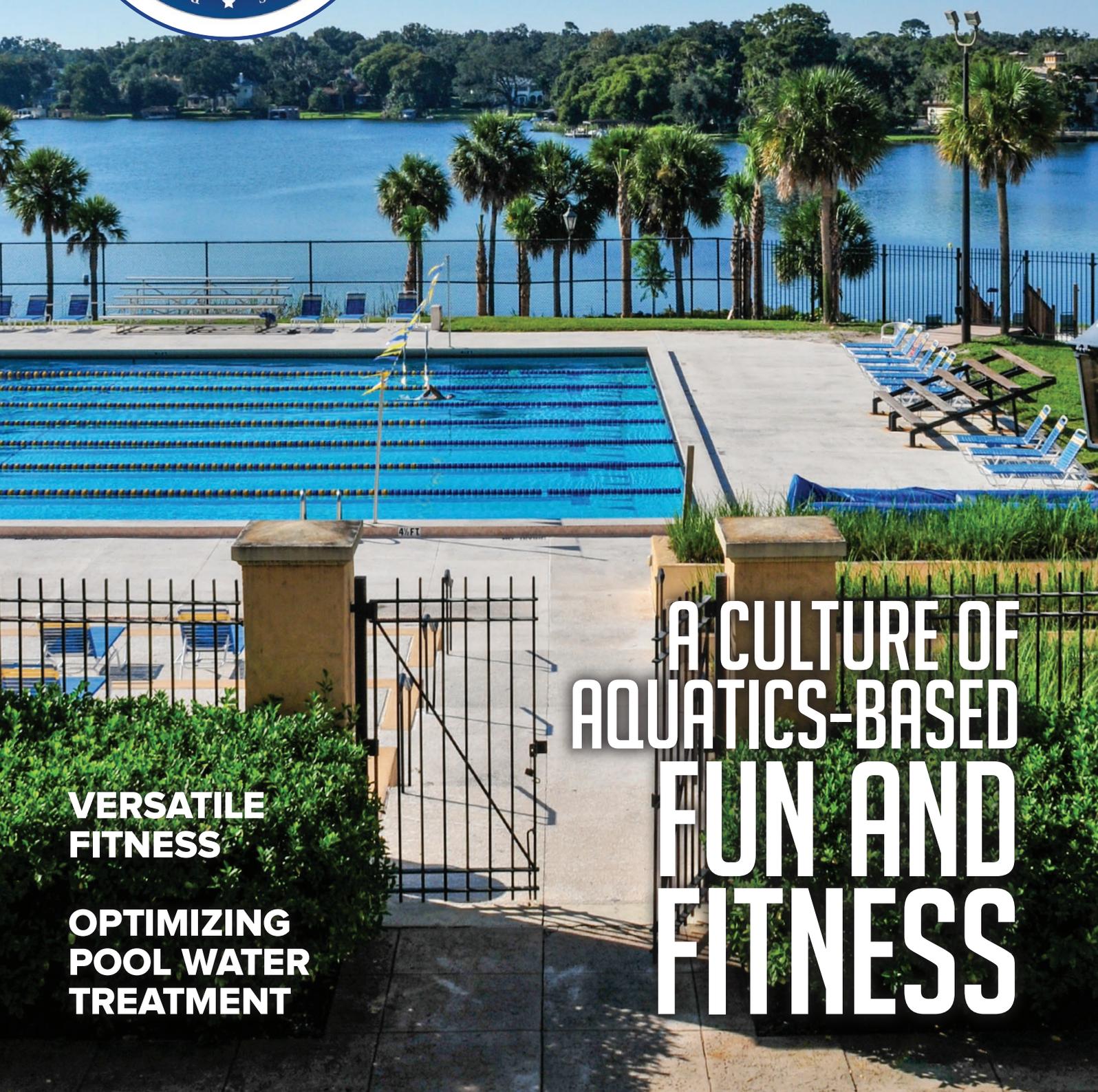




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6

A CULTURE OF AQUATICS-BASED FUN AND FITNESS AT ROLLINS AND DUKE

by David Vinson

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14

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20

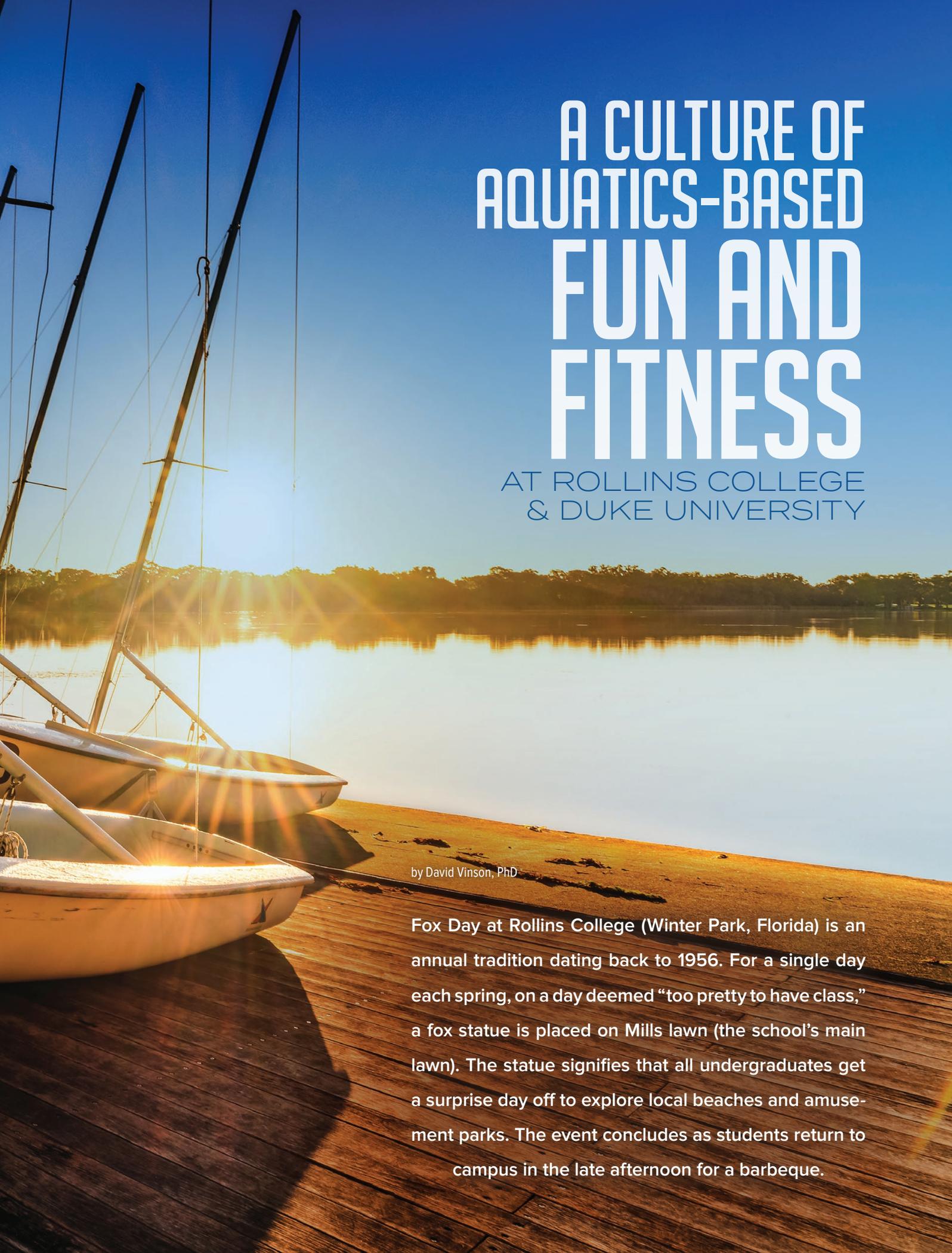
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During the Olympic Summer Games, I gleefully watch any event of any sport—archery, table tennis, modern pentathlon, judo, basketball, even dressage, for which I have little to no understanding of its rules. It’s the spirit of competition, the drama, the triumph and heartbreak of witnessing a lifetime of dedication and sacrifice culminating in a span of minutes or even seconds; and that such moments are viewed globally is inspiring—the idea that we’re all united by the same experience, even if it is a fleeting one.



Photo courtesy Rollins College

A scenic view of a lake at sunset. In the foreground, several white sailboats are docked on a wooden pier. The sun is low on the horizon, creating a warm, golden glow and lens flare effects across the scene. The water is calm, reflecting the sky and the distant shoreline. The sky is a clear, deep blue.

A CULTURE OF AQUATICS-BASED FUN AND FITNESS

AT ROLLINS COLLEGE
& DUKE UNIVERSITY

by David Vinson, PhD

Fox Day at Rollins College (Winter Park, Florida) is an annual tradition dating back to 1956. For a single day each spring, on a day deemed “too pretty to have class,” a fox statue is placed on Mills lawn (the school’s main lawn). The statue signifies that all undergraduates get a surprise day off to explore local beaches and amusement parks. The event concludes as students return to campus in the late afternoon for a barbeque.



One can imagine the popularity of the tradition with students, many of whom use the free day to explore nearby Disney World in Orlando, or to enjoy the white sands and deep blue waters of Cocoa Beach, located about an hour from campus.

But for students who pine for sun and cool waters, the reality is that Rollins College already offers them a world-class outlet in the form of the Alfond Swimming Pool.

Not only is it home to the Rollins varsity men's and women's swimming teams, but on sunny days, it serves as a popular, on-campus leisure destination for students, faculty, and staff.

The Alfond Swimming Pool is an ideal to which other private universities and colleges may aspire, both in regard to the aquatics-based technology applied to it, and also to the naturalist aesthetics of its design.

Combining Modern Technology with Natural Beauty

Rollins is a small liberal arts college of approximately 3,000 students, and yet the Alfond Swimming Pool is a testament to the swimming culture that has been honed on campus over the past several decades.

Due in large part to a generous donation from Harold Alfond, the pool has it all: a 25-yard, 9-lane



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pool that is heated for winter use and cooled otherwise; diving platforms; modern locker rooms; and an LED video scoreboard. There are also two 3-meter and two 1-meter diving boards with fulcrums, in addition to a timing system which assures that every second is recorded with reliable accuracy—a must-have for any timed swimming competition.

The facility itself is bordered by palms trees and other greenery, and it overlooks Lake Virginia, where students enjoy water skiing, sailing, rowing, and other marina activities. It is a gorgeous, postcard-worthy combination of modern design and natural beauty, and it is undoubtedly a selling point for prospective students. From the right vantage point, in fact, the aqua blue of the pool appears almost to spill directly into the blue of the lake beneath, as if both are connected by an impossible feat of wizardry.

The original 1973 design of the Alford Swimming Pool included 450 permanent bleacher seats, but in a move that has since proven instrumental to enhancing the beauty of the facility, the bleachers were removed in 1997, thereby creating an unhindered view of the lake.

Sharing Facilities and Serving the Community at Rollins College

While the students, faculty, and staff of Rollins College have access to the facility, it is shared with the Winter Park community, as well.

For years, the Blue Dolphins swimming team of the Winter Park High School have used the pool for training needs. This reflects Rollins College's strategy of serving the broader community, for it provides top-level facilities to emergent student-athletes, hopefully inspiring them to continue working to achieve their dreams.

Duke University's Top-Level Competition Pool

At Duke University, students, faculty, staff, and the larger Durham (North Carolina) community can enjoy a seasonal outdoor pool as well as two indoor pools. Each facility is beautiful and impressive in its own right, but taken together, they reflect Duke's enthusiastic commitment to promoting aquatics-based fun and fitness.

Located indoors on the west side of campus is the Taishoff Aquatics Pavilion, which serves as the home for the Duke University swimming and diving teams. The facility has hosted several major meets, including the AIAW Women's National Swimming Championships, the National Junior Olympic Swimming Championships, the NCAA Diving Regionals, the Atlantic Coast Conference Championships, the New South Collegiate Invitational, as well as numerous state championships.

Indeed, such is possible because the Taishoff Aquatics Pavilion boasts a 25-yard, 8-lane competition pool with 7-foot lanes and a depth tapering from 4.5 at each end to 7 feet in the center. Other features include custom built stainless starting blocks, ample spectator seating, and an electronic timing system that is used for all collegiate meets.

The facility also includes one of the few indoor 10-meter towers in the Southeast, in addition to 5 and 7-meter platforms. Moreover, it offers two 1-meter and two 3-meter springboards, each equipped with maxiflex boards.



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The separate diving is enormous, measuring 66 feet by 42 feet, with a depth of 17 feet.

The facility is ideal for student-athletes who are refining their skills during practice, where they can then enjoy the benefits of their hard work during competitive events.

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Duke University's second indoor pool is located on the east side of its campus at the Brodie Center, which houses the Brodie Aquatics Center.

The facility hosts a variety of community-based aquatics programs, those such as Learn-to-Swim, the American Red Cross Lifeguard program, weekly Kayak Clinics, Stand Up Paddleboard programming, recreational lap swim, and weekly Special Olympics practice. Its design is particularly suited for each program, as the pool itself includes an intimate 4-lane, 25-yard swimming area, and is 3.5 feet shallow to 8 feet deep. The Brodie Aquatics Center also offers locker room facilities and on-site fitness equipment for member use.

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The facility on Duke's Central Campus offers a 6-lane outdoor pool and leisure swim area, patio seating, as well as tables and lounge chairs. It is designed as a recreational pool where users can casually swim laps or simply float along and enjoy the cool water.

It is used by students for the Spring and Fall semesters as an ideal setting for relaxation and fun; during the summer months, it is then adopted by Duke faculty and staff, who often bring their families along.

Whether it is the student-athlete whose goal is to maximize his or her potential, a student in need of a reprieve from study, or a family celebrating a child's birthday party, the variety of aquatics facilities at Duke University serve the needs of the community, thereby promoting both fitness and fun.



Photo courtesy Rollins College



ABOUT THE AUTHOR: PUPN staff writer

Dr. David Vinson has a PhD in English with specializations in transatlantic literature and cultural studies. He is a committed scholar, teacher, husband, and dad. If you ever meet David, avoid the subject of soccer. His fandom borders on the truly obnoxious.

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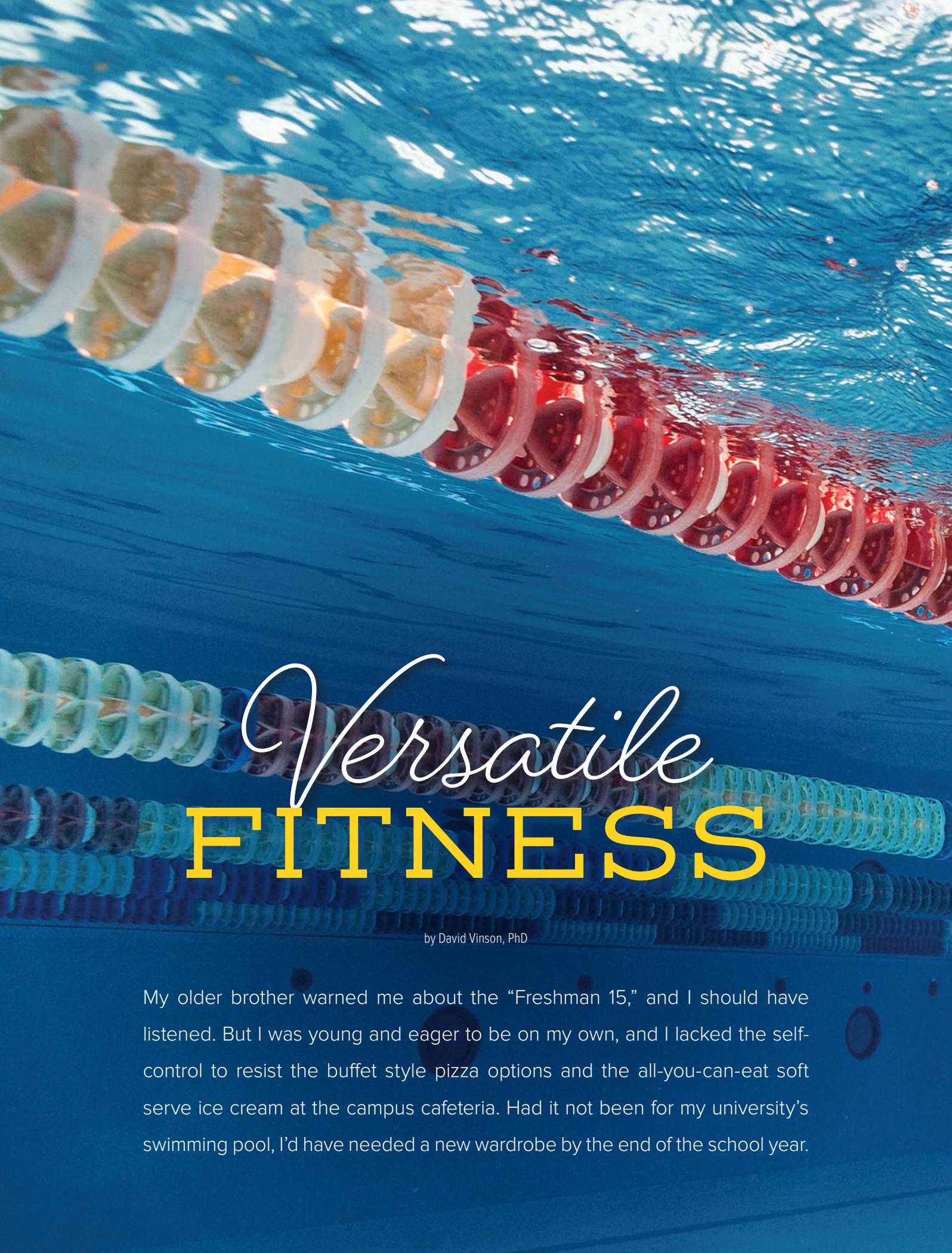
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An underwater photograph of a swimming pool lane. The lane lines are made of plastic rings in various colors: white, yellow, red, green, and blue. The water is clear and blue, with light reflecting off the surface. The lane lines stretch from the top left towards the bottom right of the frame.

Versatile **FITNESS**

by David Vinson, PhD

My older brother warned me about the “Freshman 15,” and I should have listened. But I was young and eager to be on my own, and I lacked the self-control to resist the buffet style pizza options and the all-you-can-eat soft serve ice cream at the campus cafeteria. Had it not been for my university’s swimming pool, I’d have needed a new wardrobe by the end of the school year.



The indoor facility I so frequently attended on campus became not only a refuge from the stifling heat of the Deep South, but it was a place to relax and unwind after I completed my laps for the day. And because I grew up along the Alabama coast, where my fondest childhood memories are of the long summer days I spent in Mobile Bay, there was something about the pool that eased the homesickness of my freshman year.

In terms of providing gorgeous, versatile aquatic centers, private universities and colleges have come a long way since I was an undergrad. Students now have access to aquatics-based amenities and equipment that can maximize their experiences in the water, whether the goal is simply to have fun or to practice good fitness habits.

Keeping Body and Mind Healthy with Aquatics-Based Exercise

It is well known that exercise in the water is a great way for students to burn calories and tone muscles while enjoying a complete body workout.

An additional benefit of swimming is it can help reduce anxiety, which itself is becoming more common among the student body. According to a study by the American College Health Association, 65.7% of students reported the feeling of “overwhelming anxiety” during the 2019 school year. If swimming can play even a minor role in positively impacting students’ mental health, it is our duty to promote aquatics-based activities as an avenue for good health, both of body *and* mind.

Not only can swimming help reduce anxiety, it can also improve sleep—a precious commodity for our students, and one that is undoubtedly related to stress, anxiety, and depression.

Students with physical challenges can also benefit from swimming, including those with asthma. The humid environment of indoor pools may help with breathing, and breathing exercises learned from swimming may even translate to expanded lung capacity.

Moreover, students with muscular sclerosis (MS) may find swimming beneficial since water allows limbs to become buoyant, thereby helping to support them during exercise. In one study

(“Hydrotherapy in the Treatment of Pain in People with Multiple Sclerosis” by Castro-Sanchez, et al.), a 20-week swimming program resulted in significant reductions of pain for those with MS. Those involved also reported improvement with symptoms like fatigue and depression.

The use of the swimming pool as an inclusive space ties into broader, campus-wide efforts to promote inclusivity, thereby giving everyone the opportunity of benefitting from aquatics-based fun and exercise.

Options for Aquatic-Based Equipment

While swimming provides a great workout, fitness-based aquatics equipment can make water workouts more engaging and versatile. Provided below is an overview of the equipment that can be incorporated:

Jogger buoyancy belts: A jogger buoyancy belt comfortably suspends the swimmer at shoulder level, allowing for normal breathing as one performs a wide range of water exercises, all of which are impact-free.

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For student-athletes, it is key that water workouts are impact-free. The absence of impact reduces the likelihood of injuries during training, and when combined with land-based workout routines, student-athletes are empowered to reach levels of peak performance.

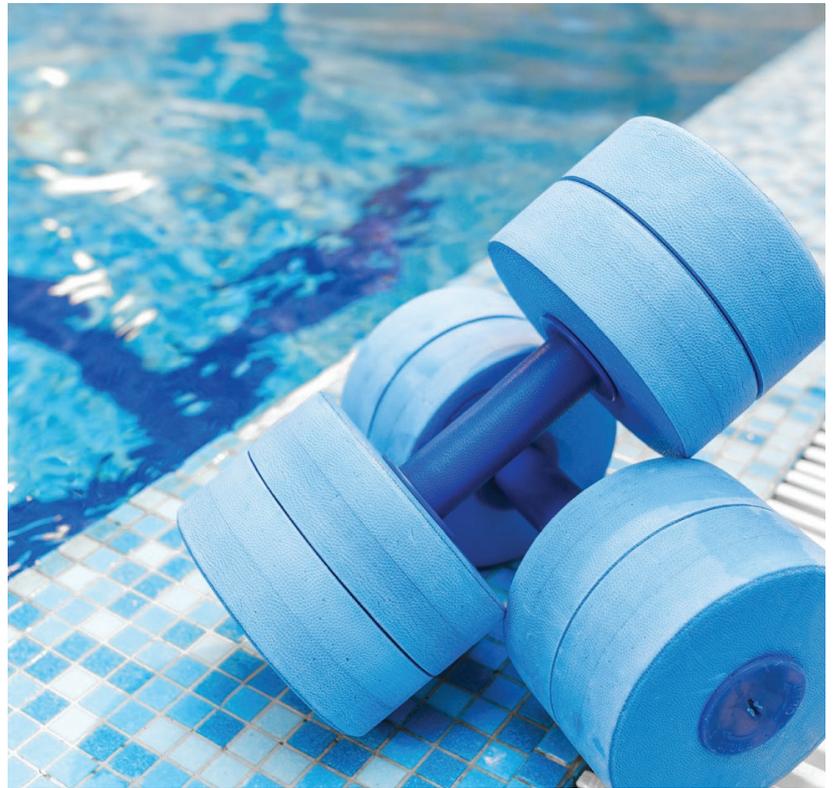
Aided by a jogger buoyancy belt, water running promotes cardiovascular exercise free of impact and weight bearing limitations. Moreover, student-athletes who are rehabilitating from injury can enjoy the very same benefits, thus facilitating safer and potentially faster recovery times.

Aquatic dumbbells: These represent another means of enjoying engaging and versatile water exercises.

Aquatic dumbbells are made of foam and plastic. They're light out of the water but heavy underwater due to the natural resistance that water provides. They're also widely adaptable and can be used to tone arms, legs, or even abs.

With an increase of resistance underwater, the weights provide an intense workout from both ends of the pool, whether in shallow or deep water. And while most people associate workouts in a pool with swimming laps, water aerobics is a great alternative for low-impact training.

For those who have suffered from injuries, who are overweight or have sensitive joints, such low-impact workouts are ideal.



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Pull buoys: The pull buoy can be used to improve a swimmer's power. A buoy is typically held between the thighs to float the hips and legs at the surface of the water. The action of swimming with a buoy is called "pulling" because only the arms are used for forward momentum.

Anyone interested in increasing arms strength and upper body power can benefit from pull buoys, and it is easy to imagine the appeal of this equipment to student-athletes—not merely competitive swimmers, but any athlete in need of building upper body strength.

Any regular swimming set can be transformed into a pulling workout: long or short repetitions, fast or slow intervals, ladders or descending pace. Also, because leg muscles consume significantly less oxygen while pulling, hypoxic breathing sets can be easily incorporated.

Aquatic cuffs: These are like the name suggests, in which cuffs are weighted and designed for use during aquatic exercise.

While the swimmer can still enjoy the benefits of buoyancy and pain-free joint movement, aquatic cuffs help to build strength, endurance, and muscle tone. An added benefit is their versatility in terms of weight and because they can be worn on either arms or legs.

Exercise balls: The equipment options here are ample, but a standard example is a 9-inch inflatable ball that is both soft and light. What matters most is that the ball floats to create resistance that must be overcome during a workout.

To increase arm strength, stand in the water and press the ball below the surface, holding it for as long as possible; another option is moving the ball in a figure-eight pattern as it's submerged. Using a larger ball increases the resistance.

To burn calories and strengthen core muscles, stand at one end of the pool and hold the ball in front with both hands. Walk forward and simultaneously move the ball in circles along the water's surface. One can make

the exercise more challenging by jogging, running, jumping on both feet, or hopping on one foot.

Equipment Exercise for All

Aquatics facilities are a space for fun and relaxation, and for keeping our bodies and minds healthy—and given the diverse needs of the student body, private universities and colleges should be sure they are providing aquatics-based exercise equipment that addresses the full range of their students' needs.



ABOUT THE AUTHOR: PUPN staff writer Dr. David Vinson has a PhD in English with specializations in transatlantic literature and cultural studies. He is a committed scholar, teacher, husband, and dad. If you ever meet David, avoid the subject of soccer. His fandom borders on the truly obnoxious.

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OPTIMIZING POOL WATER TREATMENT

by David Vinson, PhD

During the Olympic Summer Games, I gleefully watch any event of any sport—archery, table tennis, modern pentathlon, judo, basketball, even dressage, for which I have little to no understanding of its rules. It's the spirit of competition, the drama, the triumph and heartbreak of witnessing a lifetime of dedication and sacrifice culminating in a span of minutes or even seconds, or in the case of speed-based competitions, in fractions of seconds; and that such moments are viewed globally, whether shared by patrons at a Reykjavik pub, a group of Tibetan highlanders, or perhaps a crowd that collects at a shop window in the Lower East Side of New York City, well, label me an idealist if you wish, but I'm inspired by the idea that we're all united by the same experience, even if it is a fleeting one.



Aquatics-based sports are uniquely appealing, and their appeal is amplified by what's at stake during the Olympic Summer Games. Perhaps I've been seduced as a viewer by the aesthetics, the contrast of the athlete whose body is taut and powerful, and yet so small upon entering the vast, shimmering pool. In diving events, there is the creak of the springboard, the impossibly precise twists and turns, and finally the splash which punctuates the athlete's efforts, ultimately determining the success (or failure) of the attempt itself. And for swimmers, there is further contrast to enjoy, a stillness prior to the start, a nervous energy barely contained, one that explodes into chaos as limbs chop through water.

With the entire world watching, it's no surprise that swimming pools utilized for the Summer Games look immaculate and inviting. There is nothing like one in nature, with its exact dimensions, its aquamarine shine and perfect polish. From surface to floor, the pool remains clear and clean, its temperature regulated for maximum comfort.

Of course, private universities and colleges across the country host aquatics-based sporting competitions of their own, and with an understanding of best practices and the technologies needed, these institutions have worked diligently to reproduce the pristine standards of Olympic swimming pools.



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The Challenges of Pool Water Treatment

If you've ever enjoyed a beautiful, inviting swimming pool, chances are you've encountered its opposite—a high chlorine smell; cloudy water; the base stained with grime.

A pool left untreated has become infested with compounds known as chloramines. Known otherwise as “combined chlorine,” the terms represent a family of compounds comprised of used chlorine that has combined with ammonia molecules after killing germs and oxidizing organic compounds, such as those found in urine, sweat, saliva, suntan lotion, among many others.

Chloramines are the cause of the high chlorine smell. Ironically, pools that smell bad aren't over-chlorinated; rather, they're under-chlorinated.

Not only do chloramines smell bad, but they are also corrosive and have the potential to cause everything from swimmers' teeth to the ducting in an HVAC system. More concerning, they're also widely associated with causing respiratory problems, particularly in highly

frequented indoor aquatic facilities—an issue addressed by the Centers for Disease Control and Prevention, and also one covered in the Model Aquatic Health Code.

Service providers usually contend with chloramines in pools by shocking the water with large doses of chlorine to achieve “breakpoint chlorination,” meaning that the residual of free-available chlorine has reached 10 times the concentration of chloramines, in turn causing them to break apart by way of oxidation. The problem with this approach is it requires the use of large quantities of chlorine or other shock treatments, and the pool must be closed during the treatment. It is also expensive and time consuming.

Technologies that Keep Our Pools Clean and Beautiful

Rather than treat chloramines after they've polluted the pool, a far more effective strategy is to address them prior to their buildup.

Many service pool/water chemistry professionals advocate for using a combination of treatment technologies—corona discharge ozone systems, UV sanitation devices, and radically reduced chlorine levels.

Corona discharge ozone systems handle the oxidation task, destroying organic compounds like chloramines that fuel the development of bacteria. The UV system shreds the bacteria, preventing it from mutating. The chlorine plays a supporting role as a constant sanitizing residual.

By using a combination of all three technology treatments, problems associated with high chlorine levels are eliminated; likewise, corrosive source water becomes much easier to manage. The ozone system maintains a constant oxidation-reduction potential (ORP), and so it oxidizes the unwanted compounds with reliable consistency. This makes the ultraviolet transparency (UVT) of the water ideal for the UV system to destroy the harmful bacteria and prevent them from mutating.

Bugs!—And How to Kill Them

Service pool/water chemistry professionals are well aware of the presence of chlorine-resistant pathogens, namely the *cryptosporidium*, a nasty organism that has caused a number of outbreaks resulting in severe, even fatal gastrointestinal problems. Especially for

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Private universities and colleges across the country host aquatics-based sporting competitions of their own, and with an understanding of best practices and the technologies needed, these institutions have worked diligently to reproduce the pristine standards of Olympic swimming pools.

university swimming pools located outdoors, such outbreaks remain a concern.

Chlorine does not kill the bugs, but the good news is that the organism is destroyed by properly sized ozone and UV systems.

Facility managers and servicers of our private institutions' swimming pools must adopt measures to prevent an infestation before it happens. The financial cost of using ozone and UV system technologies offers significant return on investment in the form of greatly reduced chemical costs, both in terms of the very small volume of chlorine required and the reduced need for water mineral balance adjustment. Also, eliminating the presence of chloramines can greatly reduce the corrosion of materials that may surround the

pool, leading to significant savings while also reducing the required air turnover rate.

Most importantly, those using the facility are breathing uncompromised air. The water quality generated by proper treatment with combined technologies, in addition to proper filtration regimens, becomes so appealing that it attracts rather than repels users.

Learning from the Past at Yale University

In 2006, Yale University closed its practice pool due to concerns about how the water and air quality of the facility were affecting its student-athletes. The administration discovered the facility had poor air circulation and high levels of chloramines in the water,

which caused coughing as well as irritation to the eyes, noses, and throats of swimmers.

During the closure, UV filters were installed in the water return-line to purify the pool's contents. Four new fans were added in the room to enhance air quality, and the university commissioned an architect to evaluate the improved conditions.

The changes were successful, leading to a 75% reduction in chlorine use, and also to improved water and air quality.

It is key to note that the addition of UV filters, in particular, were not a temporary fix but rather a permanent, cost-saving solution to a potentially serious and health-related concern.



ABOUT THE AUTHOR: PUPN staff writer

Dr. David Vinson has a PhD in English with specializations in transatlantic literature and cultural studies. He is a committed scholar, teacher, husband, and dad. If you ever meet David, avoid the subject of soccer. His fandom borders on the truly obnoxious.

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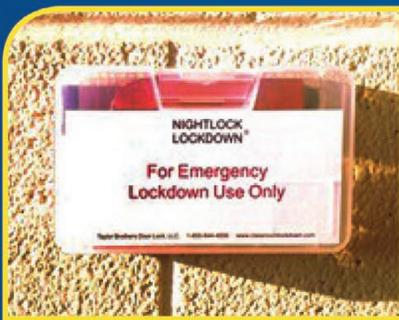
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