

UPGRADING WASTEWATER SYSTEMS IN A HIGH-TRAFFIC TOURISM DESTINATION

The neighboring communities of Wisconsin Dells and Lake Delton encompass one of the most popular tourist designations in the Midwest. The area now draws over 2.8 million visitors annually. Driven by economic growth since 1990, average winter wastewater flows have tripled, and summer flows have nearly doubled. Due to the tourism-based local economy, the wastewater flows are highly seasonal; average wastewater flows during peak summer tourist season are 2-3 times the average flows during the winter. Together, rapid growth and wide seasonal variation created challenges for the Wisconsin Dells-Lake Delton (WDLD) Sewerage Commission that required unique solutions. In 2012, the WDLD Commission selected BCR and the company's BIO-SCRU® Biosolids Thermal Dryer System because it met multiple major challenges simultaneously. A successful on-site pilot gave plant operators the confidence to implement the technology.

WDLD Cost and Risk Challenges Prior to Thermal Dryer Technology:

- De-watered biosolids were only Class B per 40 CFR 503
- Disposition limited to warm months (spring-summer)
- Wet biosolids required large, covered storage floorspace
- Enclosed, odorous biosolids created unpleasant work environment for operators and truck drivers
- Resident complaints related to trucking through neighborhood
- Only a few end users (5) allowed WDLD to deliver and land apply Class B biosolids.
- High transportation costs and tipping fees



CASE STUDY:

Wisconsin Dells Lake Delton Biosolids Dryer



INTERMUNICIPAL COOPERATION ADDRESSES WASTEWATER CHALLENGES

Before the 1970s, the Wisconsin Dells and Lake Delton Village each had their own wastewater treatment plant's. As the area grew to be a recreational tourist destination with water parks joining lake swimming and longer-standing attractions, the growing volume of wastewater began to overwhelm the small separate plants. A decision was made by the two communities to create a new and larger plant under the administration of the Wisconsin Dells-Lake Delton Sewerage Commission. Over the years, various improvements have been made to the plant to keep pace with both increasing volume and stricter regulation. The installation of BCR's BIO-SCRU dryer is the latest advance in this process and has made a decisive difference in the conversion and disposition of biosolids from the plant.

CHALLENGING SITUATION

In the early 2000s, the sheer mass of EPA Class B biosolids from the plant again created a challenge. Because they could only be land applied during the warm months of the year, the biosolids had to be stored through the fall and winter in two buildings where they froze and then thawed with the coming of spring. The biosolids were odorous and unpleasant for plant workers to manage, bulky to store, and expensive and difficult to dispose of. Few farmers wanted wet, Class B biosolids and most landfill sites would not accept them, even though they repeatedly passed tests indicating they were free of pathogens. The Sewerage Commission needed to find a way to convert the waste to a product, suitable as a soil nutrient, while drastically reducing it in volume and eliminating the storage problem.

Conducting the mobile demonstration on site with our sludge convinced us the Bio-Scru® Dryer was simple, operator friendly and the right solution to our challenges.

- John Brown, Wisconsin Dells Lake Delton Sewerage Commission



Bio-Scru is a registered trademark of BCR Environmental Corporation

CLIENT DEFINED: LONG TERM SUCCESS

- Thermal dryer produces Class A dried biosolids per 40 CFR 503
- Dry, granular product with no odor
- Easy-to-use and stackable bulk sacks for winter storage.
- Total output volume of biosolids reduced by 80%
- Suitable for soil amendment, non-farm use such as parks, fill dirt and golf courses
- Dried Class A biosolids are now on allocation with more than 24 end users—and a wait list
- End users pick up orders, eliminating transportation costs
- Natural gas cost more than offset by pre-dryer handling/disposal costs



BCR'S THERMAL DRYER SOLUTION DELIVERS

1. BCR installed two 50 cubic-yard hoppers for cake storage, which permits unattended operation overnight; this in turn reduces unproductive startups and shutdowns.
2. The project included a BCR Service Agreement which provides continuous customer support via remote real-time monitoring, monthly reports, and quarterly inspections to increase uptime and reduce maintenance expense over the lifetime of the technology.
3. Fully automated one button startup and timed or one button shutdown. The BIO-SCRU consistently produced Class A biosolids each day of a 28-Day Compliance Test required by the Wisconsin Department of Natural Resources (DNR).



For more information, please contact BCR at www.bcrinc.com, marketing@bcrinc.com, 1-866-724-9145

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Our biggest challenge of finding Class B application sites and its' costs have been completely eliminated by drying to Class-A biosolids.

- John Brown, Wisconsin Dells Lake Delton Sewerage Commission



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