

The image shows the interior of the Pullen Aquatics Center, a large indoor swimming pool facility. The pool is long and rectangular, with lane lines visible. The ceiling is high and features a large, multi-paned skylight that allows natural light to enter. The walls are made of light-colored concrete blocks, and there are blue and white tiled sections. A person is visible near the pool deck on the left side. The overall atmosphere is bright and clean.

## *Pullen Aquatics Center*

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# CASE STUDY

## Pullen Aquatic Center Raleigh, NC.

### Innovative air dispersion solutions for open ceiling architecture

**Raleigh, NC.**—For most public facilities, a day of downtime is bad and a week is worse. The people at the Pullen Aquatic Center had to endure a full month of closed doors in the process of learning a basic fact: corrosive chemicals, water and traditional steel ductwork don't mix.

Only six years after the city of Raleigh North Carolina built Pullen, the rust flakes falling from stainless steel ceiling ducts made a shutdown and complete duct removal necessary. "Every morning we would have more flakes in the pool," recalled Terri Stroupe, Aquatic Facilities Supervisor at the center. "It builds up. We had to polish the pool and the deck frequently just to keep the tile from staining red."

The problem was solved by replacing the old network of ducts with a new Comfort Flow DuctSox fabric air dispersion system. The porous polyester fabric construction of DuctSox is virtually unaffected by pool chemicals in the air, which corroded the original stainless steel. Even though a recreational pool doesn't seem like a chemically hazardous environment, it can be torturous to metal of all types.

"We have to work on our railings constantly to keep the rust down," said Stroupe. "In a chlorine environment, you need something resistant like the fabric of DuctSox."

Finding an effective solution was only half the battle for the Pullen staff. The larger challenge was enduring the difficult process of removing the old ductwork. A two-story network of scaffolds was needed to enclose most of the building's exposed ceiling before beginning the three-week process of cutting down and hauling out the rusted metal. By contrast, the bulk of the DuctSox installation was completed in two days.

Stroupe added that the finished DuctSox system does a better job handling the tricky climate control conditions inside a pool. Aquatic centers need plenty of fresh air to offset the odor of pool chemicals, she explained, while at the same time maintaining a constant temperature near 80°F. "We've seen a much more even distribution of air," she said. "People don't seem to feel a 'breeze' as much, which means more comfort for a person with wet, exposed skin." The bright white DuctSox also



interact well with ceiling skylights, creating a clean, bright appearance.

DuctSox's best feature of all, Stroupe added, will come into play when the

removable, washable fabric ducts are taken down and cleaned. "We won't even have to drain the pool," she said. "After what we've been through, that will really be nice."

**DuctSox Corporation**  
4343 Chavenelle Rd  
Dubuque, IA 52002

Phone: 563-588 5300  
Toll-free: 866-382-8769  
Fax: 563-588-5330

[ductsox.com](http://ductsox.com)

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