

PREMIERE ISSUE

# SWIMMER

FITNESS

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Why Doesn't America Have Enough Swimming Pools?

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October 2, 1991

Americans consistently list swimming as one of their most popular forms of recreation, so why can't there be more pools, more lap swimming lanes and a greater number of open hours at public pools for use by lap swimmers and water fitness enthusiasts?

Actually there are more pools now than there ever have been in the past. Up until the 1940s, there were fewer than ten thousand pools in the entire United States. The pools were owned and operated primarily by YWCAs, YMCAs, universities, municipalities and a few wealthy individuals.

Although slowed somewhat by the recent recession, a pool building boom has been taking place over the past half century. This dramatic increase in pool construction was brought about by the invention of vinyl liners, above ground pools, spas and hot tubs; concern over the high national drowning rate, fitness needs of an aging population, and the increasing popularity of water parks and attractions. Municipalities and service agencies have responded to the needs of the public for recreational facilities and opportunities close to home, and have been building pools to serve their customers and to compete in the lucrative leisure market. Many homeowners with discretionary incomes have chosen to increase the value of their homes by installing a swimming pool in their back yards. The costs of building and owning a residential swimming pool are moderate when compared to purchasing other luxury items such as boats or recreational vehicles, so residential installation of pools continues to increase. Today, there are close to seven million pools in the U.S., in all sizes, shapes, and price ranges, making pool ownership available to almost all organizations and segments of the population.

Most pools aren't really as crowded as we think they are. Commercial pools rarely reach their bather capacity limits. The occupant load limits are set by state code and enforced, in most cases, by county departments of health. The limits exist for safety reasons. It's difficult to supervise an overcrowded pool, and bathers in crowded pools get in to space use conflicts. Bathers get in each other's way and collisions occur. The limits also exist for reasons of water cleanliness. The circulation, chemical injection and filtration systems are sized to handle the debris and bacteria brought into the pool by a certain number of people per hour.

Some states like California determine maximum bather loads based on square footage of water surface area. Other states, like Florida, determine bather capacity on gallons per minute of water circulated. Most states use a variation of the American Public Health Association standard that separates pools into diving, shallow water, deep water and deck areas and then calculates bather load on square footage. What's considered a crowded pool in one state is not necessarily what's considered crowded in another. Using an example of an indoor 25 yard long by 62 foot wide pool, ranging in depth from 3 to 13 feet, with one diving board, and containing approximately 278,250 gallons of water; capacity limits in Florida would be set at 154 bathers, in California, 232 bathers; and in Pennsylvania (a state who uses the APHA standard), 362 bathers. An eight lane pool filled to capacity with sixteen to twenty-four lap swimmers is being tremendously under utilized from the point of view of designed capacity.

Lap swimmers constitute a very small segment of the population. Organizations who construct aquatic facilities primarily designed for lap

swimmers are not serving the needs of the majority of their recreational users. A study of recreational trends in the 1980s shows swimming ability is tied to education and income levels. Because of increased opportunity and likelihood of access to facilities, the higher one's level of education and income the more likely he/she is to be a swimmer. Interestingly though, only thirty to fifty percent of adult Americans can swim. The majority of those who can swim, only swim seasonally or on vacation and fewer than ten times per year. It is estimated that only six to seven percent of the population swims well enough to swim laps continuously for a distance of 500 or more yards.

We have more pools than ever, the pools are under utilized, and most Americans can't swim, so why do our pools seem so crowded?

Three reasons for the lack of available swim lanes seems apparent:

- there has been a shift in programming priorities
- design innovations have led to the creation of less traditional pools not necessarily optimal for lap swimming, and
- lap swimmers are not willing to pay the actual costs associated with dedicating use of lanes for swimming at a time when most pool managers or aquatic directors need to justify costs of operation.

A shift in programming priorities has been taking place in recent years. Pool users have disparate ideas on how a pool should be used. Multiple use programming is necessary to provide better use of space in the pool. Traditionally, aquatic activities have been categorized into five areas: fitness, instructional, competitive, recreational and therapeutic uses. Many pools built in the past were designed primarily for informal recreational use and for instruction of grade school aged children. Larger public facilities were often

described as multi-use, but designed with the competitive swim team or lap swimmer in mind. But today, the demand is for increased amounts of space primarily for planned recreational activities, fitness and therapeutic programs. The whole concept of what is an acceptable or appropriate pool activity has changed dramatically. Pools have become family leisure destinations.

Fitness programming includes not only lap swimming but also, water aerobics, water walking, deep water exercise, use of fitness stations and resistance and strength training equipment.

Instructional activities have gone beyond the traditional group learn-to-swim lessons. Pre-school water adjustment, private swim lessons, infant survival skills, lifeguarding, water safety and basic rescue skills classes; SCUBA diving, synchronized swimming, instructor certification programs, and special classes for timid or impaired swimmers are only some of the instructional courses being conducted at public pools.

Competitive age group programs have expanded to include, masters programs, competitive diving, water polo, synchronized swimming, inner tube water polo and underwater hockey leagues, and fin swimming.

Recreational programming no longer means just opening the pool to the public for a "free swim" or plunge. Informal and formal recreational activities are now regularly planned for pools. Activities as diverse as fishing contests, underwater holiday tree trimming and pumpkin carving events, dive-in movies, triathlons, windsurfing and boating instruction, "beach" parties, water game festivals, and underwater concerts have been organized.

The medical and allied health professions have become more aware than ever of the benefits of aquatic therapy. Therapeutic programs conducted in

pools serve a diverse group of participants with special needs, including those with physical or mental disabilities, sport enthusiasts with temporary orthopedic injuries, post operative or injury rehabilitation patients, overweight individuals who want to start a regular exercise program, arthritis sufferers, the sight and hearing impaired, and individuals needing to reduce stress in their lives.

With all of these activities being programmed and the large number of individuals with very diverse needs wanting to use public pools, it's no wonder lap swimmers feel there's not enough space for actually swimming.

Pools themselves have changed. Innovations in pool design have occurred as a result of updated codes and increasing regulation of the pool industry, risk management concerns, and the whole leisure concept surrounding use of aquatic facilities. For every traditional, rectangular 50 meter Olympic pool or 25 yard multi-use pool built, numerous special-use pools are being constructed. Children's activity pools, therapy pools, exercise pools, running track pools, diving tanks, splash pools, and wave pools are being built to replace traditional swimming pools, but are not particularly suited to swimming laps.

In today's, leisure market most aquatic personnel need to justify the costs of their programs. Lap swimming takes up a lot of space in a pool when compared to other activities, and most lap swimmers are not willing to pay the actual costs associated with their use of an entire pool lane.

The true cost of operating a pool includes a variety of often overlooked or hidden expenses. Staffing alone consumes a large chunk of the budget. Costs associated with staffing a pool include the salaries of an aquatic director or pool manager, assistant pool manager, lifeguards, instructors, maintenance staff,

check-in desk and locker room attendants. Costs of staff uniforms, personal protective gear, sun protection, and staff training, conference attendance, certification renewal, professional association dues, journal subscriptions, and reference and training manuals must also be borne by the facility.

Equipment and supplies must be purchased. Funds are needed for daily, seasonal, preventive, and emergency maintenance. Costs arise from the fact that hazardous materials are stored on the premises and dispensed into the pools. Required educational programs and compliance costs connected with use of hazardous chemicals is high. Special events need to be planned, staffed, and promoted. Mortgage payments must be made on the facility, usually for a term of 15 years.

Major pieces of pool equipment wear out and need to be replaced at certain intervals. Energy costs for air heating and cooling, dehumidification, air exchange, water heating, and lighting can be enormous. Large quantities of both pool water and domestic water for the showers and restrooms must be paid for.

Costs of purchasing chemicals and equipment needed to keep the pool water clean and bacteriologically safe including chlorine or other bactericides, alternative sanitizing systems; pH, total alkalinity, and calcium hardness adjustment chemicals; cyanuric acid, sequestering and chelating agents, clarifiers and flocculants, specialty chemicals, test kits, instruments and reagents; chemical metering, containment, clean-up, disposal, dispensing and control systems--all add up.



Pools have to market their services. Budgets are needed for advertising, course brochures, community promotional events, and to cover registration costs.

Consultants, specialists, inspections, fines, insurance, and other indirect costs of operation often add another 20% to the costs of operation.

Knowledgeable aquatic directors calculate actual costs of pool operation so they can program and schedule the facility in a way that generates enough income to cover expenditures. The total estimated costs of operation are divided by the number of hours of operation per year. Although numerous variables, particularly staff size, and the location, age and size of the facility enter in to the factoring, the hourly costs of operating a typical indoor swimming pool range from a low of about \$75.00 to a high of approximately \$150.00 per hour. It is necessary to generate the amount estimated each and every hour the facility is open, or other sources of funding must be found to subsidize programs that do not pay for themselves.

For example, if the actual costs of operating an eight lane pool is \$100.00 per hour, each of the eight lanes in the pool must generate \$12.50 per hour just to break even. If that pool lets a bather tie up a lane for lap swimming for an hour, the swimmer should be paying \$13.00+ for the privilege. If the bather only paid a \$2.00 to \$5.00 entrance fee (a typical charge in many areas of the country) for access to the facility, the facility lost money. Even if a pool does not permit single patron use of a lane, lap swimming is space intensive. Unless trained to swim together as a team, an eight lane pool can only comfortably hold sixteen to twenty-four swimmers before space conflicts and collisions arise.

Maximum use of swim lanes would be necessary for the facility to come out even.

On the other hand, if the shallow water pool space was utilized by thirty to forty water exercise participants, and the deep end of the pool by an instructional swim class of a dozen or so swimmers, a substantial profit would be realized.

When lap swimming space is at a premium, the following recommendations may help ease the crowdedness.

1. Swim at less popular times. During the middle of the day many public pools have down time or are significantly under used.
2. Build or install your own pool. Residential pools or swim spas can be purchased to fit any backyard and almost any budget.
3. Learn to swim in a pattern that takes up less space in a pool. It is possible to integrate lap swimming into the total aquatic program by being innovative in arranging formations and assigning areas for use. Circles, circles within circles, straight line and diagonal formations, marches and waves are only a few space saving methods that can be applied.
4. Encourage pools to install water jets which create an adjustable current in the pool which allow swimmers to swim their "laps" in a relatively small area of the pool without going anywhere. Swimming against a current is like swimming on a treadmill or in a flume.

An aquatic program well worth emulating is the one run by the Tualatin Hills Park & Recreation District in Beaverton, Oregon. Tualatin Hills earned the "1990 Top Water Fitness Program" award from the United States Water Fitness

Association for its outstanding programming and for meeting the needs of a variety of water fitness enthusiasts and swimmers. Good scheduling by aquatic director Judy Kell, permitted over 1,800 participants per week to participate in over 120 different water fitness classes at the five pools operated by the district. Pool space was extremely well utilized and some individual classes had as many as 75 to 100 participants.

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## FAX MESSAGE

**TO:** HANK BERKOWITZ  
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**DATE:** OCT. 3, '91

**RE:** ARTICLE

**FAX to #:** (212) 873-6134

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### MESSAGE:

Hi Hank,

The article you requested on overcrowded pools is attached. The original + the photos/slides are in the mail.

Alison