



R2E2: Transforming a Utility

*Central States Water
Environment Association
86th Annual Meeting
May 18, 2016*

Tom Sigmund
Executive Director
NEW Water

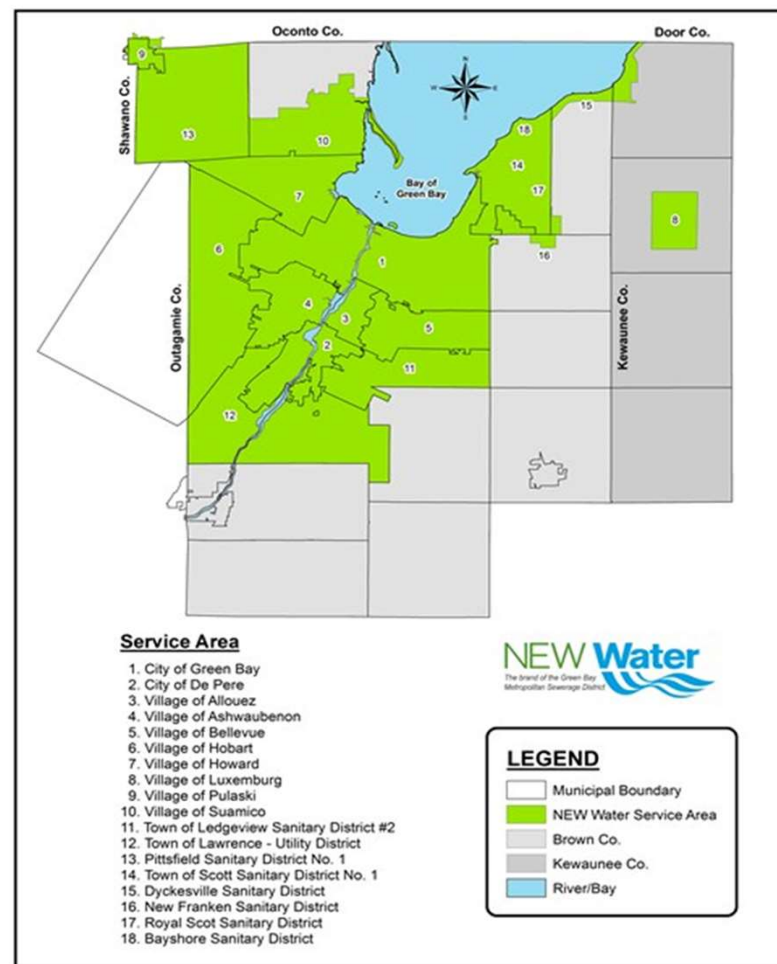
NEW Water
The brand of the Green Bay
Metropolitan Sewerage District





NEW Water – the brand of the Green Bay Metropolitan Sewerage District

- Provides collection and treatment for 18 municipalities in Northeast Wisconsin
- Formed in 1931. Owns and operates:
 - GBF, designed to treat 49.2 mgd through secondary treatment
 - DPF, designed to treat 14.3 mgd through tertiary treatment
- Serves a population of 230,000





De Pere and Green Bay Water Resource Recovery Facilities



De Pere Facility

Green Bay Facility







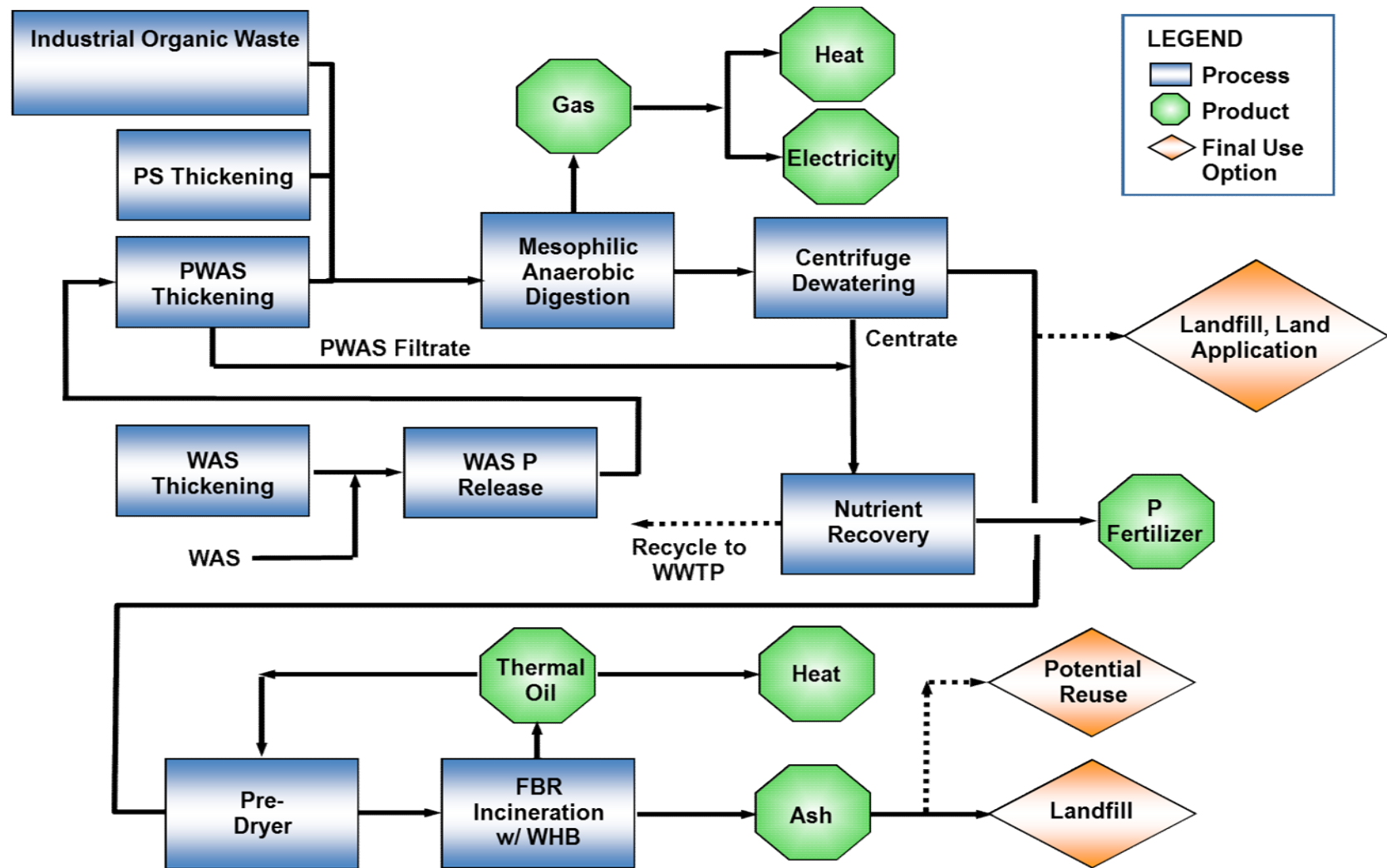


Solids Management Facilities Plan

- 2005 – 2008 NEW Water and ch2m developed the Solids Management Facility Plan
 - Planning to 2035
 - 73 solids unit processes considered
 - Resource recovery and operations emphasized in evaluation



Selected Solids Processing Solution



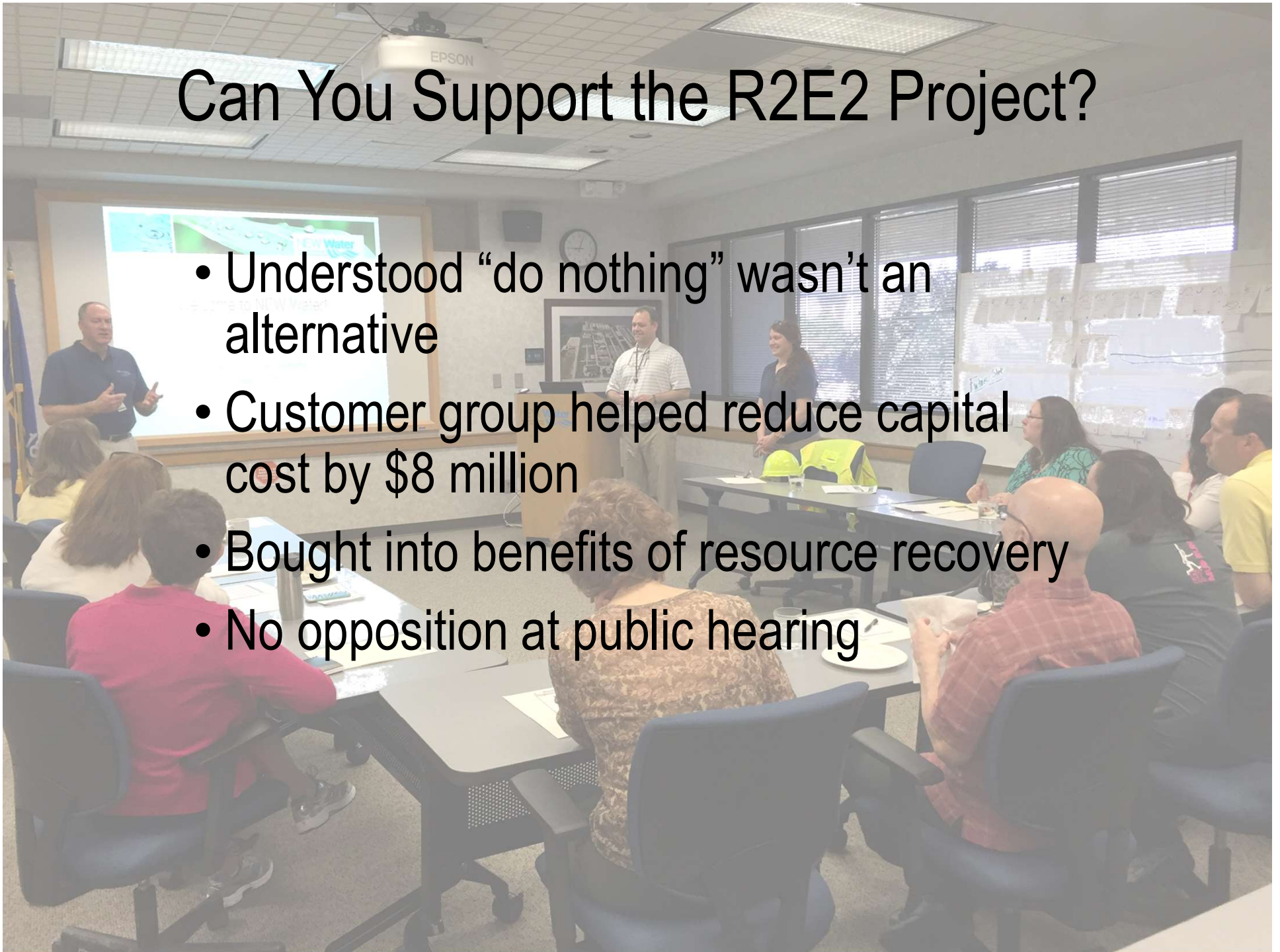


Customer Reaction

- Choices were all expensive
- Poor economy made it difficult to understand why this project was being attempted now
- Rate impact was main concern; drove customer frustration
- Formed a customer working group
- As a team, walked through entire project to explore alternatives in detail

Can You Support the R2E2 Project?

- Understood “do nothing” wasn’t an alternative
- Customer group helped reduce capital cost by \$8 million
- Bought into benefits of resource recovery
- No opposition at public hearing





Resource Recovery and Electrical Energy Generation (R2E2)





Reframe the Conversation through Branding

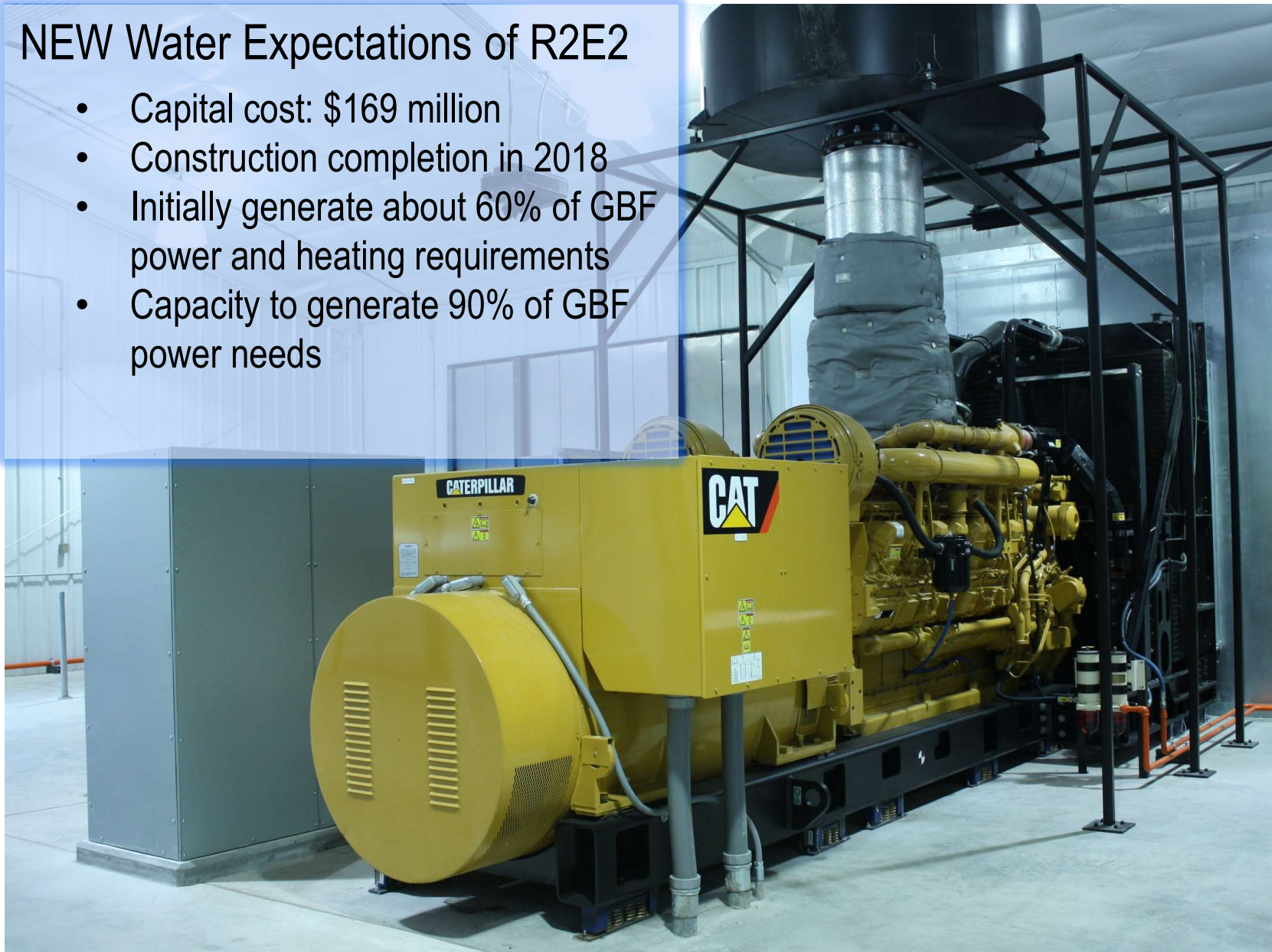






NEW Water Expectations of R2E2

- Capital cost: \$169 million
- Construction completion in 2018
- Initially generate about 60% of GBF power and heating requirements
- Capacity to generate 90% of GBF power needs





Resource Recovery: Struvite

- Nutrient recovery in the form of struvite
 - Converts into a fertilizer product
 - Creates a \$400,000 revenue stream
 - Reduces maintenance of equipment & piping





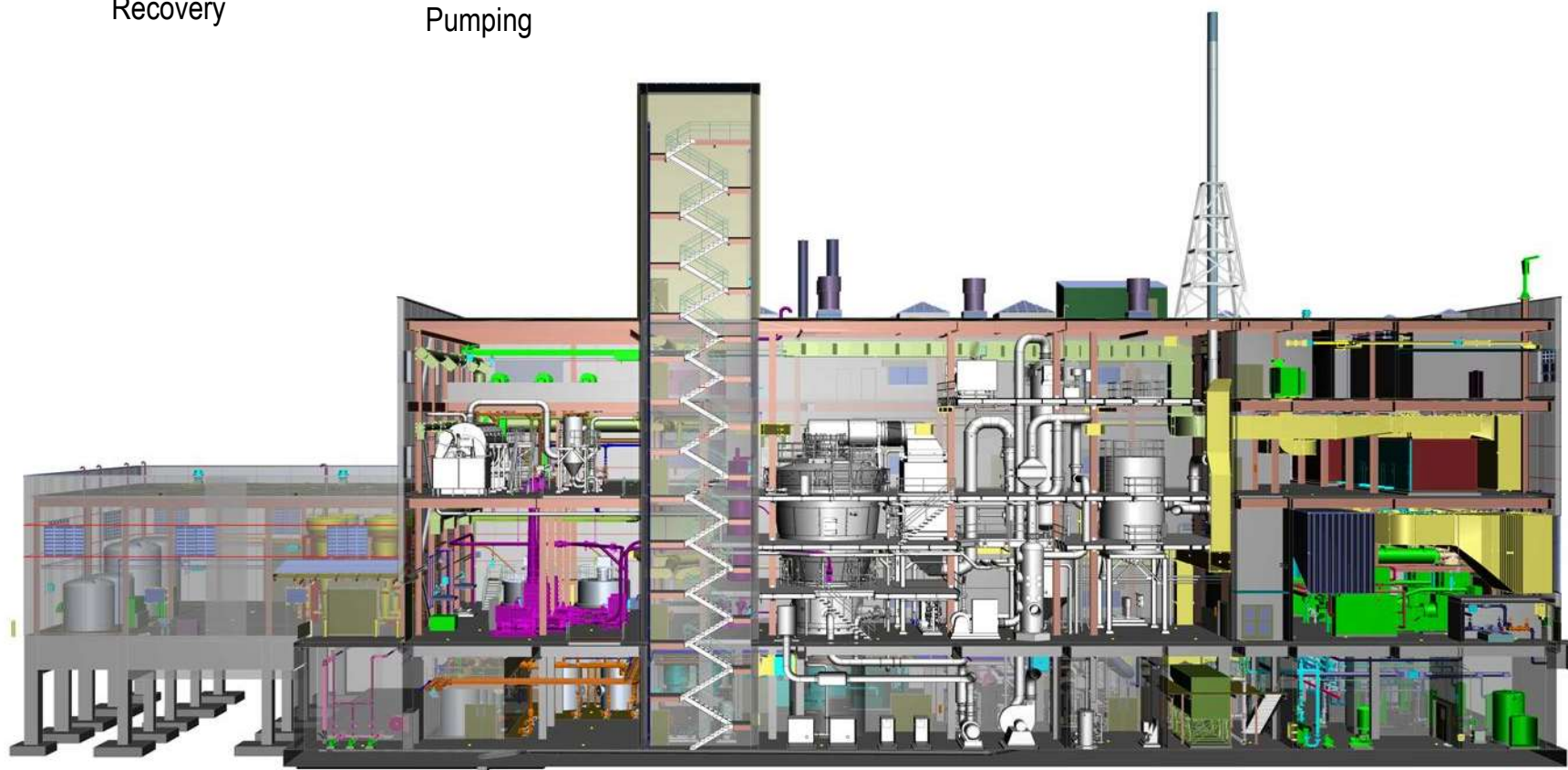
R2E2 Solids Building Overview

Nutrient
Recovery

Dewatering Pre-
Drying Cake
Pumping

Incineration

Cogeneration





R2E2 Open Houses: November 10 and 11

Sneak Peek at a New Chapter in Recovery of Our Community's Resources

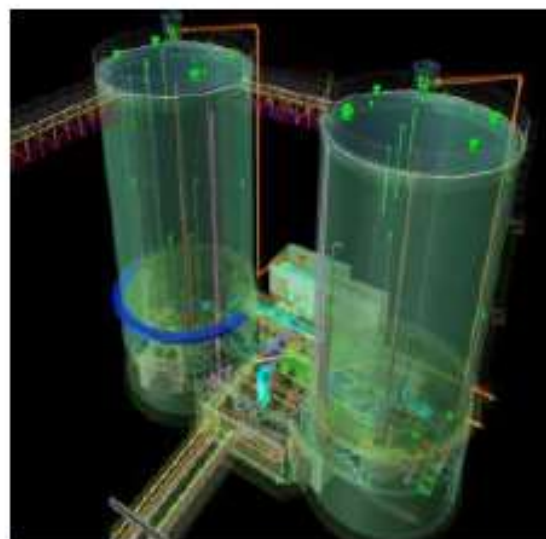
NEW Water will hold two Open Houses for the public about its new solids handling facility, which has launched construction.

R2E2 Open Houses – free of charge, open to the public:

- **Tuesday, Nov. 10, 5:00 - 7:00 p.m.**
Allouez Village Hall, 1900 Libal St., Green Bay
- **Wednesday, Nov. 11, 9:00 – 11:00 a.m.**
NEW Water, 2231 North Quincy Street, Green Bay

NEW Water's Resource Recovery and Electrical Energy generation system known as the R2E2 Project will replace the existing solids handling facility. A new facility is needed to: meet stricter environmental regulations, address the needs for increased capacity, and to replace aging infrastructure. The project harnesses resource recovery of both nutrients and gas for cost savings and environmental benefit.

"R2E2 represents an exciting new chapter for NEW Water, as we move toward a more sustainable approach to valuing our resources," says Tom Sigmund, Executive Director of NEW Water.



3D rendering of R2E2, NEW Water's new solids handling facility, which is under construction











Photo credit: Steve Seilo / April 2011







Reid Ribble @RepRibble · Aug 26

Preparing to go out and test the waters of
[#GreenBay](#) for toxic algae blooms with
[@NEWWater_WI](#) & [@USFWSMidwest](#)













SEWAGE

Sewage experts explain how products can clog system



NEW Water's Dave Hoppe monitors a dumpster full of grit, rags, wipes and other various items at NEW Water in Green Bay. EVAN SEGALL/USA TODAY NETWORK-WISCONSIN

Flushable wipes not so flushable

SHELBY DU LAC
USA TODAY NETWORK-WISCONSIN

If something is labeled "flushable" that means it can be flushed, right?

One would think so. As it turns out, though, it is not that simple.

For a while, manufacturers everywhere were slapping the flushable label on their packaging — specifically on moistened personal hygiene wipes — in order to sell the products to consumers who are eager to use and quickly dispose of them.



A wipe, center, is put through a "slosh test" machine. After 15 hours in moving water, the wipe was still holding its shape. AP

There is a problem, however. Most of the wipes are not flushable, at least by sewage standards.

Brian Vander Loop is field services manager at NEW Water Green Bay Metropolitan Sewerage District. The facility treats 38 million gallons of water per day from 219,000 residents over a 285-square-mile area in Northeastern Wisconsin.

Vander Loop said most wipes and feminine hygiene products, whether labeled

See WIPEs, Page 2A







World Toilet Day more than potty humor



Paul Srubas, Press-Gazette Media

10:32 a.m. CST November 17, 2014



Gracie Duffus, 6, checks out the display at the Brown County Central Library, while NEW Water spokeswoman Tricia Garrison looks on.
(Photo: Paul Srubas/Press-Gazette Media)

Buy Photo





**Halloween With
No Pumpkins?**

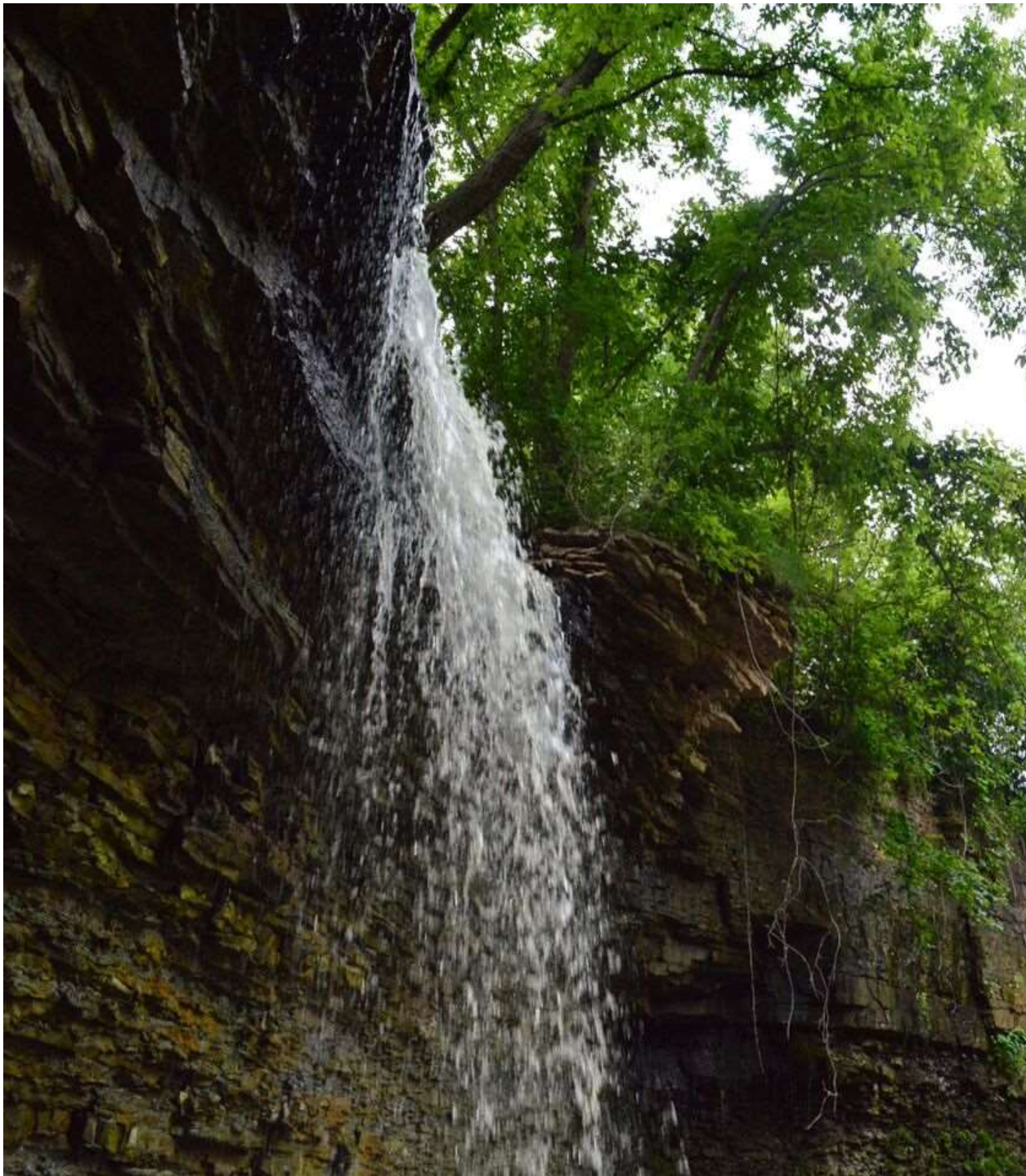
*Imagine a Day
Without Water*

[LEARN MORE](#)









*Protecting our
most valuable
resource,
water*

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The logo graphic for New Water, featuring three stylized, overlapping wavy lines that represent water.