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# A LIFETIME OF EXCELLENCE

EXECUTIVE SUPERINTENDENT BILL NESTER DEDICATED HIS CAREER TO WASTEWATER OPERATION AND MANAGEMENT, AND FOUND SUCCESS IN HARD WORK AND A CAN-DO ATTITUDE

By Trude Witham

**WHEN BILL NESTER RETIRES AFTER 45 YEARS AT THE UPPER** Montgomery Joint Authority Wastewater Treatment Plant in Pennsburg, Pa., he will leave a legacy of excellence. With 13 plant awards and eight personal awards to his credit, Nester has accomplished a great deal, yet he credits his team for making that happen.

He began his career at 19 when the wastewater treatment plant near his home was looking for an operator. Although he worked as an auto mechanic at a local service station before graduation, he always felt a pull to the water treatment field.

“My parents had a dairy farm until I was 13, and I remember in fifth grade, we took a field trip to a local water treatment plant,” he says. “I was so impressed by the plant because it looked so clean and nicely painted.”

His first day on the job at the trickling filter wastewater plant was daunting. It was a two-man operation: his supervisor handled the billing, and Nester was expected to do everything else. “My supervisor took me around the plant and said, ‘It’s yours,’ and I thought, ‘Oh boy,’” Nester recalls. “I pored over blueprints and manuals, took all the courses I could get my hands on, and just talked to a lot of people.”

## DOING IT ALL

He took one course at a time and attended numerous training classes and seminars sponsored by state agencies. His first class was a basic water and wastewater plant operation course, which he completed in October 1965.

By the late 1960s, each plant in the state had to have licensed operators. When the law was passed, everyone in charge of operating a treatment plant automatically received a license. “The license required for UMJA was Class E Type III, which I received,” Nester says.



Bill Nester, shown in front of the biosolids dryer at Montgomery Joint Authority Wastewater Treatment Plant, can look back on a satisfying career that includes many awards for excellence. (Photography by Tim Miller)

“Wanting to prove myself, I took the certification test in the early 1970s and passed for a Class B Type III, which was the highest you could receive for a trickling filter plant. I was issued a Class C Type III license because the law stated you could only be issued a license two classes higher than the plant you were working at.”

In 2004, the State Board for Certification of Water and Wastewater Systems Operators issued new certificates to all certified operators, and Nester received a Class A, E Subclass 2, 3, 4.

Nester did everything at the plant, including equipment repairs, which he managed to learn by reading the manuals and doing what needed to be done. When his supervisor passed away in 1977, the board made him office manager and hired someone else to run the plant. He did the quarterly billing, accounts receivable, general ledger, bank deposits, payroll and taxes while keeping a hand in the operation side.

“I worked 6 a.m. to 3 p.m., so after I finished the office tasks, I went outside to check on the plant operation,” he says. After one year, the plant operator quit, Nester went back into plant operations, and the Board hired someone else to do the billing and accounts receivable. In 1988, Nester was promoted to executive superintendent.

## OVERSEEING EXPANSION

In that role, Nester oversaw the plant’s expansion and upgrade from early 1988 to June 1990, and the hiring of more staff. The original plant was designed to handle 120,000 gpd and consisted of a comminutor and bar screen, a primary clarifier, two trickling filters, a secondary clarifier, a chlorine contact tank, two anaerobic digesters, and glass-covered sand drying beds.

The plant expansion increased capacity to 2.5 mgd and 2.0 mgd annual average. The upgrade included a larger comminutor and bar screen, an aer-

Bill Nester worked his way up through the clean-water profession, often learning mostly by his own initiative.

## LOTS OF RECOGNITION

Bill Nester has won many awards in his career — enough to fill a large share of a magazine page if all were listed.

Among his most significant honors is the 2002 William D. Hatfield Award from the Water Environment Federation for outstanding performance and professionalism in operating a wastewater treatment facility.

He also won the Ted Moses High Hat Award in 2004 from the Pennsylvania Water Environment Association (PWEA), for members who distinguished themselves while working to promote the association and its program. Each year, recipients' names are lettered upon the hat, which is displayed at the annual awards banquet.

The Upper Montgomery Joint Authority treatment plant has won 13 awards, including the EPA Region III Operations and Maintenance Excellence Award in 2001 for medium-sized advanced treatment plants in the Mid-Atlantic Region.

The plant was given the 2010 Beneficial Use of Biosolids Award from the PWEA at the annual PennTec conference in June 2010 at Penn State University. Nester refers to this award as his "last hurrah" before retiring.

Since 1973, Nester has been active in professional organizations. He now serves on the EPWPCOA board of directors, on the Safety, Nominating, Directory and Awards committees, and as chair of the Membership Committee. He served for many years on the Safety Committee of the PWEA, and, since 1999, on the Membership Committee. Nester and the plant have won awards from this organization, from operator of the year and a life membership award, to excellence in plant operation and maintenance and plant safety.

## profile



**Bill Nester, Upper Montgomery Joint Authority, Pennsburg, Pa.**

**POSITION:** Executive superintendent

**EXPERIENCE:** 45 years

**EDUCATION:** Professional training from Penn State University, State of Pennsylvania, Pennsylvania Municipal Authorities Association, Pennsylvania WEA, EPWPCOA, WEF

**CERTIFICATION:** Pennsylvania Class A, E Subclass 2, 3, 4

**GOALS:** Retire once a successor is found; stay active in EPWPCOA

“My supervisor took me around the plant and said, ‘It’s yours,’ and I thought, ‘Oh boy.’ I pored over blueprints and manuals, took all the courses I could get my hands on, and just talked to a lot of people.”

#### **BILL NESTER**

ated grit chamber, an additional primary clarifier, plastic trickling filter media, a solids contact tank, two new secondary clarifiers, a new chlorine contact tank, post aeration, a Parshall flume meter chamber, and a liquid sludge loading area.

The anaerobic digesters were converted to aerobic and the sand drying beds were changed to vacuum-assisted drying beds. The original secondary clarifier became the storm retention basin. The plant also added a 6,000-gallon tank truck to haul liquid biosolids to permitted farmland, a farm tractor, and a 2,600-gallon tanker to spray or inject the biosolids into the soil.

Equipment for the collection system included a Harben flusher truck to clean the 34 miles of sewer lines, and a CUES CCTV inspection and chemical grouting truck.

Today, the plant serves 8,700 people in the boroughs of East Greenville, Pennsburg and Red Hill and Upper Hanover Township. Nester’s team includes chief operator Steve Torma; operator Greg Young; lab technician Dennis Schoenly; collection systems mechanic Tom Grigas; laborer/operator trainee Matt Hinkle; billing secretary Carole Nester; and bookkeeper Brenda Bower.

#### **BACK TO THE LAND**

On Nov. 2, 1990, UMJA received a permit for agricultural use of its aerobically digested biosolids. “From 1990 to 2003, we did the whole land-applied operation, and even trucked the dewatered material to the farms ourselves and land-applied it,” Nester says. “We started looking around at other methods to manage our biosolids. I wanted to end up with a Class A biosolids, but was not sure how to get there.”

In 2001, Nester looked at a variety of equipment, including:

- Egg-shaped digesters in Kutztown, Pa.
- Digesters and aeration equipment in Nelsonville and Uhrichsville, Ohio.
- Autothermal Thermophilic Aerobic Digestion (ATAD) and belt press in Ephrata, Pa.
- Centrifuges in Abington, West Mifflin and Doylestown, Pa.
- Lime stabilization in Lower Township, N.J.
- Filter press with vacuum and heat cycle in White Haven, Pa., and Mountain City, Tenn.
- Thermal dryers in Phillipsburg, Pa., Mount Holly, N.J. and Stuttgart, Ariz.

The plant ended up getting a Fenton indirect thermal dryer that dries the biosolids to a minimum of 90 percent solids. The project was completed in 2006, and the plant began producing Class A material.

Nester and his team were instrumental in implementing the biosolids program. “Since we implemented this, we haven’t sent anything to the landfill, but are giving it away to two farmers and the general public,” Nester says. “We purchased Ziploc bags and filled them with 7.5 pounds of fertilizer to give to the public when they came in to pay their sewer bills. We encouraged them to come back with buckets or pickup trucks for more. Now, we can’t keep up with the demand for it.”

Although UMJA had no intention of selling the fertilizer, the agency applied for a permit to do so. Nester says that was a way to demonstrate to the public that the fertilizer is safe to use.

#### **A HUGE JOB**

Nester’s job as executive superintendent includes payroll administration, hiring and promotions, personnel training, development of operating budget and expenditure projections, development of service contracts, oversight of contractors’ work, plant maintenance, parts procurement, equipment selec-

tion and modifications and preparation of regulatory reports.

By all accounts, he has done the job exceptionally well. The plant has consistently met or exceeded its permit requirements for CBOD, TSS, ammonia and phosphorus. He says his team deserves the credit.

“I have a real good team of fairly young people, although turnover has been common as people have had a chance to move on to other facilities,” he says. “What makes the plant work well is its good design and a lot of dedication and common sense from the employees.”

Nester believes in managing by stepping out of his office and taking a walk around to talk to employees about their ideas. They meet every morning at 7:30 in his office and hold a safety meeting once a month. He also schedules hands-on reviews and shows tapes on safety procedures, such as for chlorine handling and equipment lifting. That has paid off in a good safety record over the years.

The staff does most of the plant maintenance and upkeep and smaller equipment repair. Employees attend seminars on lab procedures, maintenance, pump repair, and collection systems — seminars they are required to take to keep their licenses.

#### **MANY CHALLENGES**

Nester has had his share of challenges, and one of the biggest has been dealing with alarm conditions from heavy rains that cause infiltration to the main sewer line.

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“Since 1990, we have had our own CCTV truck so we can televise the mainline and check for leaking joints and then chemically seal them,” Nester says. “During drought conditions, the water table drops, the grout shrinks and falls out, and this causes the joints to leak again.”

In late 2008, the plant hired a company to repair 6,000 feet of sewer mains using cured-in-place lining material. That eliminated all the joints. “In 2008, 20 million gallons of stormwater was put through the storm basin, and in 2009, with almost the same amount of rainfall, the flow was reduced to 10 million gallons,” Nester says.

In April 2010, the authority lined 19,185 feet of sewer mains, lined 700 feet of sewer laterals, and rehabilitated 93 manholes. More such work is in the plan.



In retirement, Bill Nester looks forward to fishing and assorted projects, but he admits he will miss the treatment business.

With the sewer line issue all but solved, Nester has another issue that concerns him: cutbacks on certification testing because of the state budget. “There are people waiting to be certified who can’t get certified,” he says. “Plus, people are leaving the industry because of the liability placed on operators.

“When I began as chair of the Eastern Pennsylvania Water Pollution Control Operators’ Association (EPWPCOA) membership committee, there were 1,500 members, and now there are 1,350.”

## NOT GOING AWAY

Nester’s immediate plan is to stay on the job until a successor is found and trained. “My feelings about retiring are bittersweet,” he says. “I’m looking forward to it, but I’ve worked too hard and don’t want the plant to go downhill.”

Nester plans to stay active in the EPWPCOA on the membership and safety committees. He and his wife have a seasonal home and plan to spend more time there. “I want to get back into fishing, and there are a lot of projects I would like to finish,” he says. “Plus, I have a lot of land to mow.”

He also has some advice for his successor: The plant comes first. “As executive superintendent, you’re the first on the list to respond to the SCADA system alarms,” he says. “You are responsible, and you have to take care of it. Stay on top of everything, get outside and talk to your employees, and you’ll do fine.”

He also says the superintendent must make sure the plant looks good at all times, because chances are, “If it looks good, it will operate well.” The NPDES permit expires the end of July, and Nester wants to make sure that is taken care of before he retires. “The regulatory people know I run a good plant, and I have a good working relationship with the regulators,” he says. “I’m always up front with them if I have a problem.”

The written job description of the person who will fill Nester’s shoes is four pages long, but it only begins to describe the contributions he and his team have made over 45 years. It’s quite a record for someone who started as a 19-year-old kid. **tpo**

## more info:

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