

THREE RIVERS SCHOOL DISTRICT AT THE FOREFRONT OF FACILITIES INNOVATION

The challenges faced by districts during the pandemic created tremendous opportunities for innovation. Few districts embraced this opportunity with the success of Three Rivers School District in Oregon. District Superintendent Dave Venezuela saw the need for action in the early stages of the pandemic. In response, he developed and executed an aggressive plan to address three critical issues impacting the district's 16 school buildings:

- **Improve indoor air quality.** Air cleanliness is a higher priority now than ever before. In particular, the district was concerned about medically-compromised students and older staff members. The age of the school buildings—ranging in some cases from 70 to 100 years old—also posed a challenge to effectively update HVAC and air filtration systems.
- **Reduce waste losses.** Significant refrigeration problems in many of the schools' kitchens was a financial liability. Refrigeration outages and undetected temperature variations resulted in thousands of dollars in food waste in 2021.
- **Enhance room lighting.** Many school buildings suffered with poor indoor lighting, including classrooms and restrooms. Too often, students and teachers struggled to see the words on the page or on blackboards.

Successfully addressing these challenges not only meets immediate needs, but provides a long-term solution for health, wellness and financial strength.



QUICK STATS

STUDENTS:

4,500

EMPLOYEES:

650

SCHOOLS:

16

DISTRICT SIZE:

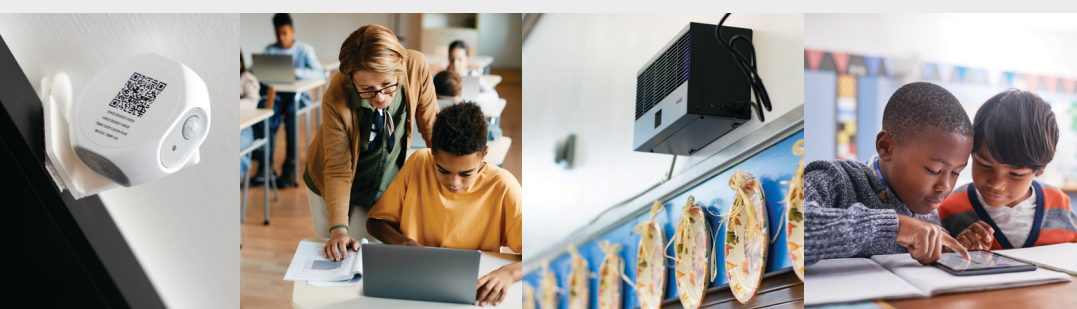
1,600 SQ. MILES

INDOOR SPACE:

720K SQ. FT.

ARAMARK PARTNER SINCE:

1987



SERVICE PARTNER RECOMMENDS THREE LEADING INNOVATIONS

After identifying the district's critical problems, Venezuela discussed the issues with Aramark Facilities Management. After a thorough review of the Three River's needs and challenges, Aramark recommended innovative solutions for each:

- **Upper Room Germicidal Ultraviolet:** A proven, safe disinfection technology that cost effectively improves air quality by emitting ultraviolet light.
- **AIWX™ Connect:** Remote monitoring of spaces and equipment to create greater efficiencies, enhance occupant comfort and alert staff to potential costly repairs.
- **Human-Centric Lighting:** Interior lighting that mimics natural light to improve the teaching and learning environment.

ULTRAVIOLET LIGHT UNITS KEEP CLASSROOM AIR CLEAN

Three Rivers has adopted a CDC-recommended layered strategy to improve its air quality. The addition of Upper Room GUV for disinfection is one of these layers. The air disinfection units deliver ultraviolet light into a room, which neutralizes airborne viral, bacterial and fungal organisms. The technology is based on 90 years of research which shows a consistent reduction of airborne transmission by 80% to 90%. The solution increases the number of effective air changes per hour in a room by up to eight, surpassing the CDC's recommendation of six or more per hour. The technology is also recommended by the EPA, Harvard Medical School and the public health program ASHRAE for preventing health issues such as measles, Asian flu and tuberculosis, as well as coronavirus.

The Three Rivers School District began installing the Upper Room Germicidal Ultraviolet units in schools with medically-sensitive students and older teachers. In addition to improving air quality, the units provide many other economic and programmatic benefits. Running the units requires about the same amount of energy as a 42-watt light bulb. The typical annual energy cost per hour to run the devices is just \$2.41, a fraction of the cost of using other air filtering systems. Each unit automatically switches on based on room occupancy. Additionally, they are quiet. They don't disrupt teaching and only emit a soft blue glow when operating. This alone provides a level of comfort to students and teachers, providing a visual reminder that the unit is working to keep them healthy.



**ONE STUDY FOUND A
50% REDUCTION IN
INFECTIONS IN ROOMS
THAT HAD FIVE AIR
CHANGES PER HOUR
—WELL OVER THE
AVERAGE OF ONE OR
TWO AIR CHANGES PER
HOUR IN A TYPICAL
CLASSROOM.**



REMOTE SENSORS PROVIDE OPERATIONAL INSIGHT AND PREVENT FINANCIAL LOSSES

By installing the leading-edge AIWX™ Connect solution, Three Rivers recognized the value that remote sensors could bring to their operation. Frequent power outages often resulted in sizable food waste, as unsafe refrigerator and freezer temperatures could go undetected. By installing sensor-controlled refrigeration monitoring, temperatures are now continually monitored, including over weekends and holidays. When outages do occur, alerts are sent directly to maintenance staff. The system provided immediate payback: within three months of installation, the district suffered a power outage and successfully avoided thousands of lost dollars in food waste.

AIWX has been expanded within the district to now include leak detection, as well. After having to replace a gym floor due to a water leak, the district sought a solution to warn of future hazards. The same platform used to monitor freezer temperatures was easily extended to leak detection. Sensors detect the presence of unwanted water and alert maintenance staff before it becomes a larger problem. Again, AIWX quickly proved its value, identifying a water line break over a holiday period. Had the issue gone undetected, it would have caused an estimated \$70,000 in damage.

The addition of AIWX provides Three Rivers with real-time insights into its operation that were previously unavailable. Information and real-time alerts are proving to save money and improve staff productivity. They are now considering a further expansion of the sensor technology to other areas throughout the district.

HUMAN-CENTRIC INDOOR LIGHTING PROVIDES HEALTHIER CLASSROOMS

To solve its indoor lighting problem, the Three River School District embraced Human Centric Lighting (HCL). HCL creates a learning environment that simulates changes in natural daylight with visual, biological and emotional effects. Luminaires are managed by an intelligent control system that accesses appropriate light profiles. Working with Aramark and PlanLED, the district installed one of the first market-ready tunable human centric lighting systems in its classrooms. Since implementing the advanced lighting systems, the district has enjoyed the many benefits of optimal room lighting, including making it easier for teachers to instruct and for students to learn.



OVER THE 2021 WINTER BREAK, AIWX CONNECT ENABLED THE THREE RIVERS SCHOOL DISTRICT TO REALIZE A COST AVOIDANCE OF \$4,500 IN FOOD WASTE.



HOW AIWX CONNECT WORKS

To monitor remotely, AIWX Connect operates via two primary functions:

Sensors: They are placed in strategic areas, such as freezers or mechanical rooms, where they monitor conditions continuously.

Central control platform: The remote sensors deliver feedback to the platform, which includes a notification system and reporting displays. If conditions vary outside of the threshold, the system sends an alert. Additionally, data collected over time provides insights for strategic planning and budgeting.



SEE WHAT ARAMARK CAN DO FOR YOUR SCHOOL DISTRICT.

CONTACT US TODAY

www.aramark.com
©2022 Aramark