BREWING BIOGAS

34th Annual
Spring Biosolids Symposium
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Stevens Point WWTP

- **Plant Details**
  - 4.55 MGD (design)
    - 2.805 MGD (2015 average)
  - EBPR
    - A/O with RAS Denite
  - Anaerobic Digestion
    - Mesophilic (735,000 gal)

- **Service Area**
  - 27,000 Population
  - BOD Population Equivalent of 54,000
2015 Average Analytical Data

• Influent
  – BOD – 389 mg/L
  – TSS – 358 mg/L
  – Total P – 5.8 mg/L

• Effluent
  – cBOD – 5.33 mg/L
  – TSS – 6.53 mg/L
  – Total P – 0.47 mg/L
Received Wastes in 2015

- **Septage**
  - 9,834 gallons/day
  - 607 lbs BOD/day
  - 840 lbs TSS/day

- **Holding**
  - 5,060 gallons/day
  - 109 lbs BOD/day
  - 165 lbs TSS/day

- **Digester Feed**
  - 8,827 gallons/day
  - 5,333 lbs BOD/day
  - 3,665 lbs VS/day
Reasons For Co-Digestion

• Produces Valuable Biogas
• Power Generation
• Generates Revenue
• Grant Availability

• Properly Treat Wastes
• Reuse of Resources
• Utilization of Existing Capacity
• Removes Loading from Aeration
Selecting Co-Digestates

- What is Available
- Analytical Data
- BMP Testing
- Trial and Error
- Golden Bullet Wastes
Stevens Point Brewery

Operations Prior to April 2015
Brewery Loadings 2006-2014

BOD Lbs/day
Brewery HSW Project

Operations after April 2015
High Strength Receiving Area
Effects of HSW Addition

Feed Rate (Lbs VS/1000ft³)

Gas Production (1000ft³/d)
Too Much of a Good Thing

• Average Feed Rate 120 lbs VSS / 1000 cu ft digestion

• Overfed at 286 lbs VSS / 1000 cu ft digestion
Other Factors to Consider

- Trucked in Wastes are Highly Variable
- Most Wastes Have Foreign Material
- Increased Side Stream Loading
- Increased Biosolids
- Increased Employee Work Load
Keys to Our Success

• Dedicated Staff
• Political Support
• Relationships with Producers and Haulers
• Learning from Failures
Cheers!

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