

Xylem's Bell & Gossett assists Massachusetts-based child welfare organization in creating a healthier environment

Group effort supports facility's green initiatives with energy-efficient solutions and property improvements



Situated on Winter Island, a 54-acre peninsula located northeast of Salem, Massachusetts, Plummer Youth Promise is a child welfare organization that serves young people in the foster care system. The original residential facility, built in 1867, has continuously housed young people for over 150 years and is a staple in this small, historic community.

The challenge

Realizing the therapeutic value its waterfront setting offered the children they serve, Plummer Youth Promise leadership began focusing on property stewardship about 10 years ago. With a broader vision to create a greener, more restorative campus, the leadership team has embarked on several initiatives focused on sustainability and reducing environmental impact.

As part of those efforts, the organization launched a two-year capital improvement effort in 2023 to create a new residential facility and restore the existing building. Despite careful upkeep, the historic structure was showing its age, presenting challenges such as a temperamental heating system, cramped double-occupancy bedrooms and outdated locker room-style bathrooms that offered little privacy for residents.

Additionally, the HVAC system upgrade required navigating how to fit a large number of pumps into three relatively small mechanical spaces.

“There wasn’t enough wall space in one mechanical room to accommodate a standard VFD with the 3-foot clearance required by the NEC, so we moved to the hydrovar® X with smart motor to provide the customer with one solution for all three mechanical spaces,” said Chris James, an application engineer with manufacturing representative Fluid Industrial Associates (FIA).

The solution

When seeking project partners for the building renovations and property upgrades, Plummer Youth Promise quickly recognized that Xylem’s Bell & Gossett shared its commitment to advancing sustainability and reducing environmental impact. Ultimately, the organization teamed up with Bell & Gossett and FIA to develop an energy-efficient HVAC system for its new residential building—a partnership that is paying off for the campus in more ways than one.

“Our collaboration with Xylem’s Bell & Gossett is helping create a healthier environment for everyone who uses our spaces,”

said Jessica Norton, community partnerships manager, Plummer Youth Promise.

In addition to transitioning to a high-efficiency heating and cooling system, Plummer Youth Promise chose a solar-powered geothermal system to heat and cool its facilities.



Contractors drilled nearly 50 geothermal wells over 300 feet into the ground, capturing the earth’s constant temperature to efficiently exchange warm and cool air. “The geothermal system is a key component of Plummer’s sustainability effort. We’re harvesting heat from the ground, so the efficiency is 400 to 500%,” said Larry Lessard, director of Achieve Renewable Energy (ARE), which led the HVAC design and installation.

“Xylem’s pump system is incredibly important because it would be a shame to have all that efficiency and then have it dragged down by inefficient pumps.”

The results

With its innovative, integrated design, hydrovar X smart pump products easily fit the reduced footprint inherent to modern-day mechanical rooms. By integrating the smart drive into a compact, accessible pump package that can be directly mounted on the pump motor, hydrovar X-enabled solutions help conserve premium floor and wall space.

The hydrovar X design is equally embraced for its simplicity.

“A lot of customers love the intelligence and capabilities that VFDs offer, but they tend to shy away due to their complexity,”

said Derrick Oberdorf, America product manager, Xylem

To remedy this, Xylem designed its hydrovar X-enabled smart pump products with built-in application software that makes it easy to configure, commission, program and operate.

Along with hydrovar X smart pumps, Bell & Gossett and FIA supplied a slate of energy-efficient hydronic equipment and digital solutions like Xylem’s Avenor smart monitoring platform and optimize® condition monitoring—which, when paired with pumps—enable remote monitoring, predictive maintenance and more efficient asset management. In collaboration with ARE, the upgrades are improving comfort and performance across the campus.

These enhancements directly support Plummer’s green infrastructure plan through improved air quality, energy efficiency and reduced environmental impact.

Beyond infrastructure improvements, other campuswide green initiatives have been implemented, including native plant landscaping, permeable paving and stormwater best practices.

Made possible by Watermark, Xylem’s corporate social responsibility program, volunteers from Xylem and FIA came together with youth at the Plummer campus to assist with those efforts. Volunteers helped clean up the beachfront and plant flowers to further enhance the natural beauty of the area and create a more welcoming, cared-for environment.



Did you know?

Xylem Bell & Gossett’s hydrovar X-enabled solutions include IE5 efficiency motors, which offer 40% less energy losses compared to traditional induction motors.

Collectively, campus upgrades are expected to decrease long-term operating and maintenance costs by about **\$7 million** compared to traditional building systems, allowing the school to put more resources into programs that **directly benefit the youth it serves.**

“Our day-to-day work usually involves solving complex mechanical challenges, but volunteering here gives us a chance to make a different kind of impact,”

said FIA President Andrew Pratt.

“Being part of this project reminds us that what we build outside of the mechanical room matters just as much as the selection of products inside the mechanical room.”

In addition to on-site support, Xylem presented a \$10,000 Watermark grant to Plummer Youth Promise to help stabilize the coastal bank and support ongoing shoreline restoration across the surrounding property.

“At Xylem, we’re focused on helping communities thrive by investing in smarter infrastructure, healthier environments and stronger local economies,”

said Susan O’Grady, senior director of marketing at Xylem Bell & Gossett.

“This collaboration shows how innovative design and community impact can work hand in hand to support both people and the planet for years to come.”



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