatment capacity to 18.0 MGD. Recommendations will include future nutrient removal and equalization capacity.

Operations Requests:

Existing Rotating Fine Screens – Replace or Rehab.
Existing Tea Cup Girt Removal – Replace or Rehab.
Existing Septic Receiving Station – Replace or Rehab.
Existing Centrifugal Blowers for the Aeration Basins – Replace with PD Blowers.

Wastewater Master Plan Update – Relevant Projects:

MEF-P1-T1 – WWTP modifications to augment wet weather treatment capacity to 18 MGD.
MEF-P2-T2 – WWTP modifications to address nutrient removal.
MEF-P3-T3 – WWTP modifications to augment EQ capacity.

The WWMPU is available at:

<https://wrd.clermontcountyohio.gov/2018/07/18/waste-water-master-plan/>

Background:

- Original plant constructed in 1970.
- Plant expansions in 1979, 1985, 1986 and 1990.
- Mechanical Screen replaced in 2007.
- Aerations equipment and electrical upgrades in 2011.
- Bi-solids and dewatering equipment added in 2014.

General Questions and Answers:

1. Can you provide with MEF's average daily flows over the last four to five years?

	MGD	MGD	MGD
Year	Average	min	max
2017	4.52	2.23	13.88
2018	5.27	2.72	15.14
2019	5.35	2.48	14.14
2020	4.78	3.18	13.61

2. When you use EQ at the plant, where is it returned to? The EQ return flow enters after the bar rack and before the influent pumping on the east side.
3. Do we ever blend the EQ discharge with treated discharge before UV and release to the river? If the EQ overflows then the BYPASS would join the effluent flow and pass through the post air tank and either head to the UV or UV bypass channel depending on the summer or winter EPA calendar.
4. What is our current wet weather treatment capacity? Hydraulic peak design is 15 MGD for 4 hours. We have pushed 20 MGD for 8 hours in the past 2 years after the EQ's were full and still met UV permit limit. When high flows occur the flow will jump gates before the grit units, fine screens, primaries, and any unused aeration tanks. We are currently restricted to 6 of 8 aeration tanks due to air loss in the transmission line.
5. When is the plant's permit up? Permit was just renewed and started on June 1, 2020. The new permit will expire in May 31, 2025. The permit can be reviewed on the OEPA website:
<http://wwwapp.epa.ohio.gov/dsw/permits/doc/1PK00010.pdf>
6. What is the permit limit for phosphorus? Weekly monitoring requirement only for phosphorus, no limits.