

# REGIONALIZED BIOSOLIDS: IS IT WORTH IT?

Evaluating West Central WI Biosolids Commission Membership

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# Agenda

- 1 Background
- 2 The Challenge
- 3 The Study
- 4 Economic Analysis
- 5 Recommendation
- 6 The Bigger Picture
- 7 Questions

# What is West Central Biosolids?

## ESTABLISHED

1997

## LOCATION

Ellsworth, WI

## MEMBERS

11 communities

## NON-MEMBERS

10 additional users

## SERVICE

Class A biosolids processing

## Why Was It Formed?

- forced to upgrade their biosolids storage facilities in the late 1990s.
- economy of scale by joining together to finance, build, and operate a shared regional facility.
- distributes capital costs, operational expertise, and regulatory compliance across all members.

# WCB Member & Non-Member Communities

## Members

- City of Amery
- Village of Baldwin
- Village of Ellsworth
- City of Hudson
- City of New Richmond
- Village of Osceola
- City of Prescott
- City of River Falls
- Village of Roberts
- Village of Somerset
- Village of Spring Valley

## Non-Members

- Eleva-Strum Joint Sewerage
- Village of Plum City
- Village of Hammond
- Travel Centers of America
- City of Mondovi
- Village of Pepin
- City of Mazeppa, MN
- City of West Concord, MN
- Downsville Sanitary District
- City of Lake City, MN

# How WCB Works

## 1 Haul

Liquid sludge trucked from member WWTPs

*+ Centrate back-hauled to member WWTPs*

## 2 Receive

Two truck bays, two scales, two screens

## 3 Store & Mix

Storage tanks for homogenizing

## 4 Dewater

Two centrifuges (Centrisys & Alfa Laval)

## 5 Stabilize

Schwing Bioset lime process (Class A)

## 6 Land Apply

Agricultural land application program

# How WCB Works



# The Challenge: A Changing Commission

# River Falls Exits the Commission

## What Happened

- River Falls accounted for a major portion
- River Falls will no longer be a member
- Decision driven by both financial and non-economic factors
- **River Falls chose to build their own biosolids dewatering/drying facility**

## Impact on WCB

- Remaining members bear a larger share of fixed costs
- Facility capacity increasing
- Remaining members, now question their own membership

The Question

# Should New Richmond stay with WCB or exit and go it alone?

**OPTION A**  
Stay with WCB

**OPTION B**  
Exit & Build Own

# Study Approach

We evaluated three scenarios for New Richmond's biosolids program:

## Existing Program

Continue current lime stabilization process at WCB. No capital investment beyond maintenance.

## Drying at WCB

WCB upgrades to sludge drying (~\$20M project). NR stays as member and shares costs.

## Drying at New Richmond

NR exits WCB and builds own ~\$10M (River Falls) dewatering & drying facility independently.  
Other estimates were >>\$10M

# Economic Analysis

# Existing Biosolids Program

Cost Component	Units	Existing
Transportation	\$/lb	\$0.20
Dewatering & Lime	\$/lb	\$0.53
Dewatering & Drying	\$/lb	-
Phase 0.5 Debt Service	\$/lb	\$0.14
Dryer Debt Service	\$/lb	-
<b>Total \$/lb</b>	<b>\$/lb</b>	<b>\$0.87</b>
<b>Annual New Richmond Budget</b>	<b>\$/yr</b>	<b>\$629,000</b>

**Note:** Existing system will eventually require a rehabilitation project. Costs shown are current operating basis.

# Option A: Drying at WCB

Cost Component	Units	Existing	Drying at WCB
Transportation	\$/lb	\$0.20	\$0.20
Dewatering & Lime	\$/lb	\$0.53	-
Dewatering & Drying	\$/lb	-	\$0.54
Phase 0.5 Debt Service	\$/lb	\$0.14	\$0.14
Dryer Debt Service	\$/lb	-	\$0.47
<b>Total \$/lb</b>	<b>\$/lb</b>	<b>\$0.87</b>	<b>\$1.35</b>
<b>Annual New Richmond Budget</b>	<b>\$/yr</b>	<b>\$629,000</b>	<b>\$974,000</b>

Similar Class A processing cost

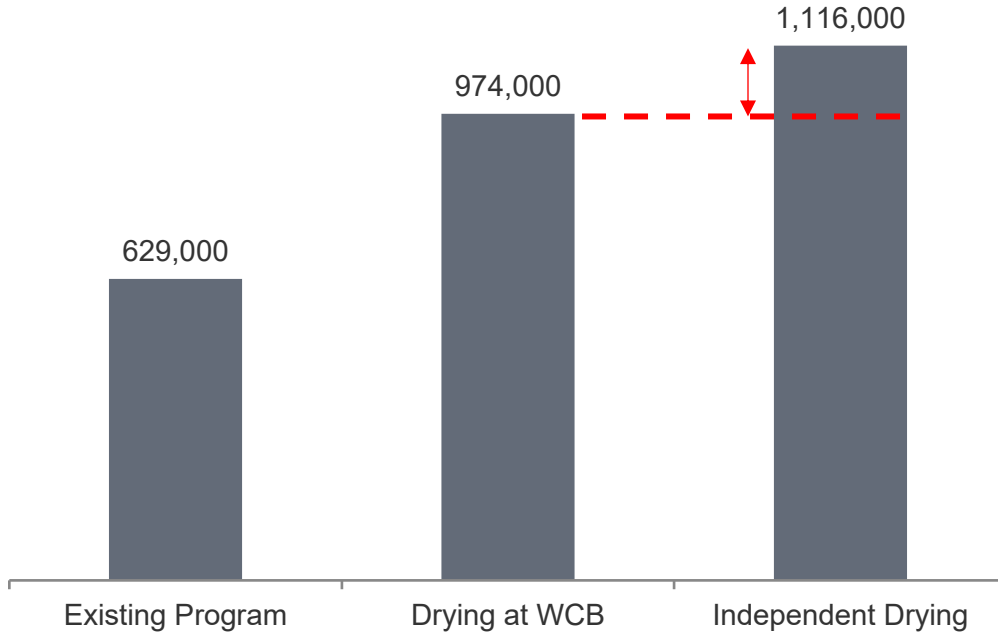
~\$20M dryer project | ~\$5.4M NR loan value | 0% principal forgiveness

# Option B: Independent Drying at New Richmond

Cost Component	Units	Existing	Drying at WCB	Drying at NR
Transportation	\$/lb	\$0.20	\$0.20	-
Dewatering & Lime	\$/lb	\$0.53	-	-
Dewatering & Drying	\$/lb	-	\$0.54	\$0.54
Phase 0.5 Debt Service	\$/lb	\$0.14	\$0.14	\$0.14
Dryer Debt Service	\$/lb	-	\$0.47	\$0.87
<b>Total \$/lb</b>	<b>\$/lb</b>	<b>\$0.87</b>	<b>\$1.35</b>	<b>\$1.55</b>
<b>Annual New Richmond Budget</b>	<b>\$/yr</b>	<b>\$629,000</b>	<b>\$974,000</b>	<b>\$1,116,000</b>

~\$10M independent dewatering & drying project | No transportation savings offset the higher debt

# Annual Cost Comparison for New Richmond



## Savings by Staying

**\$142,000**

per year

Annual savings by remaining with WCB vs. building independently

# WCB Dryer Project Economics

Dryer Equipment

**\$5.1M**

BCR BioScru IC 5400

Total Project Cost

**\$20M**

Capital cost estimate

Annual O&M

**\$348K**

Dryer operations

20-yr Net Present Worth

**\$28.5M**

Total lifecycle cost

NR Capital

**\$5.4M**

Clean Water Fund

NR Annual Payment

**\$335K**

0% principal forgiveness

# Why Upgrade? System Deficiencies

## Near-Term Issues

- Final product storage capacity nearing limits
- Equipment reliability concerns (aging BioSet)
- Desirability of final product declining
- Dependence on cost/volume of lime

## Long-Term Drivers

- Processing capacity limitations with growth
- **Regulatory uncertainty around PFAS**
- Project costs increase with delay
- BABA requirements

# Non-Economic Factors

## Shared Risk & Expertise

Operational staff, compliance burden, and capital risk distributed across 10 member communities

## Regulatory Compliance

WCB provides centralized Class A certification. Independent operation requires own compliance program

## PFAS Preparedness

Drying technology positions WCB to adapt to evolving PFAS regulations on land-applied biosolids

## Staffing & Operations

Dedicated facility staff already in place. Building independently requires hiring and training

## Future Flexibility

Dryer design leaves room for future replacement or expansion without disrupting operations

## Recommendation

# New Richmond should stay with West Central Biosolids

**\$142K**

Annual savings vs. independent  
drying

**\$5.4M**

Lower capital exposure  
(vs. ~\$10M alone)

**10+**

Communities sharing risk &  
costs

# **The Bigger Picture: Regionalization & PFAS**

# Regionalization Is Growing

Across the Midwest and nationally, communities are increasingly regionalizing biosolids processing to manage rising costs and tightening regulations.

## **Stevens Point, WI**

Junction City, etc hauling to City of Stevens Point to avoid management and costs

## **Waverly & Montrose, MN**

Joining Annandale-Maple Lake-Howard Lake Wastewater Commission. Decommissioning local plant, building forcemain to regional facility. \$13.2M investment, completion 2029.

## **MCES, MN**

Existing and new facilities are designed to haul biosolids to main facility

## **MWRD Chicago, IL**

Five water reclamation plants consolidate biosolids processing at Stickney WRP. 119,234 dry tons processed in 2024.

# PFAS & Regulatory Landscape

## Federal

- No binding EPA regulation on PFAS in biosolids (yet)
- EPA risk assessment expected (delayed from 2024)
- Interim guidance recommends thermal destruction for certain biosolids
- Information Collection Request ongoing

## Wisconsin (WDNR)

- Interim strategy for land application of biosolids containing PFAS
- **20-150 ppb: restricted land application with monitoring**
- **150+ ppb: alternative treatment/disposal required**
- Drying positions WCB for compliance flexibility

# Key Takeaways

- 1 Regionalization works — WCB has served its members effectively for nearly 30 years
- 2 When members exit, the remaining partners must reassess — but the math still favors staying
- 3 New Richmond saves \$142,000/year by remaining with WCB vs. going independent
- 4 Sludge drying at WCB is the right next step — addressing aging equipment, storage, and PFAS
- 5 The trend nationally is toward regionalization, not away from it — rising costs and PFAS regulations are driving communities together

# Thank you!

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