November 8, 2016

Matthew Lindsay
Manager, Environmental Planning
MVRPC
One South Main Street, Suite 260
Dayton, OH 45402

RE: Facility Planning Area Modification Request (City of Dayton)

Mr. Lindsay:

Please accept this letter as a follow-up to the letter dated October 14, 2016 from the MVRPC regarding Dayton’s FPA update request. Each of the additional items requested are explained/provided below:

Item B
It is the City of Dayton’s position that projected flows from the airport (including all expansion areas) will not exceed the capacity at the plant. Previous information provided identified the population equivalent that the current plant will support. In summary, given current reserve capacity at Dayton’s WRF and current population trends, the existing FPA could nearly double in size and the plant could support flows, CBOD, and suspended solids. Please keep in mind Dayton’s WRF is regulated by the Ohio EPA via an existing NPDES Permit and capacity monitored via PTI’s issued by the Ohio EPA. Available capacity to support additional area from a modified FPA is not a concern and the plant can support this FPA change immediately.

Item H
The City of Dayton, Department of Water and the Dayton International Airport (DIA) completed numerous studies to support potential development at the DIA and surrounding areas and the change to the FPA. All plans developed support this requested FPA change. Each is identified below:

- DIA Sanitary Sewer Pump Station Study (May 2009)
- Sanitary Master Planning at DIA (2013)
- Airport Flow Monitoring (On-going)
- City of Dayton Sanitary Sewer Master Plan (2008)
- Sanitary Sewer Upgrades to Support Sanitary Sewer Service at DIA (2016)
Item I
Most recently, two presentations were conducted by the DIA. The first was held on July 15, 2016 and the second was held on September 19, 2016 regarding sanitary sewer upgrades/changes. Sign in sheets are provided for each presentation (see attachments).

Sincerely,

Michael Powell, Director
Department of Water

c: Tammi L. Clements, Deputy City Manager
   Terry Slaybaugh, Director of Aviation
   Aaron S. Zonin, PE, Deputy Director of Water
   Chris Clark, Manager Division of Water Reclamation

Enclosures
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Agenda

- Introductions
- Background – Overview, Existing Conditions, Objectives
- Area Water Reclamation Facilities
- Current Improvements / Investigations
- Next Steps- Infrastructure Improvements, Regional Long Term Development
- Closing
Background – Overview Map

CITY OF VANDALIA

DEICING FLOWS TO MONTGOMERY COUNTY

SANITARY FLOWS TO VANDALIA

CARGO ROAD WEST PUMP STATION

CARGO ROAD EAST PUMP STATION

EMERY PUMP STATION
Majority of sewers are currently pumped through City of Vandalia to Tri Cities Northern Regional Waste Water Authority

Deicing Fluid pumped through Montgomery County Sewer to Dayton WRF

Treatment costs and Tri Cities limited capacity favor redirection of more flow to Dayton
Inflow and Infiltration - Flow Data

Average Daily Flow MGD vs. Total Rainfall

- Morton Outfall
- Dixie Outfall
- Total Rainfall

Months in 2016
Sewer Improvements – Phase I
Pump Station Replacement
Gravity Line Replacement (At Terminal)

COMPLETED MAY 2016
Sewer Improvements – Phase I – Gravity Line Replacement to existing Force main

COMPLETED MAY 2016
Previous Investigations – Phase II

- ADDITIONAL CAMERA INVESTIGATION – SAN. SEWER LINES (CENTER 1 AREA)
  - MH A-4 water infiltration from top ring
  - Encrustation 9.1’ from MH A-4 (infil runner)
Previous Investigations – Phase II

-Four piezometers installed to monitor ground water levels.
## Previous Investigations – Phase II

**Piezometer water level readings**

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Previous Investigations – Phase II

-Areas unpassable due to debris or full of water
Recent Investigations – Phase II area

- 7NT Recent Investigations…Center One Apron Area
Current Improvements - 2016

- PROVIDE INSITU SANITARY SEWER LINING WHERE FEASIBLE (Trenchless)
Next Steps - Phase III – Redirect Cargo Road East & West - New Force Main, EQ Basin & Add’l Pump Sta.

DESIGN TO BE COMPLETED DEC 2016
CONSTRUCTION SPRING-SUMMER 2017
Next Steps – Short Term Development

- Recent Development Opportunity –

Projected: 10MGY WATER DEMAND / 3MGY SAN. Effluent
Next Steps – Short Term Development

- Potential Development Opportunity –
Next Steps – Regional Long Term Development

- Work with Montgomery County, City of Dayton, the JEDD, Tri-Cities and Vandalia to develop long term solutions to address current & future issues.
Thank You
## DAYTON INTERNATIONAL AIRPORT
### Sanitary Sewer Update Presentation

**Monday, September 19, 2016**

<table>
<thead>
<tr>
<th>NAME</th>
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Agenda

- Introductions
- Background
  - Overview
  - Existing Conditions
  - Objectives
- Completed Improvements / Phase 1 – Sanitary Sewer Improvements
- Proposed Improvements
  - Phase 2 – Sanitary Sewer Improvements
    - Gravity Sewer
    - Pump Station
    - EQ Basin
    - Connect to existing Glycol force main
- Anticipated Flows / Permitted Flows
- Next Steps Short Term Development
- Coordination Issues
- Closing
Background – Existing Conditions

- Airport Proper Sanitary Sewer is currently being discharged through City of Vandalia to Tri Cities Northern Regional Waste Water Authority
- Deicing Fluid pumped through Montgomery County Sewer to Dayton Water Reclamation Facility (WRF)
- Treatment costs and Tri Cities limited capacity favor redirection of more flow to Dayton
Inflow and Infiltration - Flow Data

Average Daily Flow MGD vs. Total Rainfall

Average Daily Flow (MGD)

Morton Outfall
Dixie Outfall
Total Rainfall

January, February, March, April, May, June, July, August, September, October, November, December

Months in 2014
Inflow and Infiltration - Flow Data

Average Daily Flow MGD vs. Total Rainfall

- Morton Outfall
- Dixie Outfall
- Total Rainfall

Months in 2015

January, February, March, April, May, June, July, August, September, October, November, December
Deicing Fluid Permit Specs.

- 350 GPM
- 500,000 GPD
Sewer Improvements – Phase I – Gravity Line Replacement to existing Force main

COMPLETED JULY 2016
Sewer Improvements – Phase I
Pump Station Replacement
Gravity Line Replacement (At Terminal)

COMPLETED JULY 2016
Current Improvements - 2016

- PROVIDE INSITU SANITARY SEWER LINING WHERE FEASIBLE (Trenchless)
Next Steps - Phase II – Redirect Cargo Road East Force Main, EQ Basin & Add'l Pump Sta.
Next Steps - Phase II - Redirect Cargo Road East & West - New Force Main, EQ Basin & Add’l Pump Sta.
Next Steps – Short Term Development

- Recent Development From a concept in April
Next Steps - Short Term Development

- To Reality in July

Projected: 28,000 GPD WATER DEMAND / 9,000 GPD SAN. EFFLUENT
Next Steps - Short Term Development

Other Opportunities

Projected: MGY WATER DEMAND / MGY SAN. EFFLUENT
Next Steps – Short Term Development

Waterline Improvements

Legend
Airport Network
COD Network
Next Steps - Regional Long Term Development

Work with Montgomery County, City of Dayton, the JEDD, Tri-Cities and Vandalia to develop long term solutions to address current & future issues.
Closing Remarks

Thank You