

CHARTING THE NEW COURSE


How NEW Water's Vision Shifted From Compliance to Innovation on Its Journey to Become a "Utility of the Future"

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History has an ironic tendency to repeat itself.

In order to become a "Utility of the Future," the 97 technical experts at NEW Water realized it was time to take pause to become students of history: our own. Established in 1931, the Green Bay Metropolitan Sewerage District was borne from controversy, like so many water resource utilities across the US. Poor sanitation became a public menace, and began to rear its ugly head through diseases like cholera. When the conversation turned to developing a systematic process to manage sanitation, not surprisingly, debate raged over the cost. And when the sewerage district turned out to not be a panacea for all waste issues facing the developing community, debate raged again.





Fast-forward to the 21st century. Evaluating our storied history as a utility we realized that what worked in the past, and more importantly, what did not work, would help us navigate the path forward from compliance to innovation. Learning from our history, as well as shifting behaviors and cultural values, would be needed to prepare us for the future.

NEW Water serves 233,000 people over a service area of 285 square miles as a wholesale provider of wastewater conveyance and treatment services to 15 municipalities. Combined, our two water resource recovery facilities treat an average of 38 million gallons per day. To build the new behaviors needed to help conduct business, we established goals to guide our progress:

- Treat the material we receive as a resource to be recovered and reused
- Work with stakeholders in the watershed to significantly reduce nutrient and sediment runoff into area waters
- Define and implement an organizational culture to unite the entire workforce
- Reach out to the community to build and strengthen regional partnerships
- Clearly communicate information to stakeholders to spur them to take action supporting environmental improvement

LAUNCHING, WITH STRONG FOUNDATIONS

NEW Water has a proud history of protecting public health through efficient and effective conveyance and treatment of wastewater. Work within our facilities was excellent and the skills and pride of the workforce was evident. From this strong foundation, we launched our journey.

An early step on this path was redefining how our staff and external stakeholders viewed our organization. We jumpstarted this process through new branding. The Green Bay Metropolitan

Sewerage District became known as “NEW Water,” indicating its regional role in Northeast Wisconsin (NEW), and that we produced clean water from waste products. We realized that our stakeholders want to talk about water rather than wastewater or sewage.

A second step was demonstrating our commitment to the future by articulating our vision: “Protecting our most valuable resource, water.” That vision illustrates the hard work that goes into achieving 16 years of 100% permit compliance at the Green Bay facility and seven years at the De Pere facility.

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As NEW Water looked to the future, employees worked to define and implement a set of unified cultural attributes for the organization. That led to four principles to which we now all adhere:

- Safety is our most important value
- We respect and value diverse individuals and values
- One team that communicates openly and honestly while encouraging and supporting one another in achieving common goals
- Leaders in the environment always looking beyond compliance

As an environmental organization, we strive to be part of the solution to the water problems in our community. The Bay of Green Bay suffers from what is colloquially known as a “dead zone,” resulting from excess nutrient loadings. To reduce phosphorus in area waters, the State of Wisconsin

offers point source dischargers an alternative method of permit compliance—an approach working with agricultural producers called Adaptive Management.

In 2014, anticipating upcoming restrictive permit limits for phosphorus (0.2 mg/L), NEW Water began a five-year pilot project in Silver Creek, a 4,800 acre sub-watershed. Through this process, NEW Water gained experience implementing Best Management Practices (BMPs), developing broad and strong relationships with stakeholders, and working through the complexities of these new rules with regulators.

Collectively, these activities and others provided NEW Water with the solid foundation necessary to launch the next stage in our evolution as a clean water utility.

INNOVATING, WITH COLLABORATION

Recovering and reusing valuable resources was a focus of NEW Water’s replacement of aging solids-handling facilities. The project was branded Resource Recovery and Electrical Energy (R2E2), and incorporated facilities to generate electricity from digester gas, recover heat energy, and recover phosphorus in the form of struvite to be reused as a slow-release agricultural fertilizer. This project was NEW Water’s first significant effort in resource recovery, and allowed the team to shape the message for staff and external stakeholders of the benefits of moving from a consumer of resources to a producer. Within its first year of operation, R2E2 has met its goal of generating 50% of NEW Water’s energy demand on-site.

NEW Water has learned enough valuable lessons in agricultural BMP implementation and broad stakeholder involvement from its pilot project to have the confidence to move full-scale into an Adaptive Management Program. The large-scale watershed program (31,000 acres) will span a period of 20 years as an alternative compliance strategy to

building costly grey infrastructure at its resource recovery facilities. The program is expected to have a greater positive impact on the environment and save NEW Water’s customers over \$50 million compared to traditional compliance alternatives.

When conducting the initial planning phase of the \$170 million R2E2 Project, NEW Water realized that it had not maintained strong enough relationships with its customers to move forward with such a large project. When the impacts to the sewer rates were widely understood by the public, it became apparent that we had not made the case to the customers as to why this large project was critical to meeting their service needs.

We took a pause in the project and worked with our customers and stakeholders to develop and implement a communication and education strategy designed to develop and maintain those relationships, as well as communicate the need for the project. NEW Water has continued proactive communication with customers using a transparent budgeting process, quarterly customer meetings, newsletters, and formation of stakeholder advisory groups that gather input on any NEW Water initiatives that impact customers.

In January 2019, NEW Water embarked on an update to its Strategic Plan. The process used for this update was unique in that it involved a much broader group of internal and external stakeholders

than in past efforts. This greater engagement and participation is intended to increase the public’s understanding of the plan, and its effectiveness, for smoother implementation.

FORWARD, WITH ATTITUDE

The motto of the State of Wisconsin is “Forward.” This word represents our attitude towards environmental stewardship and protection of public health. It also embraces the innovation we need to best meet our customers’ needs.

NEW Water staff continue to look for more opportunities to reduce resource consumption, recover more resources from the material we receive, strengthen internal and external communication, develop team members, and foster a spirit of innovation. Examples of possible future initiatives are:

- Find a way to cost-effectively recover the 201 pounds of gold, valued at \$3.8 million, that enters the two facilities each year
- Reduce energy consumption further, and increase on-site energy generation to achieve a goal of net-zero energy production
- Expand on an initial 2 million gallons per day reclaimed water project for an industry to provide water to a larger group of users
- Engage and educate a larger group of stakeholders to support NEW Water’s efforts in protecting the environment

Like so many utilities in our shared and proud sector, working “out of sight and out of mind” is no longer an option. Our communities demand, and deserve, more. Treading the path to become a Utility of the Future is an arduous journey requiring great fortitude, perseverance, and introspection. Given the great responsibility we have to the families and communities we serve, it is one well worth the effort as we continue protecting our most valuable resource, water. 💧

