



Manitowoc Public Utilities

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# WWTF Intergovernmental Agreement and Consideration to Transfer WWTF from the City to MPU

Presentation to  
Committee of the Whole and City Council,  
City of Manitowoc  
November 15, 2021

Prepared by



Community Owned...Customer Focused

**Manitowoc Public Utilities**

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**Donohue & Associates**

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## Outline of Presentation

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- Introductions
- Overview of MPU
- Intergovernmental Agreement
- Transfer Evaluation
- WWTF Condition Study by Donohue & Associates
- Conclusions of the Condition Study
- MPU Commission Recommendations
- Questions/Discussion



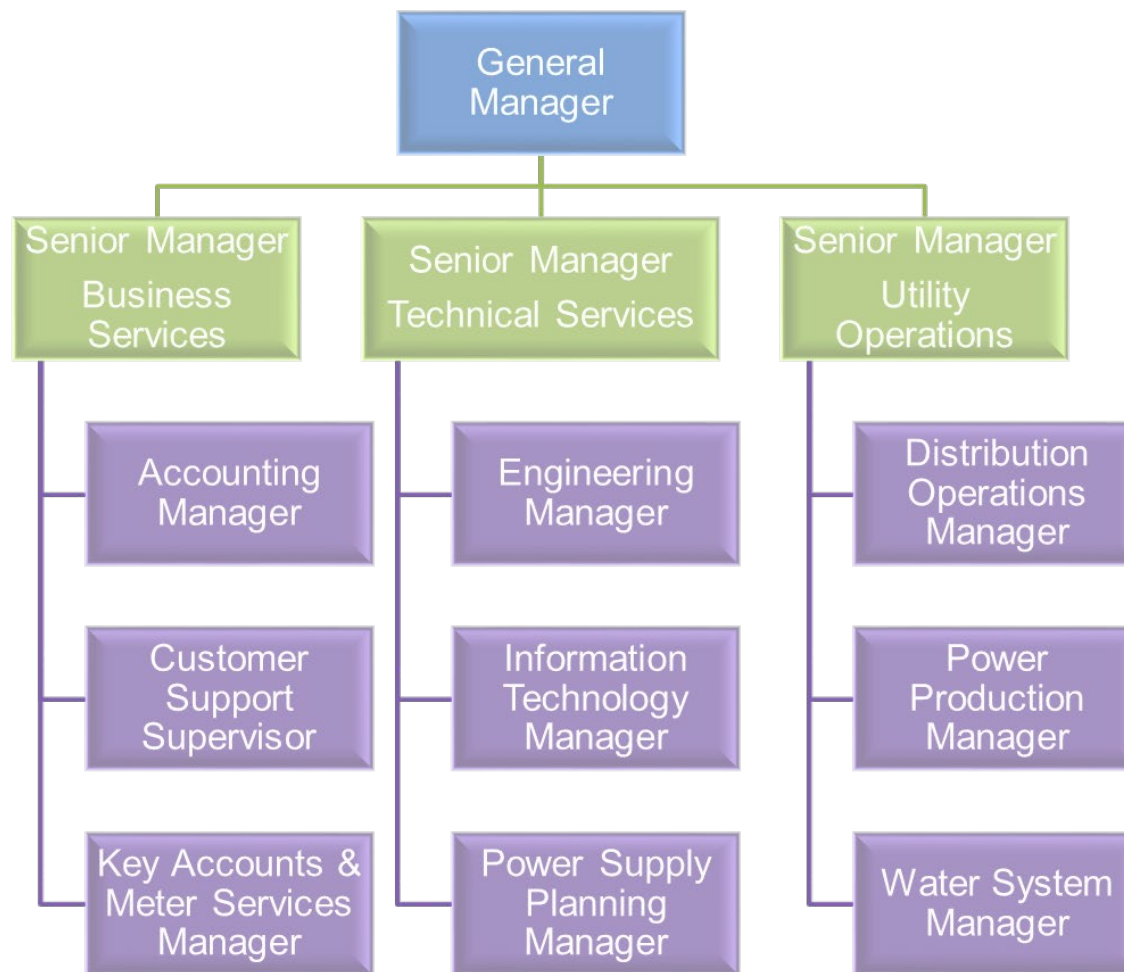
# Introductions

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- MPU Staff
  - Troy Adams, P.E.                      General Manager
  - Cindy Carter, C.P.A.                 Senior Manager - Business Services
  - Don Duenkel, P.E.                    Senior Manager - Utility Operations
  - Andy Onesti, P.E.                    Senior Manager - Technical Services
  
- City Staff
  - Mike Jaeger                             WWTF Superintendent
  
- Consultant
  - Mike Gerbitz, P.E.                    Senior VP, Donohue & Associates



# Overview of MPU





## Intergovernmental Agreement

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- In 2018, MPU was approached by the City regarding a potential transition of the WWTF to MPU management.
- A three year intergovernmental Agreement was put in place for January 1, 2019 – December 31, 2021
  - MPU provides general management and oversight services under authority of the MPU Commission
  - Trial term to realize efficiencies of association
  - Personnel remained as City Employees with City benefits, health insurance, etc.



## Transfer Evaluation

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- The potential transfer of the WWTF from the City to MPU involved the following considerations and initiatives:
    - Operational
      - Master Planning and Asset Condition Study
    - Financial
      - Separation of Collections and Treatment Assets
      - Cost of Service Study, Rates and Fees Analysis
    - Human Resources
      - Job Descriptions Review, Comprehensive Compensation and Benefits Analysis
      - Address Gaps, Develop Migration Plan
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# **WWTF Condition Study by Donohue & Associates**

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# Donohue

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Nationally-Ranked, Award-Winning, Employee-Owned Water/Wastewater Specialty Firm  
Headquartered in Sheboygan, Wisconsin



# The Master Plan Project



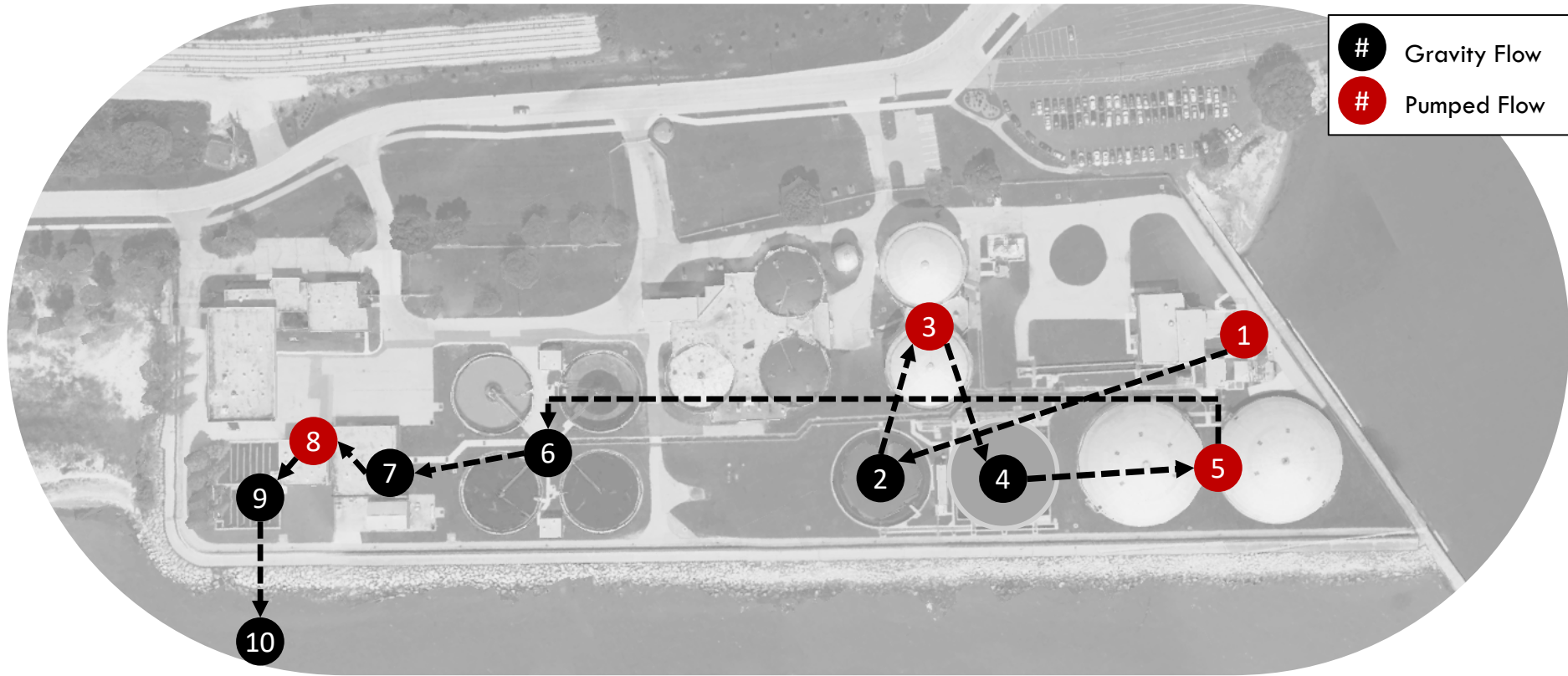
- The Plan will Document...
  - Existing Conditions
  - Forecasted Future Conditions
  - Prioritized Capital Spending Plan Well Conceived for and Congruent with Current and Forecasted Future Regulatory Requirements and Service Area Needs

# The Facility

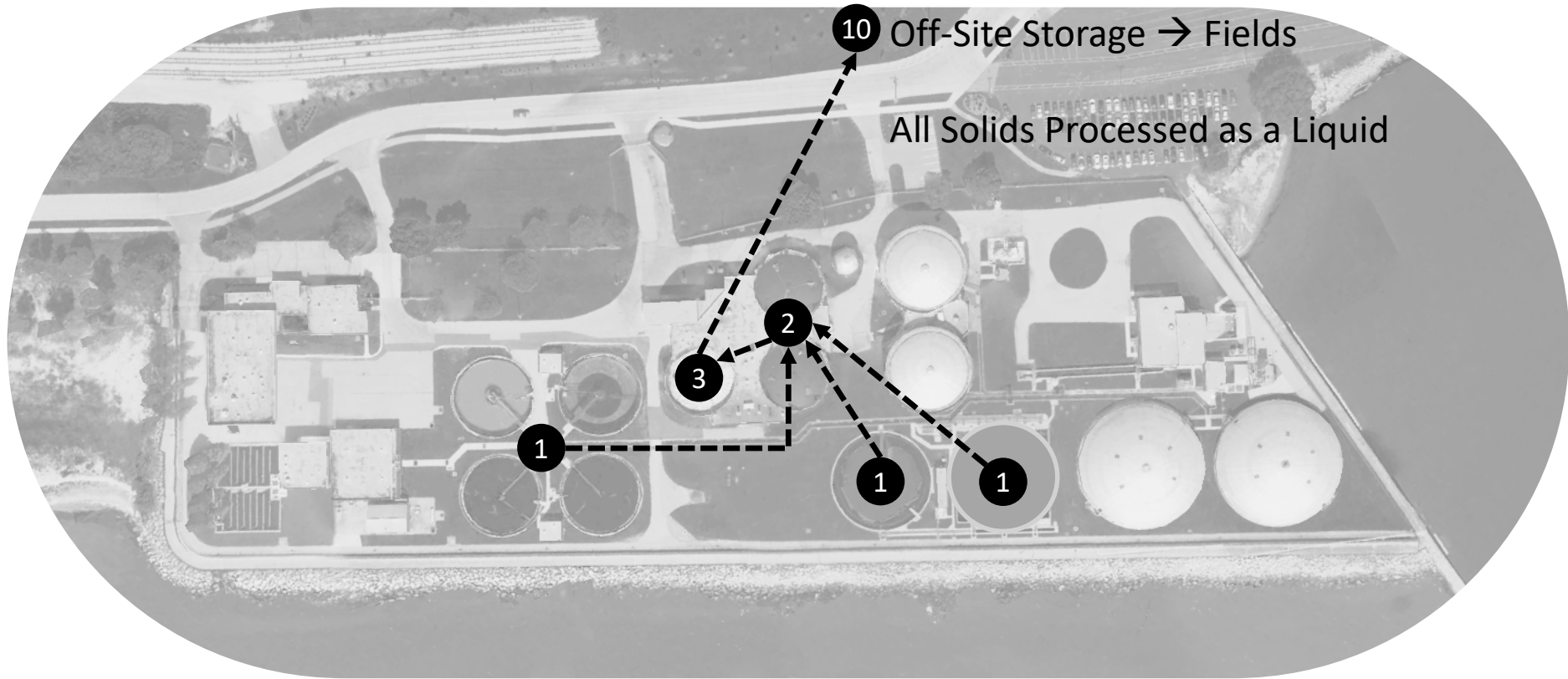
# The Manitowoc Wastewater Treatment Facility



# Liquid Treatment Train



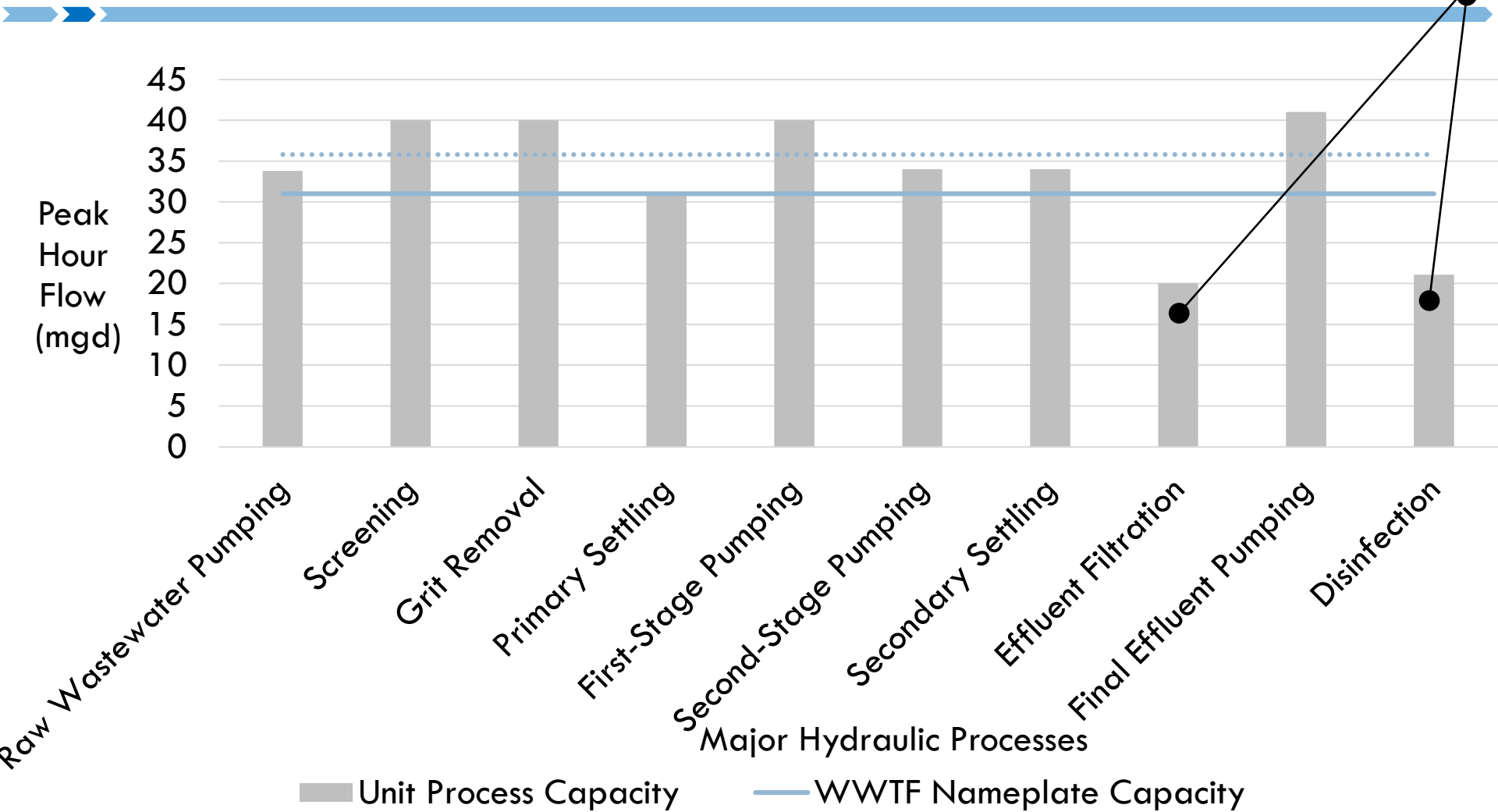
# Solids Treatment Train



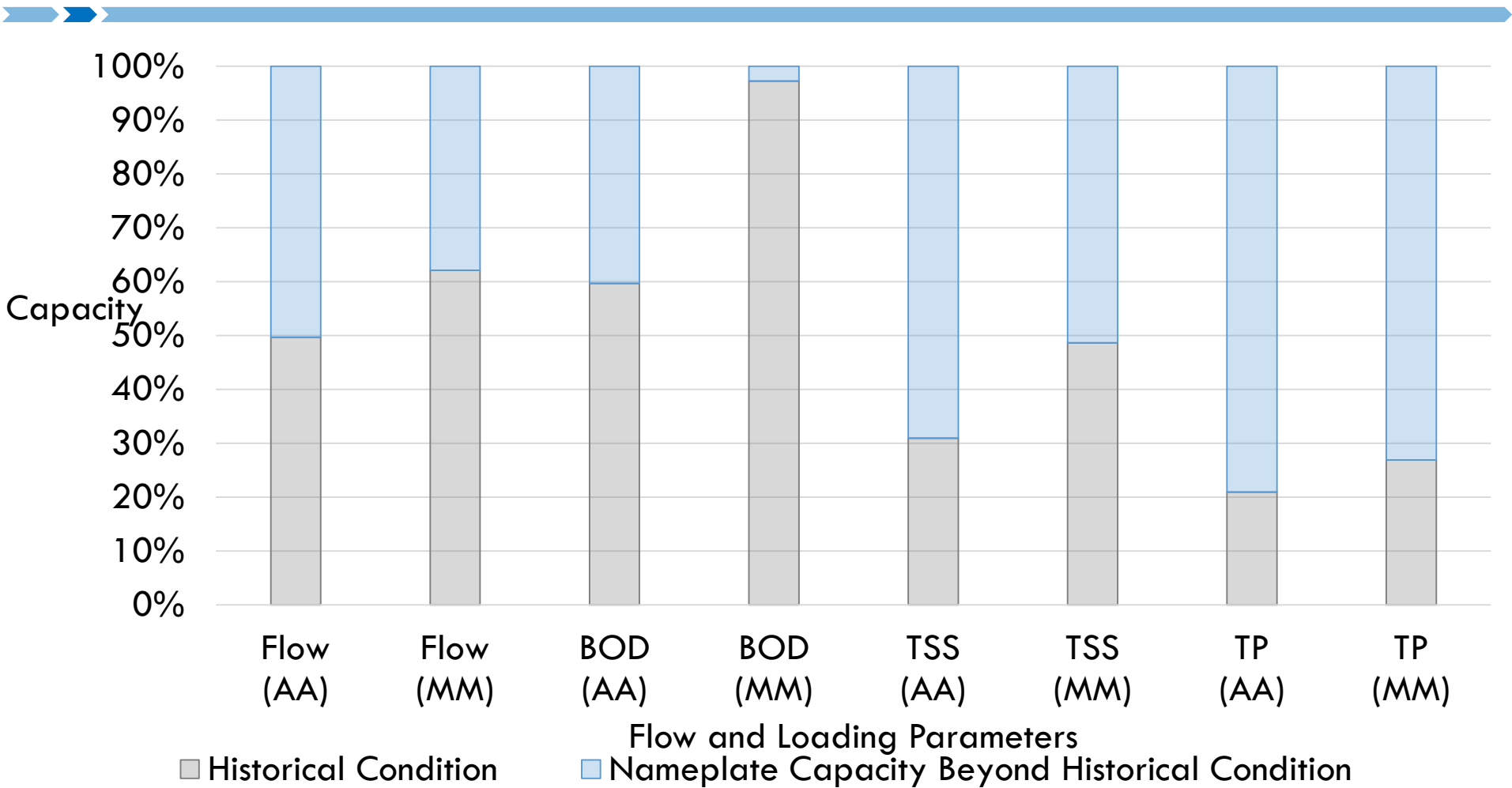
# Capacity

# Peak Flow Capacity is Adequate

Shortfall Acceptable with Permit-Compliant Effluent.

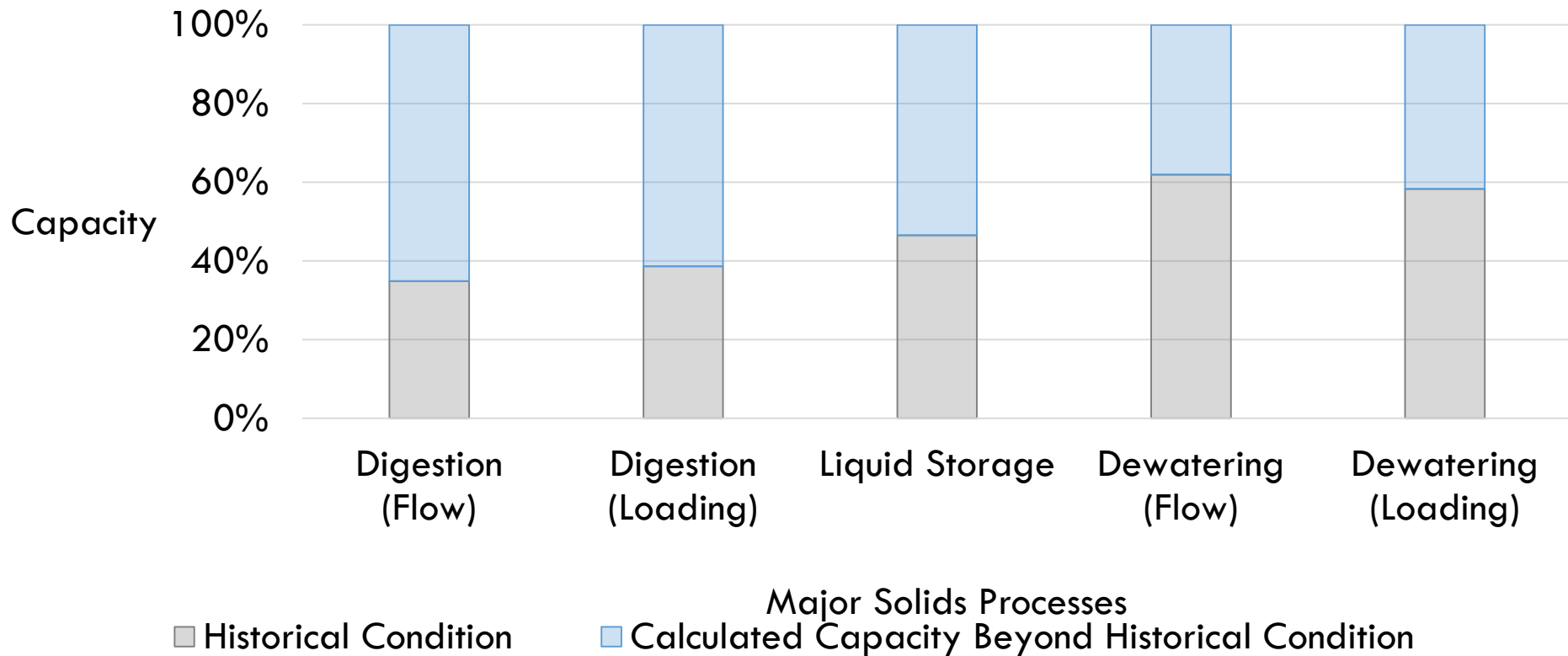


# Liquid Train Capacity is Adequate



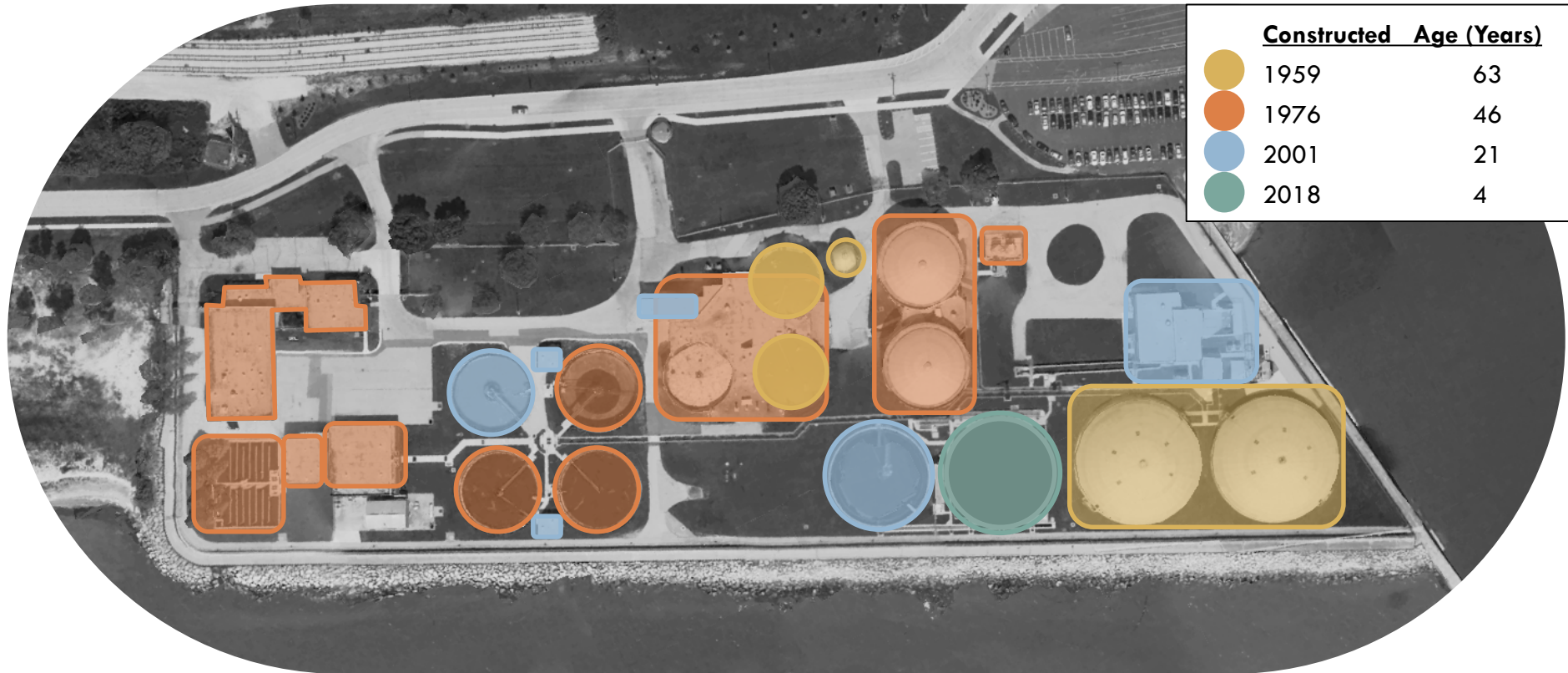


# Solids Train Capacity is Adequate



# Condition

# The Manitowoc Wastewater Treatment Facility



# Condition Assessment Findings

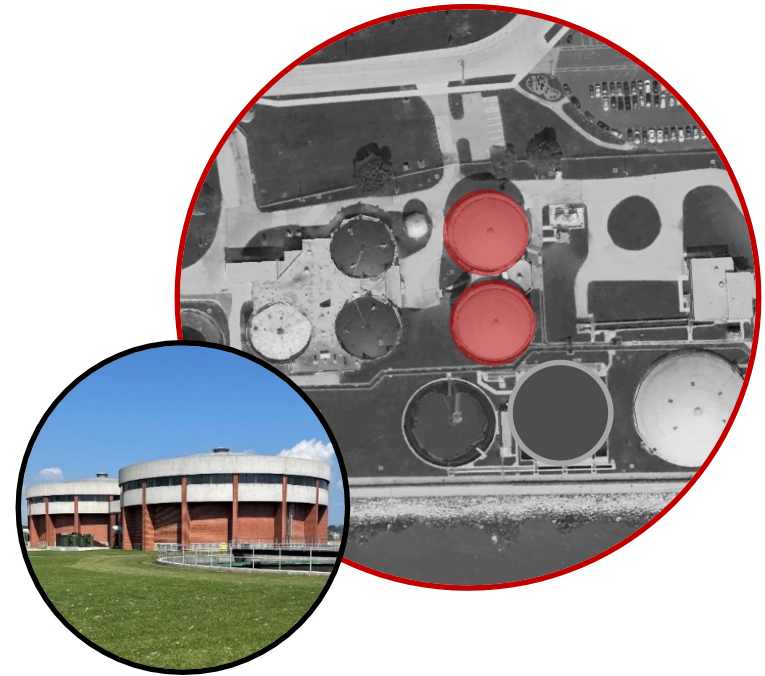
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- Extremely Well Maintained: Excellent Condition Given Age of Infrastructure and Equipment
- Requires Routine Maintenance-Related Capital Improvements to Address Aging Equipment and Infrastructure
  - Performed by Staff or Contractors
  - Funded by Replacement Fund or Annual Capital Budget

# Significant Improvement Project

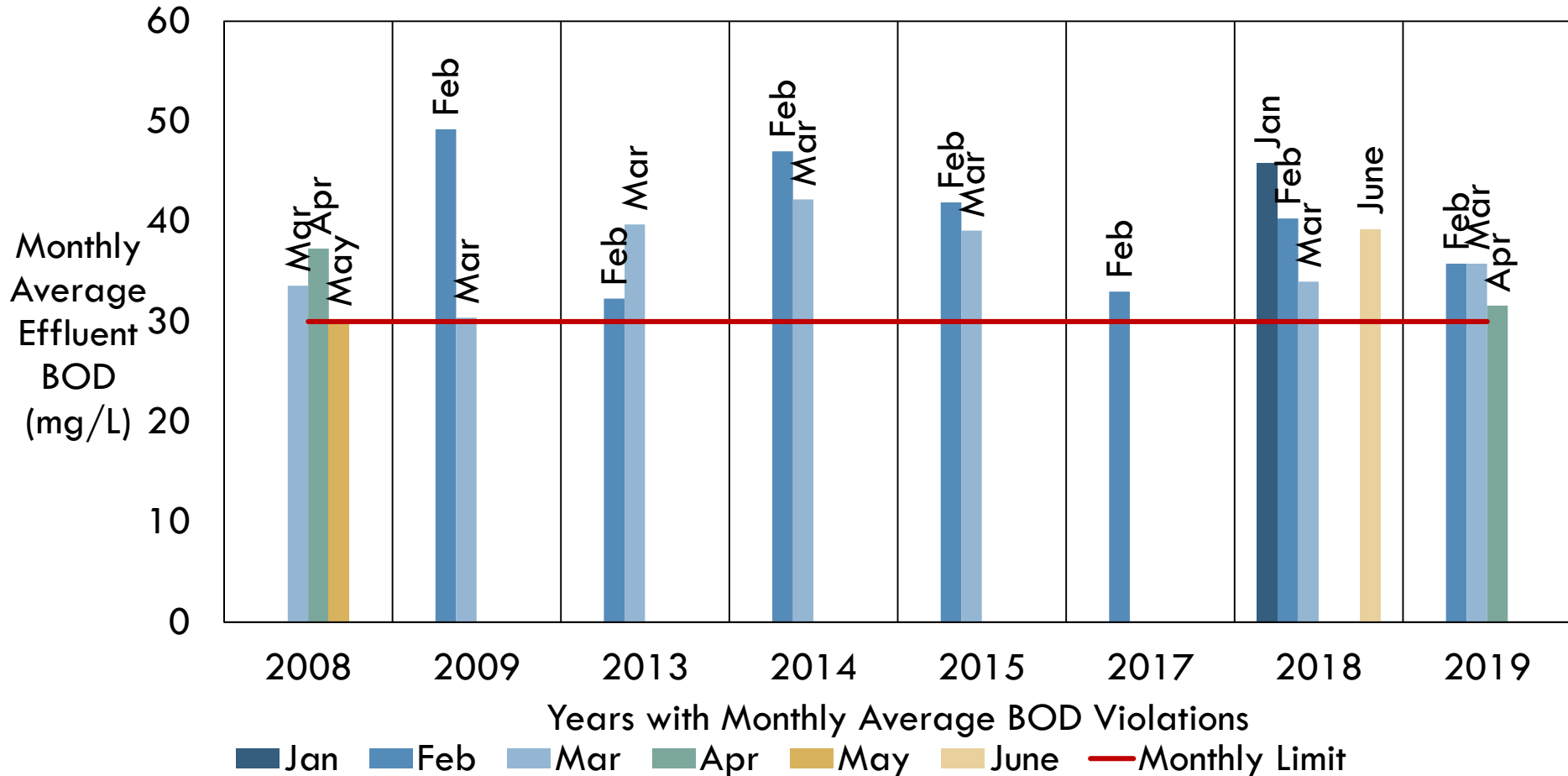
## Condition Assessment

- Recondition First-Stage Biological Filters (Stack Filters - 1976)
- Essential for BOD Compliance
  - Removes 80% of sBOD to Filters

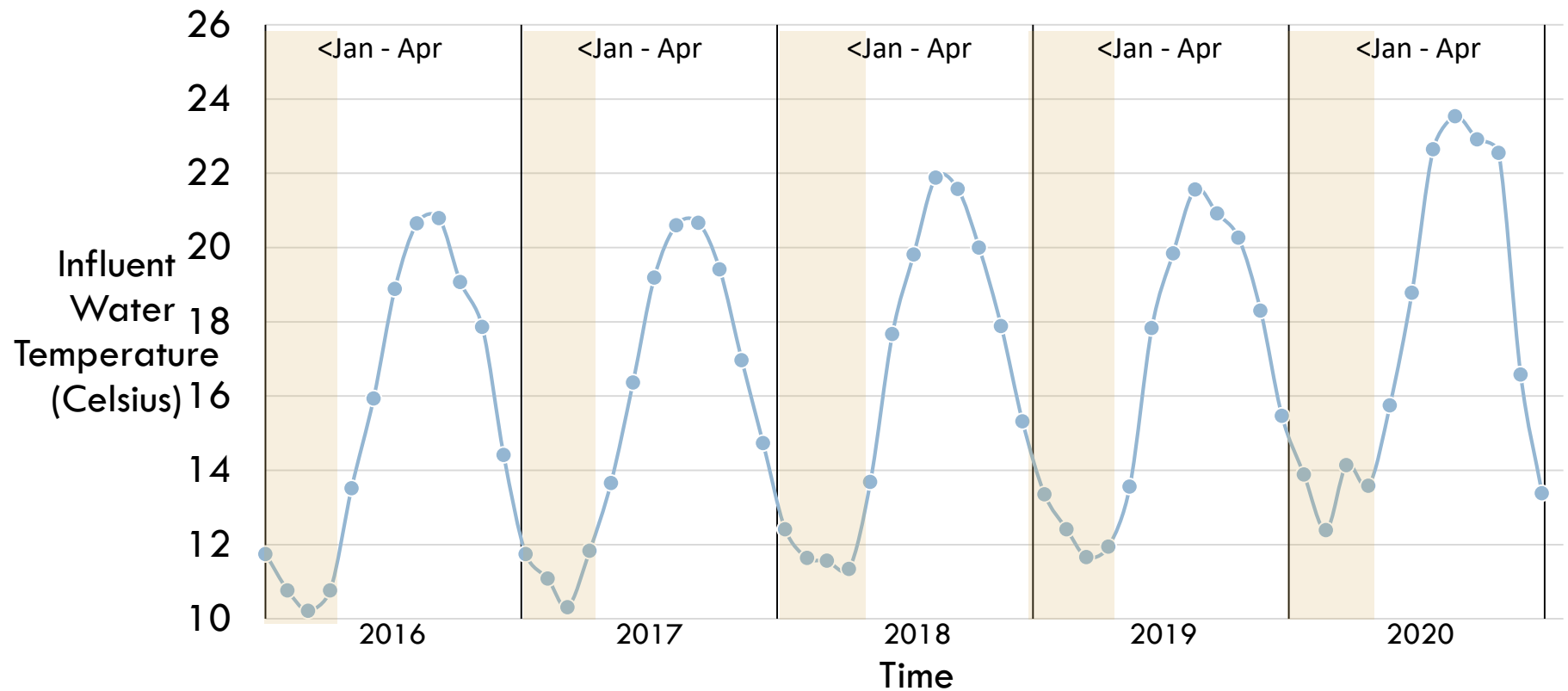


# Compliance

# Effluent Compliance: Historical Effluent BOD Violations

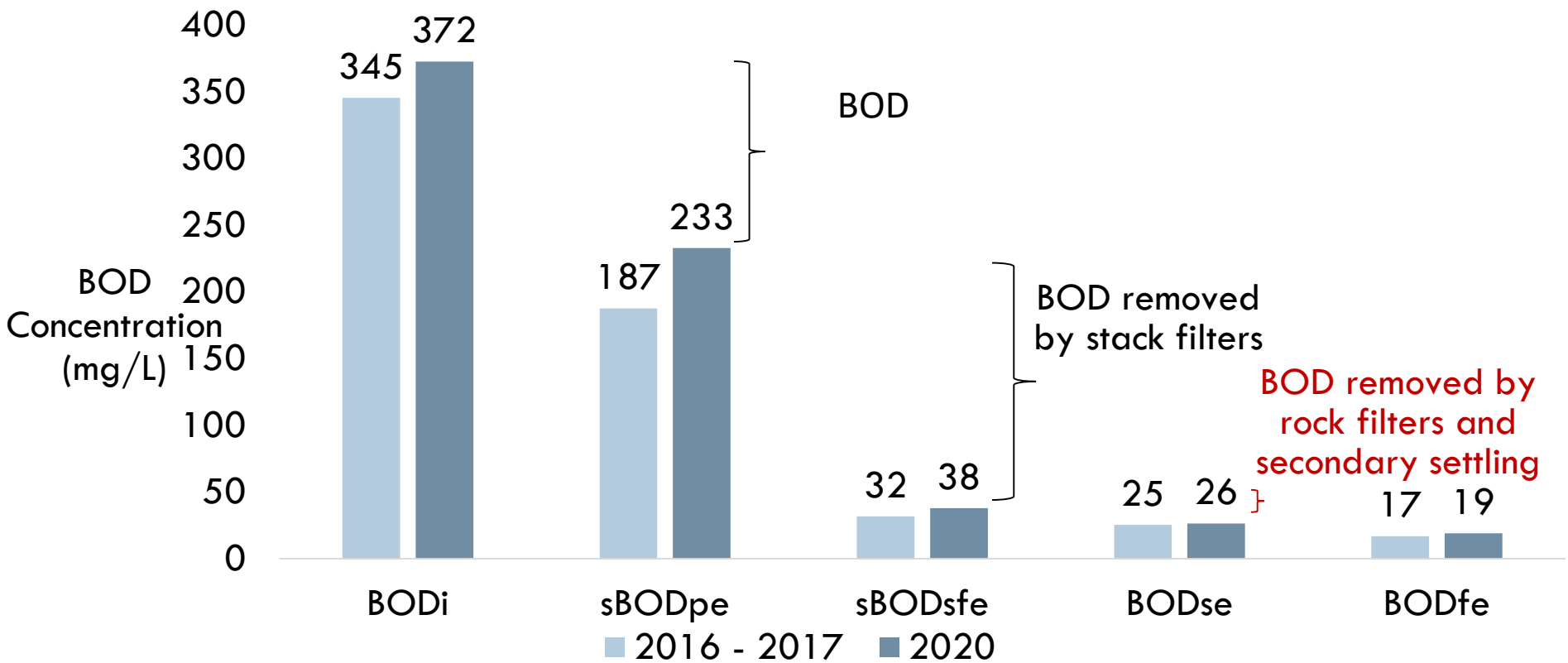


# Wastewater Temperatures Vary Seasonally and Reaction Rates $\downarrow$ 50% with 20°C Decrease





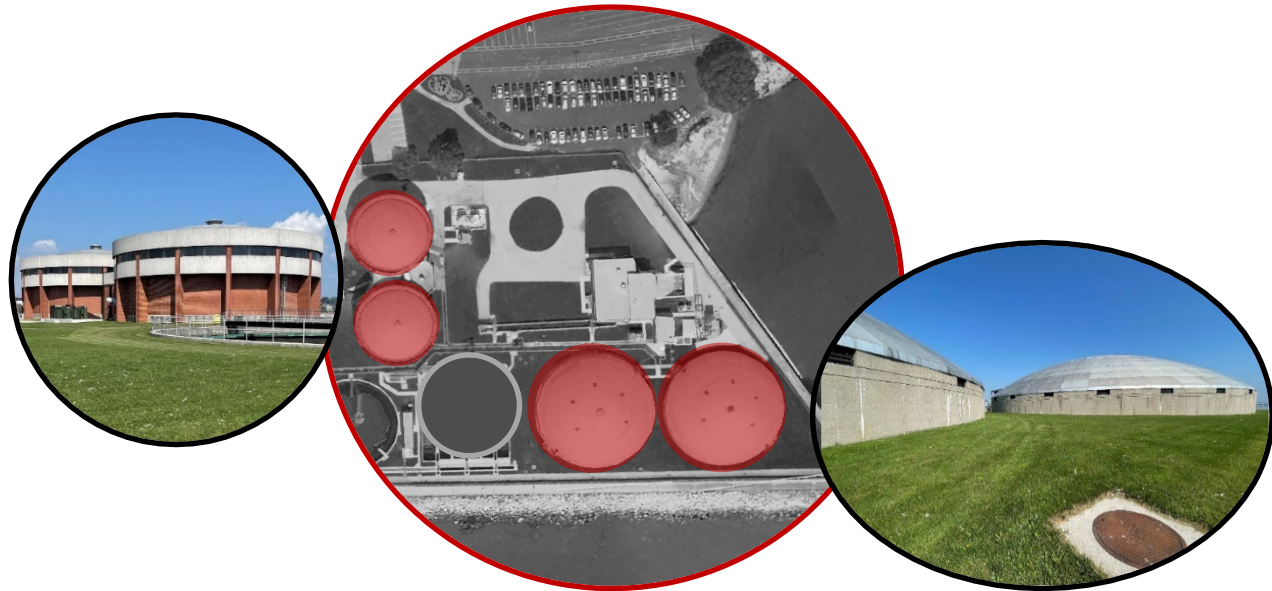
# Second-Stage Biological Filters Ineffective



# Significant Improvement Project

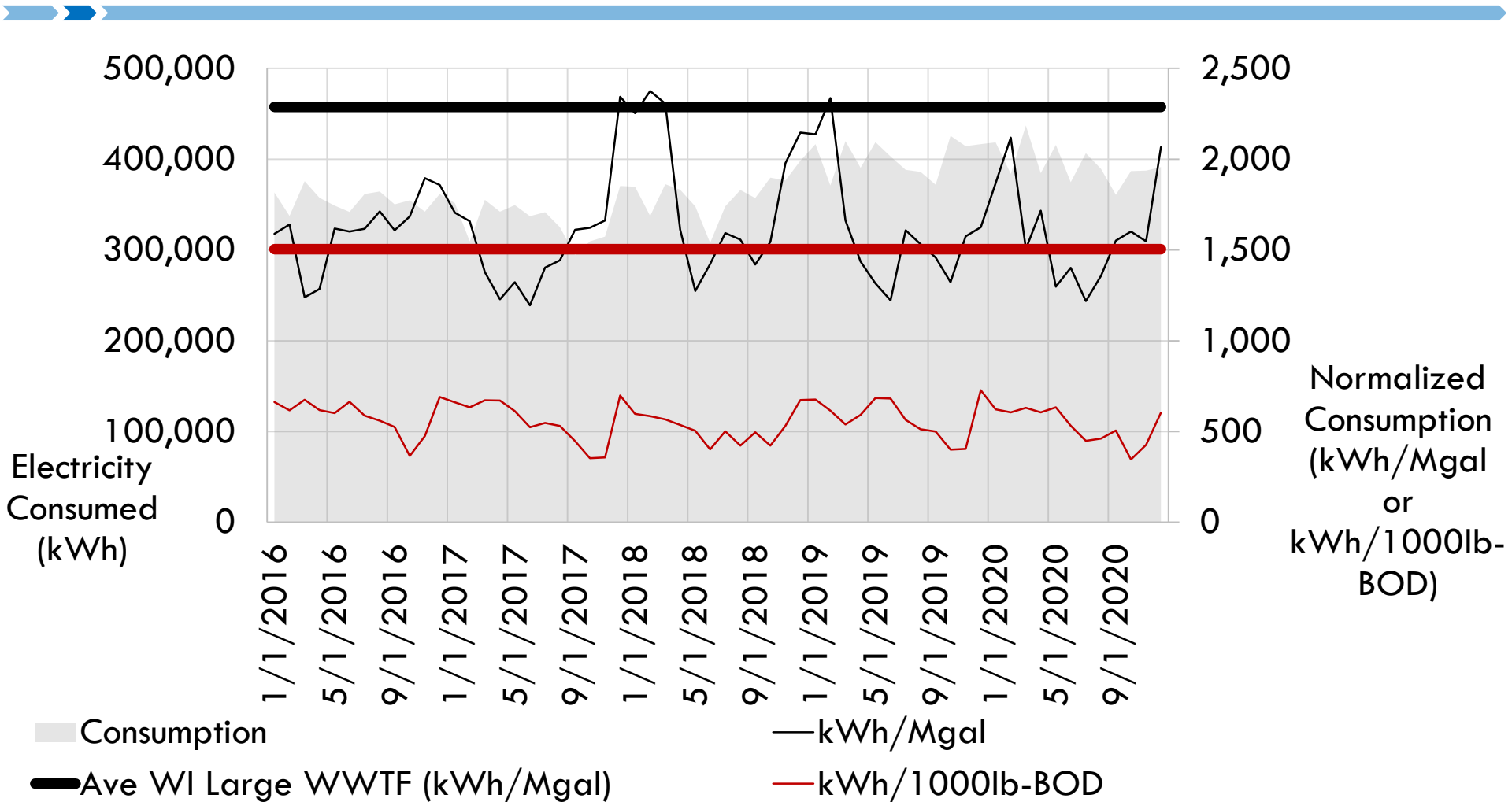
## BOD Compliance

- Recondition the First-Stage Biological Filters (Stack Filters - 1976)
- Replace Rock Filters (1959) with Activated Sludge



# **Resiliency and Efficiency**

# The Facility is Energy Efficient



# Biosolids Program Faces Challenges

- **Mother Nature** is in Charge of Land Application Program
- **Hauling Contractor** Vulnerabilities are Your Vulnerabilities
- **Agricultural Practices** Evolve
- **Lots of Water** and Lots of Trucks
- **Aging Storage System**
- **Regulations** Evolve



**Master Plan will Evaluate Biosolids Program  
Alternatives: Resiliency, Efficiency, and  
Compliance**

# Future Discussion(s)

## Alternatives Evaluation Results

Phased Capital Plan: Capital Costs, Annual Costs, and User Rate Implications



## Conclusion of the Condition Study

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Extremely Well Maintained: Excellent Condition Given Age of Infrastructure and Equipment

- Requires Continued Routine Maintenance-Related Capital Improvements to Address Aging Equipment and Infrastructure
  - Secondary Digester Boom and Media replacement
  - Lagoon refurbishment (examples)
- Requires Future Large Scale Project to replace Rock Filters with Activated Sludge process system

Projects Funded by Replacement Fund or Annual Capital Budget.

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## MPU Commission Recommendations

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- The MPU Commission has approved, as recommended by MPU Leadership, to support the transfer of the WWTF from the City to MPU should the Council decide to proceed.





## MPU Commission Recommendations

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- The MPU Commission recommends an amendment to the WWTF Intergovernmental Agreement for a one-year extension outlining the following transfer milestones:
  - Develop Communication Plan - 4Q2021
  - Employee Informational Meetings - 1Q2022
  - Comprehensive Compensation and Benefits Evaluation - 1Q2022
  - Cost of Service Study, Rate and Fee Evaluation - 3Q2022
  - Accounting and IT Logistics Planning to Support Transfer - 3Q2022
  - Rate and Fee Development - 3Q2022
  - Employee and Asset Transfer - January 1, 2023



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# QUESTIONS/DISCUSSION

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