

Case study

# St. Mary's County Public Schools

Leonardtown, Maryland



## Energy school district saves \$1.9 million with no capital investment

St. Mary's County Public Schools comprises 27 buildings throughout St. Mary's County, serving 13,089 students.

### Challenges

- Update and repair heating, ventilating and air conditioning (HVAC) and controls equipment, without budgeting funds for HVAC improvements.
- Improve energy efficiency and lower operating expenses without sacrificing classroom comfort and within an accelerated schedule.
- Effectively and efficiently make repairs and maximize equipment life cycle.

### Solutions

- Install pneumatic controls and Metasys® Facility Management System (FMS) to enhance and simplify the operation, controlling and monitoring of the various buildings.
- Complete project as part of a performance contract to pay for all of the work through savings, while containing costs and guaranteeing results.
- Empower the maintenance and operations staff to self-sufficiency and train them to service and maintain the majority of the equipment.



Joan Kozlovsky, superintendent of schools, is pleased with both the improved learning environment and reduced costs.

“The cost savings enabled us to allocate more dollars for instructional materials and equipment for students.”

**JOAN KOZLOVSKY**  
**SUPERINTENDENT OF SCHOOLS**  
**ST. MARY’S COUNTY PUBLIC SCHOOLS**

## Results

- Exceeded, ahead of schedule, savings guarantee of \$1.28 million; actual savings were more than \$600,00 of the guaranteed amount.
- Surplus operations savings paid for installation and future expansion of FMS.
- Improved comfort of learning environment.
- Expanded maintenance staff competencies.

## Partners for improvement

After the school board confirmed that the proposed solutions aligned with the district’s strategic goals, Johnson Controls began a partnership with the district to further define its physical plant and building improvement objectives. Supervisor of Maintenance and Operations for St. Mary’s County Public Schools, Brian Law, worked with the Johnson Controls team to develop a plan to facilitate the improvements.

The St. Mary’s learning environment improvement plan established five main goals. First, gain School Board acceptance and increase their comfort with the project. Second, resolve the deferred maintenance problems and restore to proper working order HVAC equipment. Third, add systems and

equipment to improve efficiency. Fourth, train staff to maintain equipment to maximize their self-sufficiency. Fifth, complete the work in one step, not in pieces.

Johnson Controls representatives performed a technical analysis on several school buildings in the district to determine the complexity level and time needed to accomplish the district’s goals. From the site visits, Johnson Controls produced a report detailing areas in which energy savings could be achieved.

The report further corroborated Law’s assessment of the status of the environmental controls in the various buildings. Malfunctioning HVAC controls caused some areas to be too hot or too cold. Equipment tended to run continuously, wasting energy. Lack of funds prevented broken original equipment from being repaired or replaced, prolonging inefficient operation and perpetuating costly energy waste. Each of these problems represented an opportunity to improve the comfort of the learning environment and conserve energy, which in turn, saved money.

## Savings surpass expectations

Due to the success in the first year of the project encompassing seven buildings, the school district expanded

its relationship with Johnson Controls to work on eight more buildings. The overlapping five-year phases helped to accelerate the improvements and increase efficiency in the fifteen buildings. Each project was treated separately, encompassing the five point plan approved by the school board.

Within six years, St. Mary's County Public Schools saved almost \$1.9 million in energy costs. "Our cost per year for energy is less today than it was in 1980, and we've added 400,000 square feet of school space," says Law.

Law recalls that it wasn't all smooth sailing. He says, "Problems occurred, as they do with all projects, and together we worked through them, solved them."

Superintendent of Schools, Joan Kozlovsky says, "The St. Mary's County Public Schools' mission has been greatly facilitated by the use of applied technology as a management tool – we've 'managed' energy and avoided costs. The cost savings enabled us to allocate more dollars for instructional materials and equipment for students. In addition, improved conditions of the learning environment significantly impact student readiness to learn."



Matt Thomas, chief mechanical technician, examines a Metasys control panel.

"Our cost per year for energy is less today than it was in 1980, and we've added 400,000 square feet of school space."

**BRIAN LAW, SUPERVISOR OF  
MAINTENANCE AND OPERATIONS  
ST. MARY'S COUNTY PUBLIC SCHOOLS**

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