


Session 10
Sustainability

Sustainable Practices in Odor Control Systems

June 8, 2023

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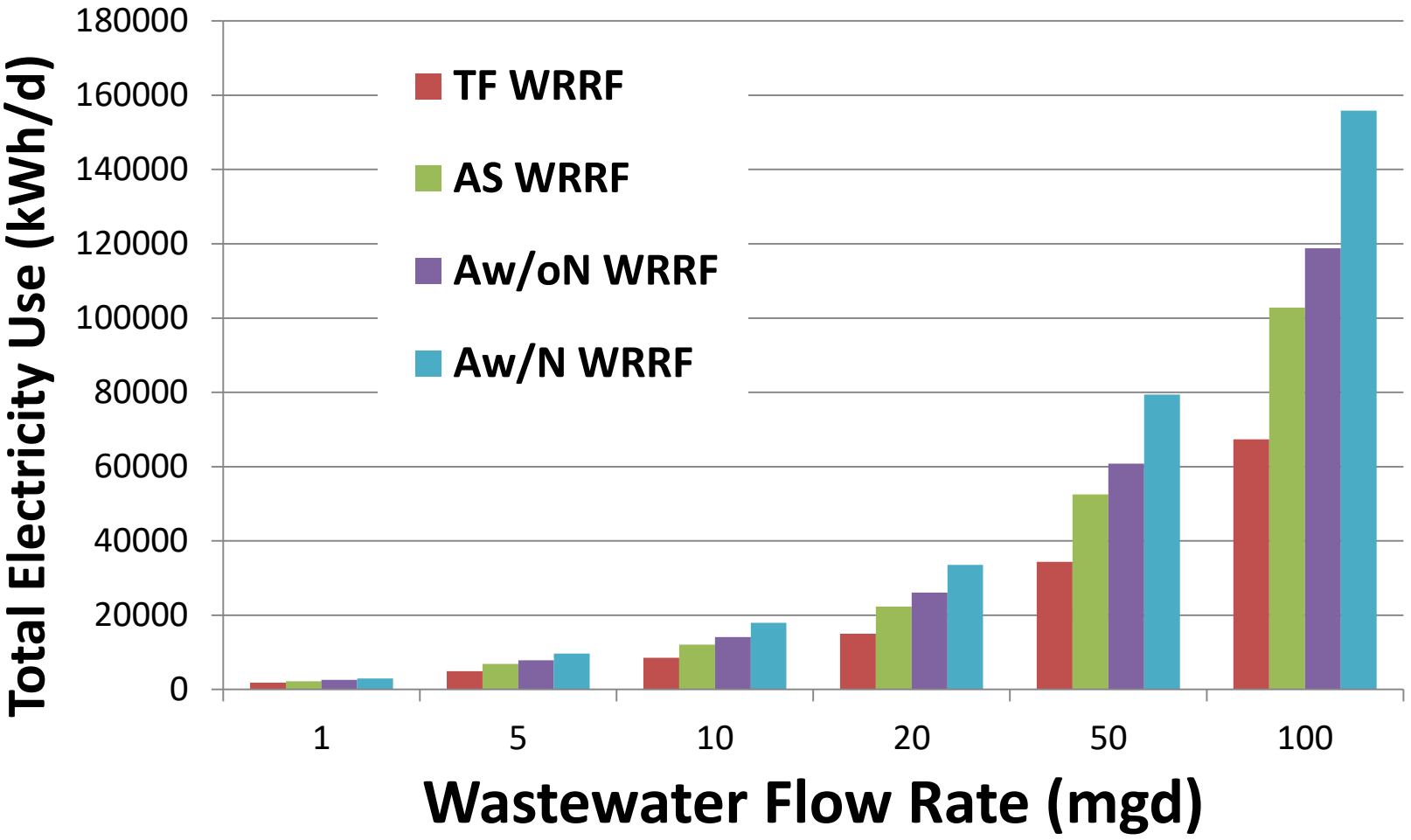
Outline of Presentation

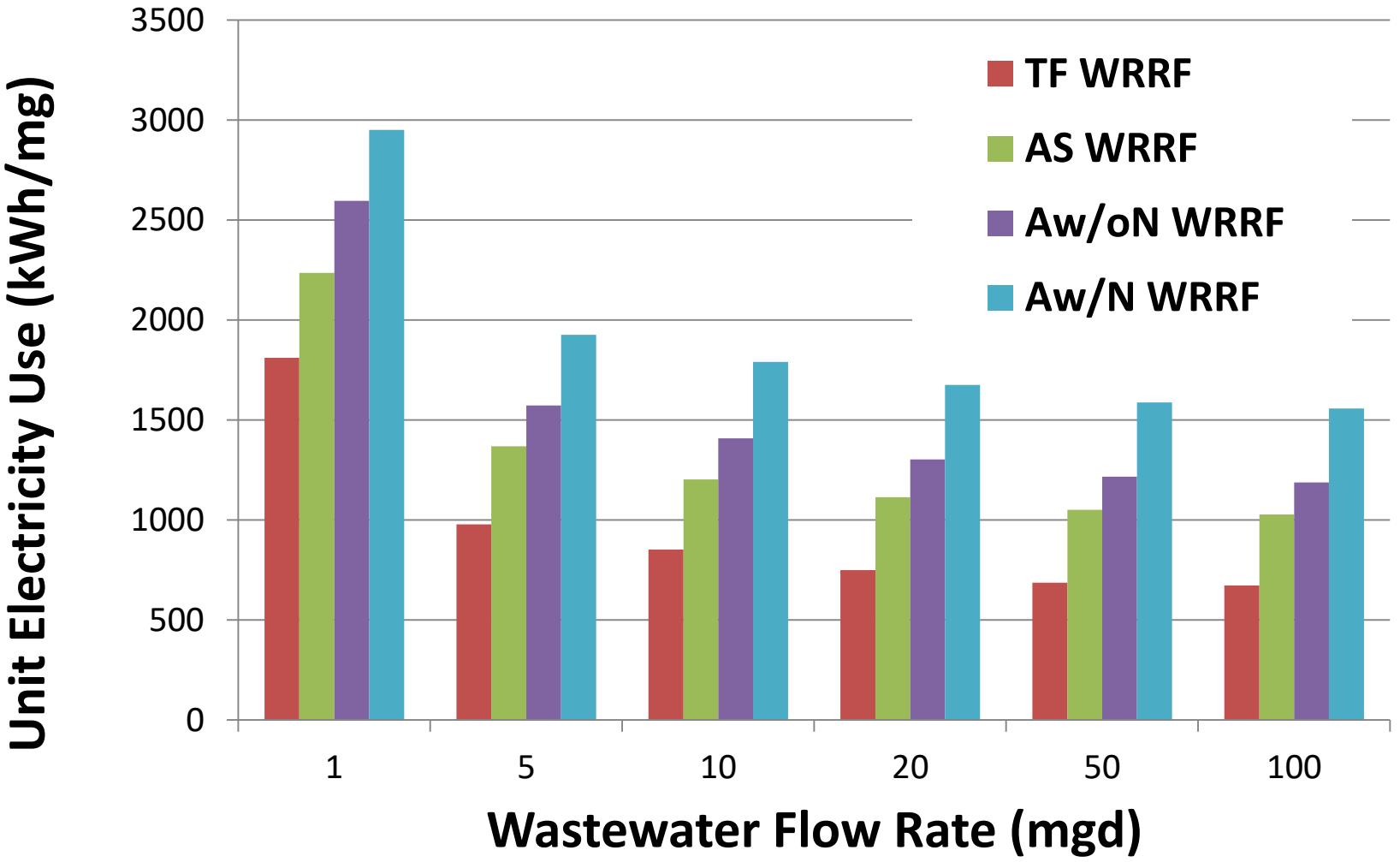
- Energy Use
- Air Flow Management
- Odor Control Systems
- Pressure Loses
- Duct Design

Total Energy Use by WRRF



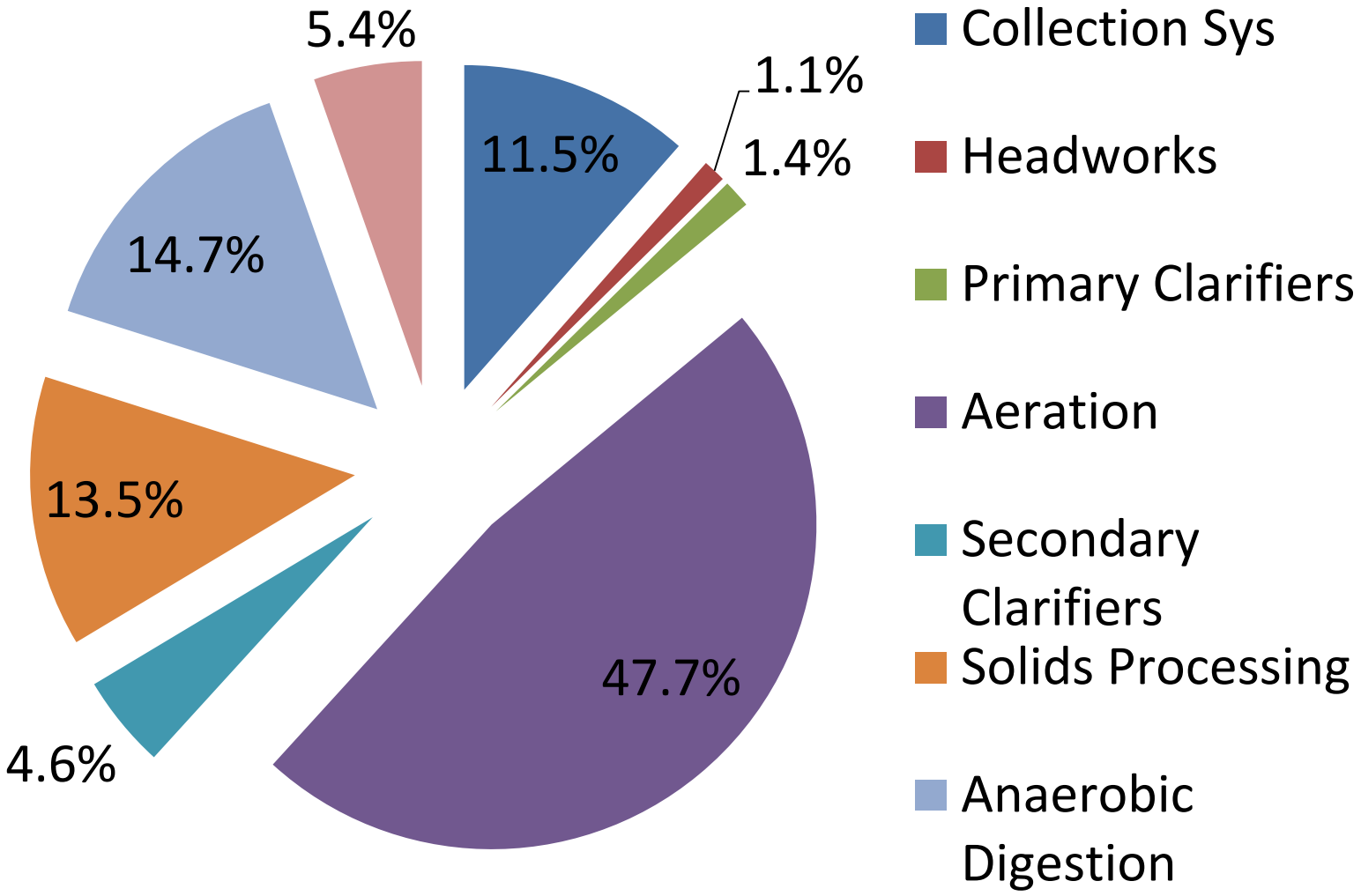
Source: WEF, MOP-32

Unit Energy use by WRRF



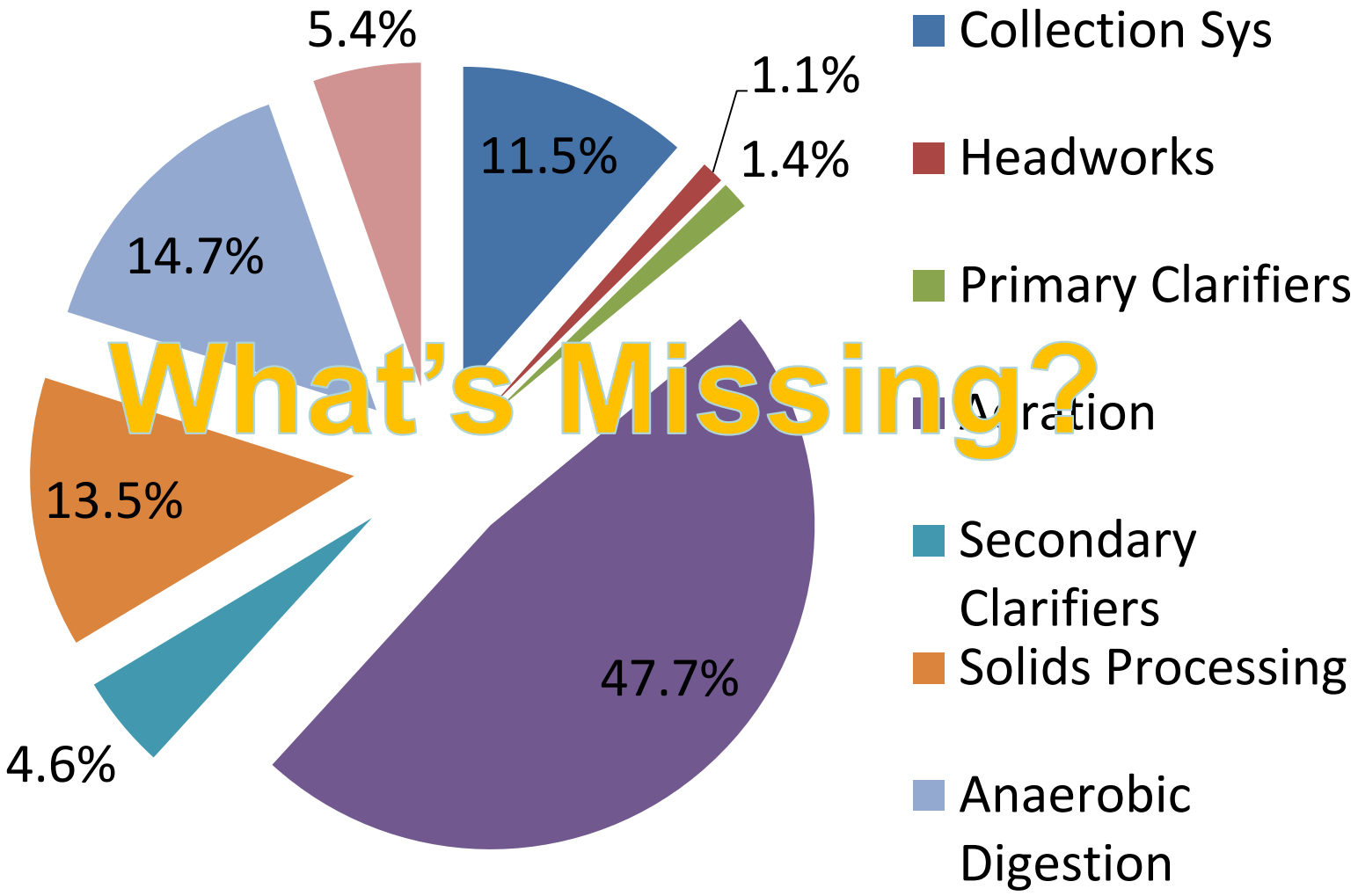
Source: WEF, MOP-32

20 MGD Activated Sludge WRRF



Source: WEF, MOP-32

20 MGD Activated Sludge WRRF

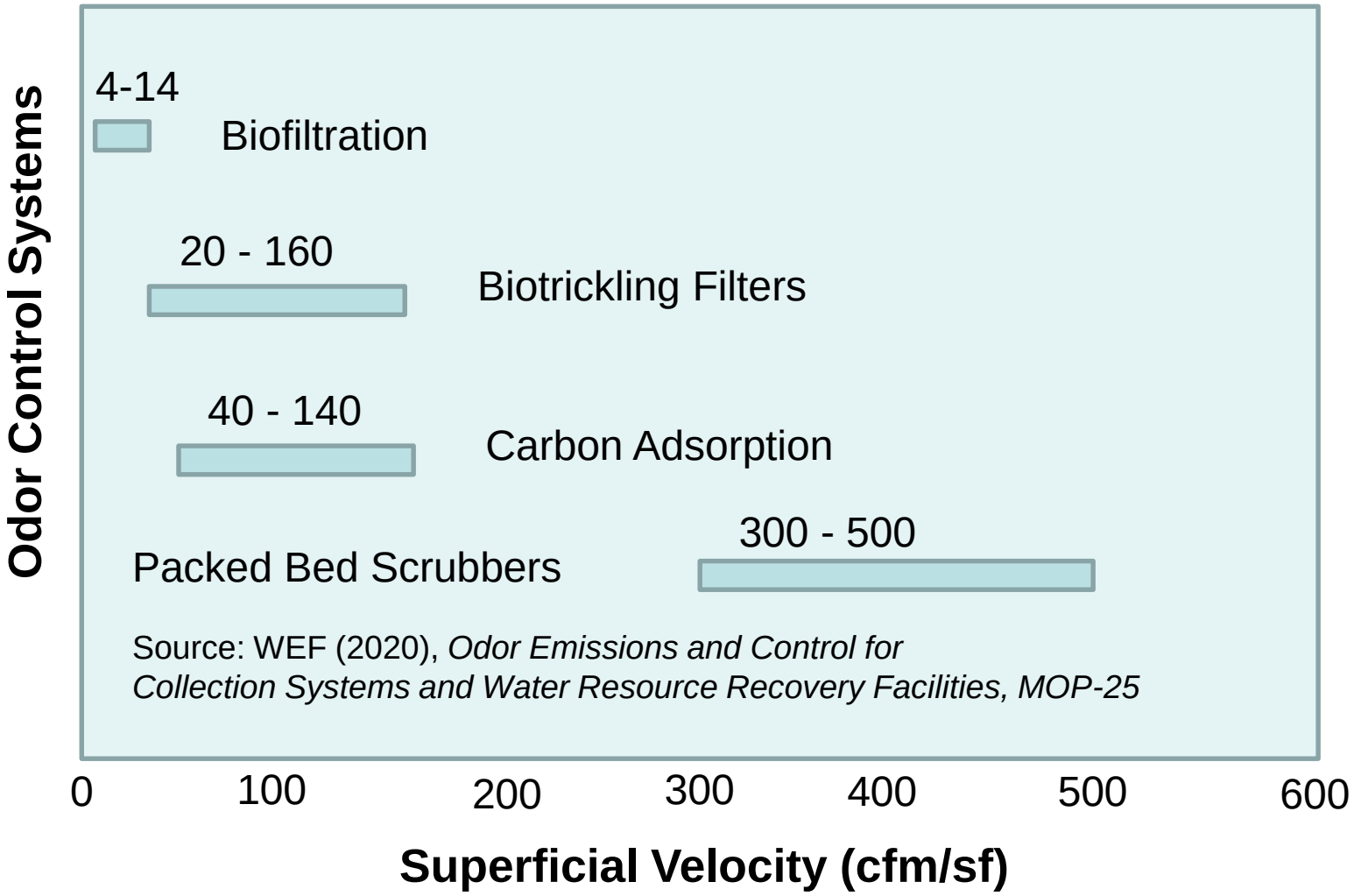


Source: WEF, MOP-32

Air Flow Management is Key

- Process Technology
- Operational Approach
- Ventilation Requirements
- Separation of Air Flows
- Odor Treatment Technology
- Exhaust Discharge
- Receptor Exposure Impact

Air Flow Loading Rates



Energy Reductions from Odor Control Systems

- Reduce or Eliminate Fans
- Reduce Air Flow Rates to Fans
- Reduce Head Loss to Fans
- Reduce Ductwork Pressure Requirements

Reduce Ductwork Pressure Requirements

Y's T's and lower DP's

Preliminary Conclusions

- Odor control systems are ignored with respect to their energy use
- Air flow management is critical odor control system sizing
- Pressure drop across duct work and odor control unit determine power demand
- Imbedded carbon in the is a secondary consideration


Questions?

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Mike Lannan, Tech Environmental