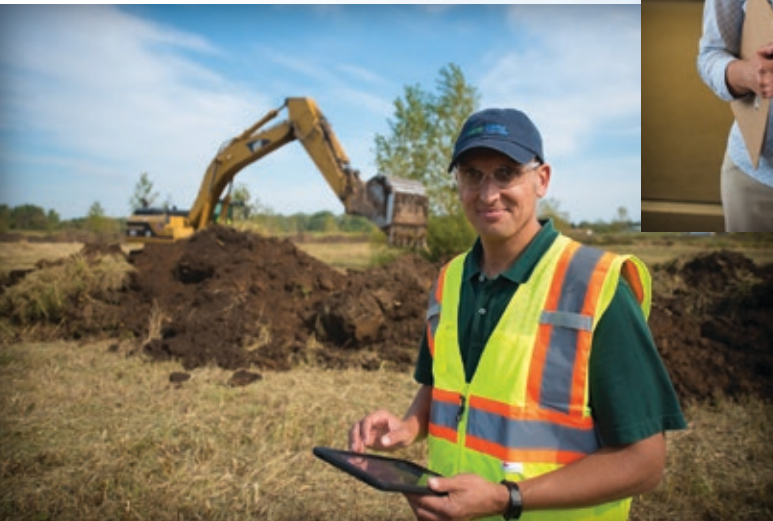




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2017 ANNUAL REPORT



Beyond Compliance

NEW Water Leadership



Commission

Row one, left to right:

Kathryn Hasselblad, President, Term Ends: 12/31/21
James Blumreich, Secretary, Term Ends: 12/31/19
Tom Meinz, Vice President, Term Ends: 12/31/18
Mark Tumpach, Vice President, Term Ends: 12/31/20
Lee Hoffmann, Vice President, Term Ends: 12/31/22

Executive Staff

Row two, left to right:

Trisha Brown, Human Resources Manager
Brian Vander Loop, Director of Business Services
Nathan Qualls, P.E., Director of Technical Services
Patrick Wescott, Director of Operations
William Hafs, Director of Environmental Programs

Cover / back page photos, clockwise from cover:

Ed Bellin, Mechanic; Green Bay Watershed, courtesy of The Nature Conservancy; Brick family, NEW Watershed Champions; Lake Michigan, courtesy of Sue Deering; Jeff Smudde, Watershed Programs Manager; Lisa Sarau, Staff Engineer; NEW Water's Green Bay Facility.



View an interactive Flipbook of this Annual Report online!
www.newwater.us/about



Look for this icon throughout this report – which signifies content with videos featured in both our Flipbook and YouTube Channel
(www.youtube.com/user/gbmsd)

A Message from the Executive Director



A little over ten years ago, NEW Water decided to broaden its focus on improving the environment to areas outside of its interceptors and two wastewater treatment facilities. A desire to increase recovery of valuable resources set the direction for the Resource Recovery and Electrical Energy Recovery (R2E2) Project. At the same time, NEW Water was facing future significant capital and operating expenses to remove a small amount of phosphorus from its effluent to meet stringent limits. This led to considering Adaptive Management as a means to meet those regulatory requirements, as well as work with agriculture to reduce runoff of nutrients and sediment into area waterways.

With those two pending initiatives, we realized that a new brand was needed to help focus the upcoming conversations on water in the most general sense with a very diverse group of stakeholders; the end result was NEW Water.

The R2E2 Project construction made significant progress in 2017 and will be ready for operation in 2018. NEW Water will then be able to generate about half of its electrical energy needs and significantly reduce its use of natural gas by extracting energy from the waste material it receives from its customers. We will also begin recovering phosphorus for sale as an organic fertilizer.

The Silver Creek Adaptive Management Pilot Project continued in 2017 to install best management practices on agricultural land to reduce sediment and nutrient loss to waterways, strengthen existing partnerships, and form new partnerships to assist NEW Water on how to proceed with a future full-scale Adaptive Management program. That program will reduce the cost of regulatory compliance for NEW Water's customers and will also have a much greater positive impact on area water bodies.

Year 2017 ended with the Green Bay Facility achieving 15 years of continuous 100% permit compliance and the De Pere Facility meeting six years. Actual discharges from both facilities are well beyond compliance with the regulatory requirements, resulting in cleaner water being returned to the Fox River and the bay of Green Bay.

To take on initiatives like R2E2 and Adaptive Management, NEW Water needed the support of its customers. Over the last seven years NEW Water has worked very intentionally to enhance relationships with its customers through steady, open, and honest conversations about both routine and difficult issues. We meet with our customers in a group setting at least four times a year, as well as host individual meetings. We believe we can now talk about difficult subjects, receive input, and gain support for those important issues.

I hope this report demonstrates that NEW Water is delivering performance to its community that is Beyond Compliance.

Thomas W. Sigmund, P.E.



Beyond Compliance: Collaboration & Innovation

Illuminating sustainably. Running operations to ensure nonstop community service requires round-the-clock lighting solutions. NEW Water's Electrical & Instrumentation Department tackled this with sustainability in mind, garnering a grant from Wisconsin's Focus on Energy, and installing new LED lights throughout the underground tunnels, and facilities. The result is an estimated 90% cost savings in energy and lightbulbs.

Safer conditions. The Treatment Department enacted new safety measures on the ash handling process, with a power disconnect and lockout system that will make the procedure safer for NEW Water staff to collect samples. The Maintenance Department commissioned a new parts washer system that is water-based, reducing hazardous waste exposure to staff, and providing a more environmentally friendly way to clean the equipment needed to keep the water treatment process running smoothly.

Photo above:

Members of NEW Water's Management team (not all present), left to right: William Hafz, Bill Angoli, Jean Van Sistine, Bill Oldenburg, Brian Vander Loop, Jeff Czypinski, Tricia Garrison, Thomas Sigmund, Bruce Bartel, Julie Maas, Nathan Qualls, Patrick Wescott.

Photos below, left to right:

Craig Lawniczak, R2E2 Coordinator;
Mark Mansky, Operator; Bobby Zepnick,
Mechanic Apprentice.



Efficiencies in IT. With trends to integrate wastewater process control and automation systems with enterprise resource planning (business software systems), and the need for data sharing across IT platforms, cybersecurity is an ever growing concern. To mitigate risk, IT staff have implemented cyber defense systems at multiple levels, as well as efficiencies for intrusion prevention, virus detection, data backup and disaster recovery.

Sustainable service. An initiative in the Field Services Department provided a backup solution to potential power outages ensuring uninterrupted service to a Lift Station serving more than 2,500 households in the community.

A Lean approach. Many staff are trained in Lean, a systemic method to streamline work processes for greater efficiencies and cost savings. Through a Lean project, staff tackled the wastewater sampling process, which is used for permit compliance, and customer billing. This resulted in an estimated savings of 30% of staff time as well as a 30% cost reduction.

Collaborating for the community. In 2017, NEW Water needed to do some underground work on sewer pipes (interceptors) in the same vicinity that the City of De Pere needed to do work. Rather than working separately, NEW Water teamed up with the City. Due to economy of scale, the overall cost was less to the community, the projects were streamlined, and traffic disruptions were lessened. "By doing this together, we were able to minimize the impact to property owners in the area," said Lisa Sarau, NEW Water Staff Engineer.

Beyond Compliance: Protecting Our Waterways

The science of water. Through its Aquatic Monitoring Program (AMP), NEW Water joined forces with the Wisconsin Department of Natural Resources, and the University of Wisconsin–Milwaukee Zilber School of Public Health on a three-year study to determine levels of toxins (cyanotoxins) produced by cyanobacteria, or blue-green algae, in the bay of Green Bay. Launched in 2016, the study continued in 2017, with preliminary data showing elevated levels of cyanotoxins in the water. AMP has been continuously monitoring area waters for more than 30 years, and its extensive database is used by water scientists in Northeast Wisconsin, the Great Lakes region, and throughout the United States. NEW Water is proud to serve as a trusted source of water information for our community.

Photos above, left to right:

 Sarah Bartlett, Water Resources Specialist, was interviewed for Mike Goushe's "Up Front" program.

The Bay Guardian workboat.

Photos right and below, clockwise:


Left to right: Nicole Van Helden of The Nature Conservancy, Jeff Smudde, and Casey Eggleston of the Fund for Lake Michigan scope out the wetlands project.

Left to right: Troy Streckenbach, Brown County Executive; Mike Mushinski, Brown County; Jeff Smudde; Dan and Raymond, father and son of Diederich Farm; Barry Bubolz, Natural Resources Conservation Service; Brent Petersen, Brown County.

The Interseeder.



Wetlands installation. Wetlands have been called the "kidney" of an ecosystem – filtering out pollutants and sediment, and serving as a sponge to control water flow. In partnership with The Nature Conservancy, Ducks Unlimited, U.S. Fish and Wildlife Service, and the Oneida Nation, nearly 7% of cropland acres in Silver Creek were restored to wetlands.

 **Partnering for water.** Thanks to a grant from the Fund for Lake Michigan, NEW Water purchased an Interseeder, an innovative piece of farm machinery that plants seeds between corn rows, reducing runoff, improving soil health and area waters. The equipment was donated to the Brown County Land and Water Conservation department, which will loan it at no cost to area farmers.



Partnering for Water



This project has received a \$1.67 million grant from the Great Lakes Restoration Initiative of the U.S. Environmental Protection Agency (EPA) under an assistance agreement to NEW Water. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.



Silver Creek Project. The land-water nexus is being explored in this pilot project, to improve water quality at a lower cost. In its third year, NEW Water continued working with landowners in this 4,800-acre watershed foray into Adaptive Management. Cover crops have been planted, buffer strips and grassed waterways installed, and water monitoring continued to capture the results.

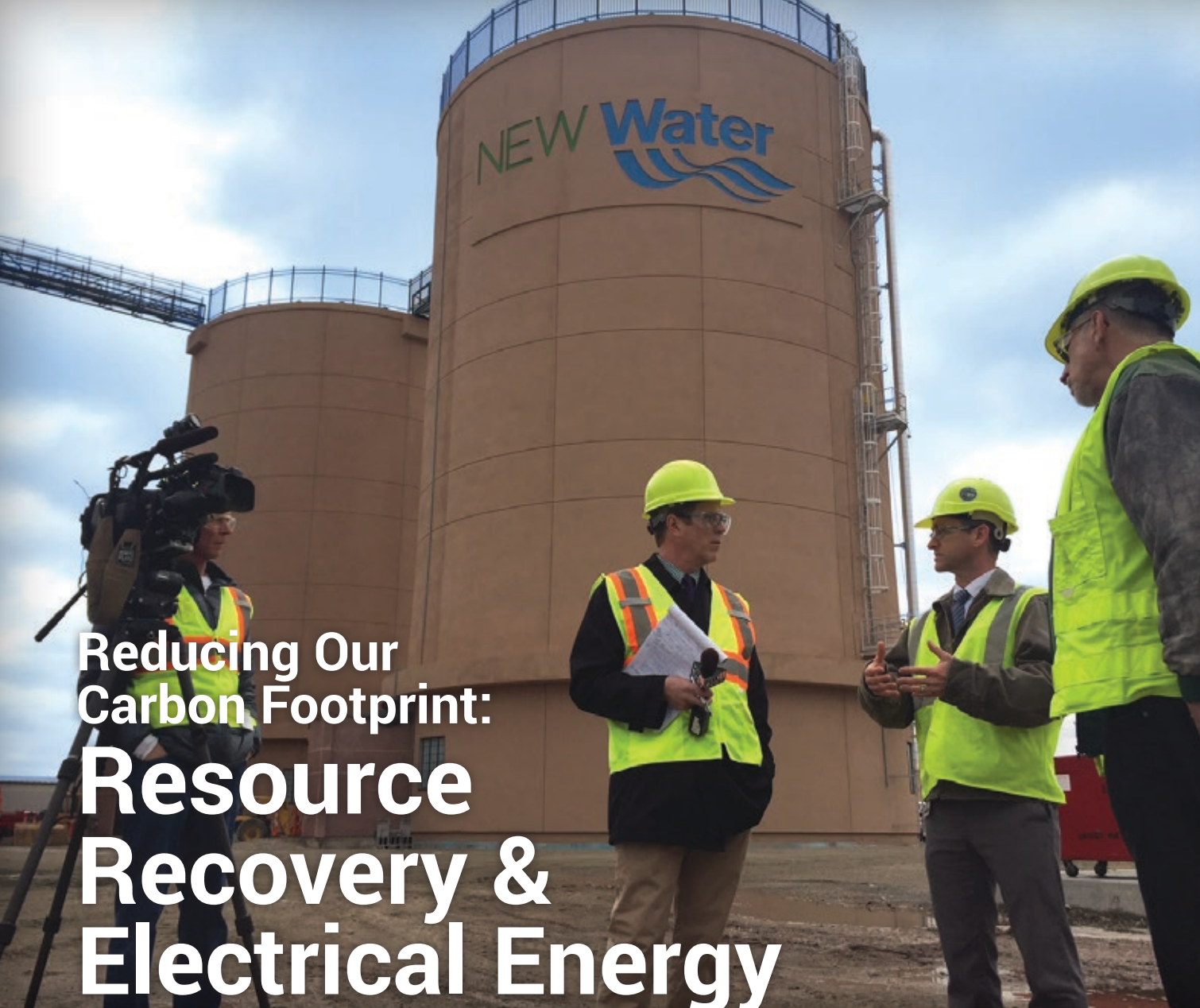
Grazing. With partners in the Silver Creek watershed, a managed grazing project was launched to determine water quality impacts to the surrounding watershed. Preliminary results are promising.

Photos top to bottom:

Rick Adamsky, left, discusses the benefits of grazing for improving soil health with Jeff Smudde.

Rotational grazing was studied with these cattle in 2017 in Brown County to determine the impacts on surrounding water quality.





Reducing Our Carbon Footprint: Resource Recovery & Electrical Energy

Construction of NEW Water's new solids handling facility, Resource Recovery and Electrical Energy, or R2E2, continued and was nearing completion. The project treats what is sent to NEW Water as a resource to be recovered, rather than a waste to be disposed. Using anaerobic digestion and other technologies, R2E2 will generate electricity from biogas, and harvest and reuse heat and nutrients. In 2017, the digester walls were hoisted into place, panel by panel, 42 of them each weighing 80,000 pounds. Microorganisms from a nearby facility were brought in to "seed" the digesters, to kick start the treatment process, which will allow NEW Water to generate approximately 50% of its own electricity, reducing both cost and carbon footprint.

Photo above:

Director of Technical Services Nathan Qualls (center) and Project Manager Bill Angoli (right) discuss R2E2 with Mark Leland from Green Bay's Fox 11 network.



Photos top to bottom:

An aerial view of the new R2E2 digesters.

The new solids building, left, stands next to the old solids building, scheduled to be razed in 2019.

Watch a time lapse of the lids and logo being placed on the digesters.



Protecting our most valuable resource,
water

In 2017, NEW
Water achieved
**100% PERMIT
COMPLIANCE**
for 15 years
in a row.

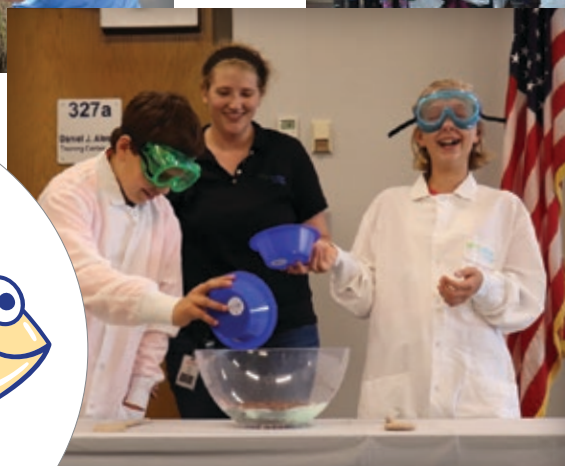


14,685,455,000

**gallons of clean water returned to the Fox River from
NEW Water's Green Bay and De Pere Facilities**

Serving to Engage, Inform, & Inspire

On the journey to protecting our most valuable resource, water, NEW Water actively engages the community to tell our story. In 2017, NEW Water hosted tours, gave talks and presentations, and participated in a number of community events. Staff helped Girl Scouts earn Wonders of Water Badges, collaborated with the Boys & Girls Club of Greater Green Bay for a STEM Superheroes Camp to offer interactive opportunities to learn about science, technology, engineering, and mathematics. We teamed up with the Green Bay Water Utility for a “One World, One Water” booth at the Einstein Science Expo, with visitors learning about where our water comes from, and how it is returned clean to the environment each day.



Photos clockwise from top

Bruce Bartel, Treatment Manager, addresses the 2017 Teen Leadership Green Bay class.

STEM Superheroes Camp with the Boys & Girls Club of Greater Green Bay. (Next two photos): Girl Scouts receive their “Wonders of Water” badge with Lisa Sarau, left, and Erin Schroth, right.

Erin Schroth, Public Affairs & Education Specialist, leads a “typical morning activity” with young scientists to demonstrate how much we rely on water each day.

Jim Snitjen, right, of the Oneida Nation, demonstrates critter identification in Silver Creek, as part of NEW Water’s field monitoring day with students from Oneida and Bay Port High Schools. William Hafz, left, looks on.

Nods for NEW Water



NEW Watershed Champion: Brickstead Dairy

NEW Water teamed up with the Green Bay Water Utility for the fourth annual World Water Day event, to call attention to water issues in Northeast Wisconsin, and to celebrate efforts to improve water quality.

Brickstead Dairy was presented the NEW Watershed Champion award during the event for conservation measures on their family farm that serve to protect area waters.

"Sustainability is very important to me because we want to ensure that the legacy of Brickstead Dairy continues. To do that, we have to ensure we have clean water and are stewards of the land," said Dan Brick. "That entails incorporating the use of cover crops to protect the soil and surrounding streams and rivers. Those crops build healthy soil, keep it from eroding, hold phosphorus and other nutrients in place and help the soil more effectively hold water for the main crops to feed the cows."

Brickstead Dairy Farms is a sixth-generation, 700-dairy cow operation and has been in continuous operation since the mid-1800s. Learn more at www.bricksteaddairy.com

Photo, top: The Brick family.

Left: Left to right: Tom Sigmund, Dan Brick, Nancy Quirk, Green Bay Water Utility's General Manager.

Right: Aaron Eichhorst, left, stars as "Commander Cleanwater" at NEW Water's annual STEM Superheroes Camp. In the back row, donning a captain's hat is John Kennedy, retired Watershed Programs Manager from NEW Water, who volunteered to help out as well. Boys & Girls Club campers celebrate their newly earned "Defenders of the Bay" titles.

100% Permit Compliance, Green Bay Facility. NEW Water received this award from the National Association of Clean Water Agencies (NACWA) for 15 years in a row.

Operators Competition Awards. NEW Water teams "Stinks Like Team Spirit" comprised of Joe Watson and Billie Komorowski, and "Lake Michigan Defenders" comprised of Corey Evers, Ed Bellin, and Ashley Lloyd, placed 1st and 2nd, respectively, in the annual Wisconsin Wastewater Operators Association competition.

George W. Burke, Jr. Facility Safety Award. NEW Water received this award from the Central States Water Environment Association (CSWEA) in recognition for establishing an effective safety program and safety performance record.

Water Environment Federation Fellow. Thomas Sigmund received this honor for contributions toward "preserving and enhancing the global water environment."

Public Information & Education Award. NACWA lauded NEW Water for the STEM Superheroes Camp, a collaboration with the Boys & Girls Club of Green Bay.

NACWA Emerging Leaders. Matt Schmidt and Jake Becken completed the inaugural year of this program to identify and nurture leaders in the water industry.

Communicator of the Year. Tricia Garrison received this honor from her peers at the Public Relations Society of America, Northeast Wisconsin Chapter, for NEW Water's Public Affairs & Education efforts.

Moody's AAA Rating. NEW Water continues to achieve this designation for exceptional creditworthiness to meet financial commitments.

Volunteer Certificate of Appreciation. The Speakers Bureau received this honor from Wisconsin Public Service for community outreach initiatives. Special thanks to retirees John Kennedy, Dan Busch, Pat Rocheleau, and Scott Thompson, who continue to serve NEW Water.

Water Conservationist of the Year. NEW Water's Silver Creek Project received this accolade from the Wisconsin Wildlife Federation.



Our Most Valuable Asset: Our Staff

New Hires

Dalton Aderholdt –
Mechanic Apprentice

Todd Wanta – Electrical &
Instrumentation Technician

Sarah Bartlett –
Water Resources Specialist

Ethan Wandersee – Limited Term
Employee (LTE) Operator

Tyler Bolwerk – LTE Operator

Sharon Thieszen –
Pretreatment Program Coordinator

Ryne Koehler – LTE Operator

Ben Settersten –
Computer Software Specialist

Nicole Langenberg – Human
Resources/Payroll Specialist

Erin Schroth – Public Affairs
& Education Specialist

Retirements

Jack Laguna –
Network Software Administrator

Michael Urbancic –
Lab Services Manager

Paul Willems – Treatment Leader

Denton Bradley –
Maintenance Mechanic

Job Changes

Casey Shaw –
Lab Analyst I to Lab Analyst II

Erin Houghton – Water Resources
Specialist to Watershed Specialist

Jon Strandberg –
Operator-in-Training to Operator

Jake Becken – Interim Treatment
Leader to Treatment Leader

Matthew Schmidt – Field Services
Technician to Operations Trainer

Jacob Kehring –
Operator to Treatment Leader

Dave Hoppe – Interim Operations
Trainer to Operator

Bill Oldenburg –
Pretreatment Program Coordinator
to Laboratory & Research Manager

Colin Clark – LTE Operator
to Field Services Technician

Joseph Watson –
Operator-in-Training to Operator

Ethan Wandersee –
LTE Operator to Operator-in-Training

Cory Marcott –
Operator-in-Training to Operator

Pat Smits – Asset Reliability
Coordinator to Maintenance Manager

Brian Vander Loop –
Field Services Manager to
Business Services Director

Jeremy Klingbeil –
Health, Safety & Security Coordinator
to Asset Reliability Coordinator

Sharon Thieszen –
Pretreatment Program Coordinator
to Field Services Manager

Each year, NEW Water staff donate to families in need during the holiday season through The Giving Tree.



NEW Water is proud to have an employee campaign to support the Brown County United Way. From left to right, at the 2017 campaign kickoff: NEW Water Executive Director Thomas Sigmund; Meghan Krause from Brown County United Way; Elizabeth Webb from the McKinney-Vento program at Green Bay Schools; NEW Water Director of Operations Patrick Wescott.

NEW Water Peer Awards

Peer Excellence Award – Jake Becken (2017), Aaron Eichhorst (2016)
Excellence in adhering to NEW Water's culture attributes of Safety, Respect, Team, and Environment

Jack Day Award – Bill Angoli (2017), Tricia Garrison (2016)
Honoring the spirit and commitment of visionary Dr. Harold "Jack" Day, former NEW Water Commission President

Caring for Our Community

NEW Water staff donate their resources and talents to numerous community charities and causes including the United Way, American Red Cross, Northeast Wisconsin Veteran's Treatment Court, Catch a Dream Foundation, The Giving Tree, and Einstein Project.

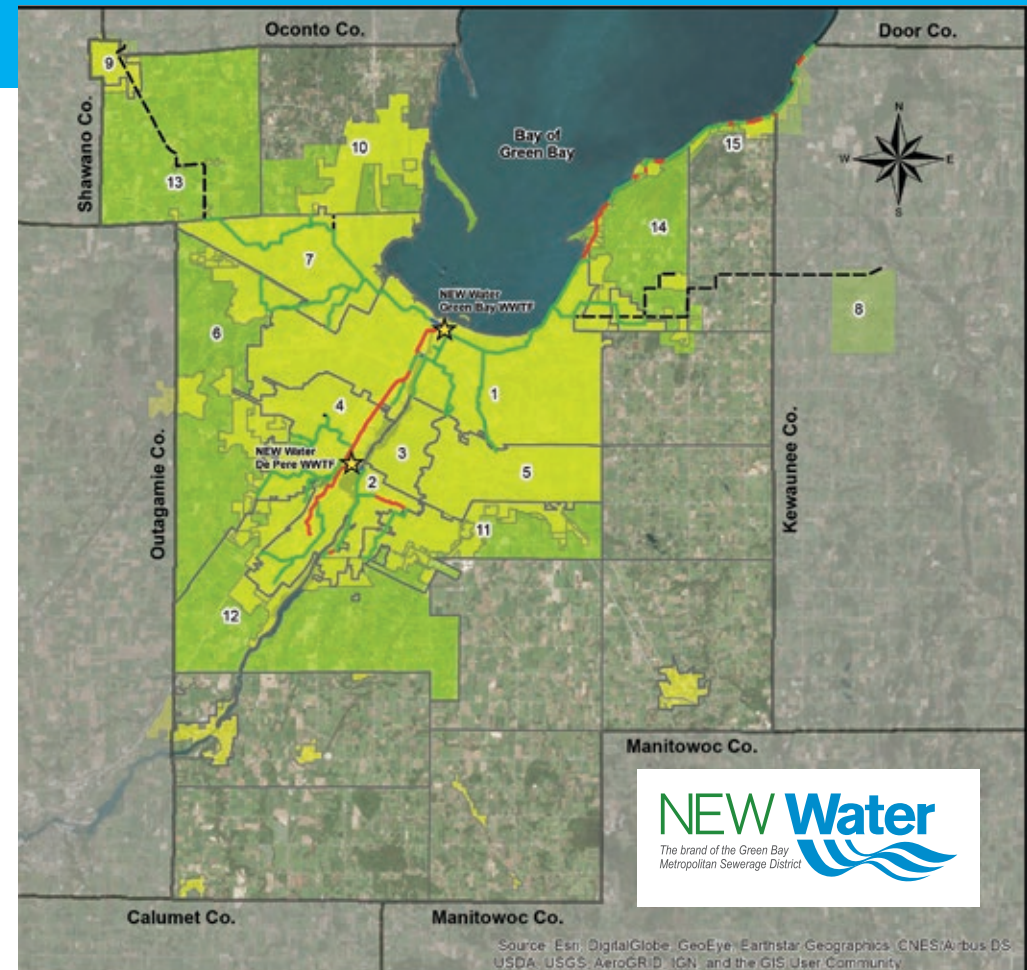
Rob Reinhart, Engineering Technician, helps a camper earn her "Defender of the Bay" certificate through learning some engineering skills.



2017 Financial Statement

The financial statement below is for informational purposes only and is not intended to represent full financial disclosures. Complete financial statements and related notes are available on NEW Water's website at www.newwater.us or available upon request.

	2017	2016
OPERATING REVENUES		
User fees - municipal waste	\$34,866,447	\$32,647,826
User fees - mill waste	1,585,340	1,415,855
Capital revenue - mills	1,496,164	1,696,131
Other revenues	2,309,402	1,702,120
Total operating revenues	40,257,353	37,461,932
OPERATING EXPENSES		
Salaries and wages	7,204,083	7,055,515
Fringe benefits	3,113,909	3,252,544
Employee development	146,274	118,996
Travel and meetings	61,101	61,576
Power	2,444,939	2,408,771
Natural gas and fuel oil	934,380	908,606
Chemicals	609,627	590,801
Maintenance - plant	1,458,500	1,371,703
Maintenance - interceptors	787,254	257,930
Contracted services	2,437,773	2,261,912
Insurance	240,938	232,200
Solid waste disposal	186,079	173,741
Office related expenses	506,085	461,973
Supplementary expenses	447,920	403,151
Subtotal	20,578,862	19,559,419
Depreciation	7,652,471	7,474,124
Total operating expenses	28,231,333	27,033,543
Operating income	\$12,026,020	\$10,428,389



Service Area

1. City of Green Bay
2. City of De Pere
3. Village of Allouez
4. Village of Ashwaubenon
5. Village of Bellevue
6. Village of Hobart
7. Village of Howard
8. Village of Luxemburg
9. Village of Pulaski
10. Village of Suamico
11. Town of Ledgeview Sanitary District #2
12. Town of Lawrence - Utility District
13. Pittsfield Sanitary District No. 1
14. Scott Municipal Utility
15. Dyckesville Sanitary District

LEGEND

- Gravity Sewer
- Forcemain Sewer
- River Siphon Sewer
- Sewer By Others
- Neighboring Counties
- Municipal Boundary
- Brown Co. Sewer Service Area
- NEW Water Annexed Area

Proudly Serving Our Community Since 1931

Mission:

Leading water quality improvements for the bay of Green Bay through operational excellence, resource recovery, education, and watershed management.

2017: In Numbers

492,436

pounds of phosphorus removed by NEW Water and prevented from entering area waters

147

acres of wetlands were restored in the NEW Water Silver Creek Project area, thanks to grants and partnerships

12,000

trucks of hauled waste delivered to NEW Water to be cleaned and returned safely to the environment

9,500°

approximate temperature of the sun's surface – as well as NEW Water's Inductively Coupled Plasma torch, used to test for metals in water samples in our state-certified Laboratory

14,685,455,000

gallons of clean water returned to the Fox River from NEW Water's Green Bay and De Pere Facilities

89,032

feet of pipes inspected through in-pipe televising. NEW Water's pipes are inspected on a 5-year rotation

\$14,000

dollars received from a Focus on Energy grant for LED lightbulbs to illuminate operations for nonstop community service

90%

reduction in costs for light bulbs and the electricity to power them

2,250,000

gallons: capacity of each anaerobic digester of R2E2, the new solids handling facility



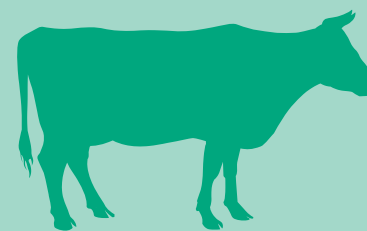
4,895,151,667

approximate toilet flushes that flowed to NEW Water



15

years of achieving 100% permit compliance at the Green Bay Facility, and six years at the De Pere Facility



1

heifer attended World Water Day, to help celebrate conservation efforts that earned Brickstead Dairy the NEW Watershed Champion Award

4,000+

visitors to the NEW Water and Green Bay Water Utility "One World, One Water" booth at the Einstein Science Expo

