

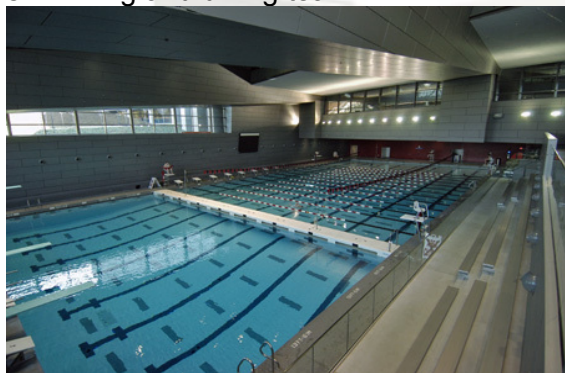


## Greetings from the Deck

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I hope that you are ready to get the season started off for 2006-2007. The first meet of the year is the Miami Redfins Masters SCM meters meet. The next meet within the Ohio LMSC will be at the new facility at the University of Dayton. The meet information is posted on the LMSC website.

We do have a new team in our LMSC. Our new team is at the University of Cincinnati – the Bearcat Masters. You may not know that the University built a recreation center and a new 8 lane 50 meter pool. The Keating Aquatic Center natatorium is a state-of-the-art facility at University of Cincinnati and home to the Bearcats' varsity men's and women's swimming and diving team.



The pool and facility were completed in 2006. The opening ceremony was Saturday, October 21<sup>st</sup> with a Tri-Meet with Bowling Green and Xavier University. The Alumni meet was also held in conjunction to celebrate the return of swimming to the campus after a 4 year absence. Our hope is to have the State meet in April or May at this pool. I will keep you posted as things progress.

There are lots of great things happening in our LMSC. Our numbers have increased over the last 3 years and new teams are springing up all over our LMSC. Looking to the future, with the addition of new facilities in our LMSC, we hopefully can successful bid for a USMS National Championship meet. This would be huge for our LMSC.

I hope to see you at the pool

Happy Swimming ☺

CJ

## The Ohio LMSC Meet Schedule:

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All up-coming meets in the Ohio LMSC and surrounding LMSC's (Lake Erie, Indiana, KY, Michigan) can be found at [www.ohiolmsc.org](http://www.ohiolmsc.org) under the Up Coming meet section.

## Changes in registration Fee:

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For the 2007 registration year the annual fee was increased to \$25. USMS will be raising the minimum from \$20 to \$25 starting in 2008. In anticipation of this we will raise the fee to be in compliance with this change with USMS and also in anticipation of the bidding process for USMS Long Course National; we need \$10K to pay for the application fee. We are submitting a bid for the 2009 USMS Long Course Nationals to be held at Ohio State University in August.

## Paperback writers:

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If anyone has articles or news that they want to share, or even better want to write articles please shoot them directly to our newsletter editor, Jim Monahan ([jmonahan@fuse.net](mailto:jmonahan@fuse.net)) . We can include them in the winter edition of the newsletter. If we know about it, we will print it for all.

## 2006 XI FINA

### World Masters Championships

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Recently, twelve Ohio Masters swimmers returned from Palo Alto on the campus of Stanford University where they competed in the largest aquatics competition ever in the history of aquatics in the world. The 11<sup>th</sup> FINA World Championships was the largest gathering of all five aquatic disciplines (Swimming, Water Polo, Diving, Synchronized, and Open Water) ever.

There were over 5,500 swimmers representing 74 different countries on 1,161 different teams. Almost half of the swimmers were from outside the U.S. Ten different nations sent more than 100 athletes each. The 32 events were contested in 14 different age groups with participants ranging from 25 to 95 years of age.

USA	3130
Japan	324
Germany	237
Great Britain	185
Canada	156
Italy	153
Russia	136
France	122
Brazil	118
Mexico	109

These championships are held every 2 years. The 2004 World Meet was in Riccione, Italy and the 2008 competition is scheduled for Perth, Australia.

Including the training days and open water events, the swimming took place over 11 days. This was by far the fastest and most competitive meet ever held in Masters Swimming. 161 FINA World Records were set – the most records ever set in a Masters Swimming meet.

FINA, USMS, and the Local Organizing Committee did an outstanding job of running this competition and provided the best competitive conditions for everyone. Two 50 meter pools were used for competition every day and on the day of the 800 Free the competition lasted for more than 13 hours. The Officials and Volunteers should be commended and thanked for the wonderful job they did to make this a spectacular event. I have never been to an event this big that has run so smoothly. The relay day was one of the best days of the meet as a swimmer and spectator. The whole day was dedicated exclusively to the six 200 Meter Relays. 1485 relays competed, the waters were churning almost non stop for 8 hours and the result was 37 new World Records.

## So what makes a pool fast?

**The question is easy; the answer is more complex and requires examination of all the individual factors involved.**

In aquatics like other sports, the difference between winning and losing isn't measured in meters centimeters or millimeters. It's measured in 0.001's of a second. That hairs breadth of difference determines local, national and international records. This pursuit for excellence is challenged by thousands of registered swimmers. They compete through swim meets sanctioned by Swimming/Natation Canada. While all international competitions are governed by Federation International De Natation Amateur (F.I.N.A.).

Water temperature has a direct bearing on an individual's performance as a competitive swimmer. A pool that is cold is not only shocking from initial immersion, but yields disappointing times as compared to existing records. Conversely a hot pool does not remove the excess heat (sweat) a swimmer generates and therefore they expend more energy exponentially. This results in slower recorded times. Standard requirement set by F.I.N.A. is 26 degrees Centigrade plus/minus 1 degree. The temperature of the surrounding natatorium is another important factor and should be maintained within 1-2 degrees centigrade above the water temperature

There are basically 4 types of energy (heat) loss in a swimming pool. Environment radiation, evaporation, convection and conduction. On an outdoor installation it is next to impossible to control heat loss/gain. The wind factor can be reduced by protective fencing, hedges, buildings, or landscaping. Indoor pools are governed by humidity, velocity of air, pool surface area and the difference between water and air temperatures. Since 90-95% of heat loss occurs directly at the surface. Even the R value of insulation on indoor pools can reduce condensation and energy (heat) loss.

In order to protect the swimmers' health from cross infection, F.I.N.A. has established recommended bacteriological and chemical criteria for swimming pool water. It is not enough to be sanitary however, as pool water must also meet aesthetic requirements. The unseen friend or foe of competitive swimming is the chemical balance of the waters. The major areas of concern are pH, total alkalinity, free/combined chlorine, calcium hardness and total dissolved solids.

The measurement of pH is a logarithmic scale from 0-14 with 7 as neutral. The comfort zone of swimmers is a pH between 7.4-7.6, since this is the natural pH of our bodies. In competitive swimming an athlete can excrete a substantial amount of sweat and perspiration, which is acidic, causing the pH to lower. Chloramine formation appears quicker at a lower pH, therefore it is important to have a feed system that can keep up with this demand.

The balance of pH is greatly affected by the level of total alkalinity. If the level of alkalinity is too low the pH value can swing dramatically during a meet. On the other hand if the level is too high, the pool water will have a tendency to cause the pH to drift upwards and cause the swimmer discomfort. Ideal range for total alkalinity is between 80-120 part per million.

Everyone is aware of the benefits of chlorine to restrict cross infection between competitors. However, when ammonia/nitrogen, which is found in swimmers sweat and perspiration, is introduced to chlorinated water it produces offensive, chloramine products. These chloramines cause the "red eye" and strong odors that competitors and spectators complain about. The pool water should be breakpointed prior to any meet to remove any excessive contaminants. The free available chlorine should be 1.0-1.5 p.p.m. as determined by D.P.D. test methods with a 0.0 parts per million p.p.m. of combined chlorine.

Calcium hardness levels may not impede a swimmers performance, but competitors find greater comfort in water with a level between

200-275 ppm Total dissolved solids by itself will not cause a pool to be slow, but high levels will cause turbidity, resulting in water clarity problems. This increased level will present athletes with a difficulty in judging the distance of their targets. The level for T.D.S. should be kept well below 2500 p.p.m.

The design of the recirculation system is crucial in a competitive pool. Water must be skimmed continuously, since dirt bacteria and swimmer wastes collect on the surface. The system must also address water displaced by swimmers (static surge) and waves (kinetic surge) during competition. The water level must be maintained precisely, to ensure consistent times. The best design is a gutter system for effective skimming and surge control. Operating at rim flow, gutters will provide a constant distance between starting platforms and the water at quiescence. Properly engineered gutters are designed to quell waves rebounding from the wall, which slow the times of competitors in outside lanes.

The water returning to the pool must not have any appreciable current or cause turbulence that may impair/aid a competitor. Experts agree that ideally, water should be returned through the bottom of the pool as in a up flow system. This will displace the water evenly without prejudicing any one competitor. Newest innovations in up flow systems, provide for pre-engineered stainless steel channels, contained within the pool shell. This design returns water through openings placed the full length of the racing lane for even distribution.

Lighting is important to competition to judge distances and to evaluate the position of other competitors. Lighting can be provided by inpool lights ceiling fixtures or natural sunlight. The minimum illumination for indoor pools is 215 lux and outdoor pools should be at least 110 lux (F.I.N.A.). All inpool lights should be restricted to the side walls during competition.

In to-days pool design, bulkheads, which can be moved, are necessary to accommodate the variety of competitive requirements. A

bulkhead must be uniformly rigid as swimmers utilize this wall to propel themselves on the return leg of the race. If the bulkhead flexes, it will perform lazily, as evidenced in the recorded times. Non-corrosive stainless steel bulkheads are precision-engineered to span the pool within 1/4 of an inch. These bulkheads are delivered to site in one piece.

Racing lane lines represent a great technological advance in competition swimming pool equipment. The new designs are superior in controlling water turbulence, with wave killing action. Coaches and pool designers agree that turbulence can further be reduced by installing a buffer lane along the length of the course. This design requires the wave to pass through the lane line twice, before it can interfere with a swimmer

Properly designed starting blocks/platforms with a non slip surface, provides a giant advantage for competitions. The platform should be firm and give no springing effect. False start lines, backstroke flags and stanchion posts, are not only functional equipment, they provide a competitive image to swimmers.

Since the whole dedication is towards time, a system that responds quickly and accurately is a vital component of any competitive swimming facility. Automatic equipment, complete with touch pads, can realize the difference between a new record or a very competitive swim by any athlete. Because just one hundredth of a second can mean the difference between winning and losing, the start is very crucial. If a start pistol is used, swimmers in the far lane can be at a disadvantaged by almost a tenth of a second. But if an electronic start system with speakers mounted under each starting block is employed, the start is even.

Goggles protect swimmers eyes in chlorinated pool water. This allows for clearer vision during competitive swim meets. Modern goggles feature materials that are made of hypoallergenic silicone. Fitted with strong lightweight and fog resistant carbonate lenses.

Competitive swimmers have found quicker times wearing "Second Skin" type bathing suits made from lycra. Swimmers traditionally wear a swim cap during competitions, to produce less drag. Today's lycra is popular because its cooler than conventional rubber types. There also exists the "New" trend of shaving the entire head and even all body hair.

Two major factors that should never be overlooked are the coach and the competition. A successful swim coach will earn the best results from his athletes and they in-turn will respond to strong competition

## **Procedures for Meet Host!**

This section is intended to be a repository of computer-based tools that are used by the volunteers who run the various USMS functions. If you have some tools to offer, contact the [USMS Webmaster](#).

### **Top 10 Tools:**

The top15 and conv15 programs in this zip file can be used by LMSC top 10 recorders for processing top 10 compilations.

### **Hy-Tek:**

USMS officially recognizes Hy-Tek Sports Software as the recommended supplier of computer software for Masters Swimming. Contact Hy-Tek at their home page [www.hy-tekLtd.com](http://www.hy-tekLtd.com) or call their Sales Office at (919)633-5111 to order products with your 25% USMS Discount or to order a FREE Demo copy of any of their products.

With the 8.1 release of the Hy-Tek Meet Manager program, you can now automatically check your meet results for new USMS and world records. Just [download](#) and unzip the current records from this site into your Meet Manager directory.

### **SDIF:**

A copy of the USA Swimming Standard Data Interchange Format specification document (version 3) can be found [here](#).

## Big Meet Preparation

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One way to get ready for a target meet is to look at the last 6 - 8 weeks before the event as a time to do sets where the swimmer swims as close as possible to his race pace ( designated *quality workouts*). Workouts will vary depending on whether the swimmer is a sprinter or distance person, but all swimmers, even triathletes, need some sprint work to get faster.

For sprinters to swim close to race pace in workouts, they must swim fast in smaller increments than the total yardage of the event. To get ready for 100's, sprinters do broken 100's, sprint 50's and sprint 25's at race pace with lots of rest. As one gets closer to the meet, the sprinter will continue to do sets of build-up broken 100's or descending 50's where one descends down to race pace on last one of a descending set. The key for sprinters is to stop all out sprints at least 5 - 7 days before the meet, as sprinting makes it harder for muscles to recover (why one does the build-ups or descending sets closer to the meet).

Swimmers who concentrate on 100's and 200's also do similar quality sets as the sprinters, but add other sets: a broken 200 or a set of 9-12 x 50, descending down to slightly faster than 200 pace. Swimmers whose best events are in the 400-1650 range will still do some fast 100's and broken 200's, but will also do main sets (from 8-3 weeks before the meet) of 8-10 x 50 on tight interval, or 50's on a longer interval swimming slightly faster than race pace, or (for milers) 10x100 on their race pace on an interval on which they can swim the target pace. As they get closer to the meet they continue to swim those sets at race pace but with more and more rest (longer intervals). The last 7 days, their sets are descending (e.g. 12x50 on a moderate interval, descending down to race pace).

Note that these quality workout days are only 2 or 3x weekly and swimmers do regular workouts the rest of the time. Swimmers who are not competing can benefit from the quality

days as their initial speed will improve. If a swimmer starts swimming slower on his quality days, he should take more rest before his next quality workout. The amount of quality yardage in a quality workout will lessen as the swimmer gets closer to the meet and intervals will be longer, often using the descending sets. Weight workouts and running should also taper off. Stop weights 3-4 weeks before the target meet. Total workout yardage will also taper over the last 3-4 weeks. **No all out sprints the last week.** Sometimes a swimmer fears that he is getting out of shape when he gets to the end of the taper, so he does not rest as much as he should and may end up swimming tired in the meet. You will not get out of shape in one week. Rest is the most important ingredient that last week – get more sleep if possible. Please tell your coaches what meet you are setting as a goal meet and which events are your priority.

## Places To Swim in Ohio

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### Attention all Teams and Clubs!!!

Have you been to the Places to swim page on the Ohio or USMS website? If so, are all the workout groups in your area up to date? Would you please check this information and let Scott Goertemiller know if an update is needed?

Go to the USMS website at [www.usms.org](http://www.usms.org) and click on Places to Swim. Filter out your LMSC and all the places currently listed will appear. If there is one that is out of date, click on "edit a place to swim", make the appropriate changes and click "submit" and then the information for that program will be up to date