2019 OCRS PERFORMANCE REPORT

How well does the system work?

ON COURSE RATING SYSTEMS, LLC (OCRS), found at https://oncourseratingsystems.com/ began as a grant funded faculty research project more than 20 years ago at Washington and Lee University in Lexington, Virginia.

The driving motivation behind its origins and continuous advancement since has always been to help Cross Country athletes improve themselves as runners. Training obviously is the way to do that but in order to train effectively a runner needs to know exactly how well he or she is currently performing, an easy matter in track and field, but historically that information has eluded participants in Cross Country, the greatest sport on earth.

OCRS has a patented course difficulty rating system which finally gives coaches and athletes key information they need to train effectively, target achievable goals, accurately pace themselves on vastly different courses, and avoid the #1 mistake in cross country, going out way too fast. There are 59 courses on the OCRS website currently ranging from 10k to 4k in twelve different states which include California, New York, Texas, and Wisconsin. For practical reasons OCRS has concentrated on 5K courses for the last several years. Here below are the 5k courses on which the data for this report came.

OCRS RATED 5K COURSES

New or updated courses in 2019 highlighted in green

Balboa Park	San Diego, CA
Detweiller (3miles)	Peoria, IL
Dickinson Park	Carlisle, PA
Fork Union	Fork Union, VA
Great Meadows	The Plains, VA
Hagan Stone Park	Greensboro, NC
Holmdel Park	Holmdel, NJ
Kernstown Battlefield	Winchester, VA
Lehigh University	Bethlehem, PA
Mc Alpine Park	Charlotte, NC
Mt. SAC	Walnut, CA
New Market	New Market, VA
Ocean County Park	Lakewood, NJ
Panorama Farms (new)	Earlyesville, VA
Panorama Farms (old)	Earlyesville, VA
Pole Green Park (open)	Mechanicsville, VA
Pole Green Park (woods)	Mechanicsville, VA
U of WI Parkside	Kenosha WI
Van Cortlandt Park	Bronx, NY
Wake Med Soccer Park	Cary, NC
Wolf Branch Farm	Forest, VA
Woodberry Forest	Woodberry Forest, VA

Of the several thousand visitors to the site every season most are familiar with and use the performance equivalence calculator. It tells an athlete what their performance on one OCRS course would be, (its equivalent) on another OCRS course if run at the same competitive level in similar conditions.

The performance equivalence (PEQ) calculator shows users a time in minutes and seconds identifying equivalent performances but it also shows runners what they are capable of running on another perhaps very challenging OCRS course they have never seen in an upcoming race. If they actually run at the same performance level on that other course, and if the difficulty ratings of both courses are accurate, and if the weather and surface conditions are basically the same, then their time on the second course will be close if not identical to their PEQ time. Big IFs. Let's see how it turns out.

There were many performances in 2019 that almost exactly matched their PEQs. For example, finishing fourth at the Pole Green (woods) XC classic on 9/7/19, Louisa Counties' #1 runner ran a 16:02. That performances' equivalent (PEQ) at Panorama Farms (new) where he will race in one week is 15:59. He actually ran 16:01. His Panorama Farms (new) to Fork Union PEQ where he will race the week after is 16:16. He actually runs a 16:14 there. His team mate, the #2 Louisa Co. runner, who finished 25th at the same Pole Green race in 16:59 and whose PEQ at Fork Union was 17:11, actually ran 17:08.

One of the most impressive PEQ to actual performances was turned in by one Daniel O'Brien from Virginia Episcopal School beginning with his winning the MileStat.com XC Invitational on 10/19/19 at Pole Green (open) in 14:57. According to his father and coach, Pete O'Brien, this was Daniels' best race of the regular season, run on an almost entirely flat course and as we will see about equal in competitiveness to his seventh place finish on the very hilly and challenging Balboa Park course at the Foot Locker championships in San Diego on 12/14/19. His Pole Green (open) to Balboa Park PEQ was 15:23. His actual time at Balboa Park was 15:24.

These nearly identical PEQ to actual performances just cited are even more impressive when you consider that none of the five courses on which they were run were exactly 5000 meters and varied in length by as much as 89 meters (4927m to 5016m.). All were precision measured however, by OCRS (see video on how to measure a course) and times normalized to exactly 5000m to provide this level of accuracy. So the PEQ numbers so far, while impressive, show only a few individual performances. What would a larger population sample look like?

Seven of the top twenty one boys at the 11/7/19 VHSL 5A Region Championships at Panorama Farms (old) ran an average of 4.7 seconds from their PEQ's between Panorama Farms (old) and Great Meadow (site of their VA state championship) on 11/16/19. Seven of the top eight boys from the 10/24/19 Shore conference championships at Ocean Co. NJ came within an average of 6.2 seconds from their PEQ's between Ocean Co. and Holmdel Park three weeks later on 11/16/19. Five of the nine NJ girls who finished in the top 24 at the NE Foot Locker regional race at Van Cortlandt Park on 11/30/19 came within an average of 5.8 sec from their Holmdel Park to Van Cortlandt Park PEQ's. And five of the six NJ boys who finished in the top 22 at the same FL regional meet at VCP came within a 5.2 sec average from their Holmdel to VCP PEQ's.

Some of the most impressive PEQ numbers in the OCRS system over the last several years are from performances by the top high school cross country athletes around the country competing for national bragging rights in San Diego at Balboa Park . The higher the performance level, the closer the PEQ to actual performances are. In the 2019 championship for example, nine of the top fourteen boy's finishers, having qualified on other OCRS rated courses (the West region had to run on an alternative, unrated, road course due to weather and mud) came within a 4 second average of their regional to national PEQs. And thirteen of the top nineteen girls in the championship race were within a 6.4 sec average from their regional to national PEQs. Similarly impressive results were produced in the several preceding years on the same courses.

These numbers clearly point to the accuracy of the system and performance consistency of these great athletes, but PEQs are just one of competitive advantages OCRS can provide runners and coaches. We are excited to introduce and briefly describe the newest feature of the system. They are called Pace Targets! We just saw how PEQs can show an athlete an overall time he or she is capable of running on a tough course they may have never seen. Pace Targets can show them their paces each mile individually customized to their current fitness level to cumulatively produce that overall time. These are the per mile paces they can actually maintain for the distance so they will race up to their current ability. It really works! Pace Targets can also be set up and practiced at any pace such as a tempo or recovery pace so runners can get thoroughly familiar with how it feels to most efficiently spend their energy on a course. Once proven in early season lower key races, or at various practice paces on a championship course, OCRS Pace Targets help runners race smarter and can be the difference between disappointment and success. Learn more about Pace Targets on the website.

A note of **CAUTION** is in order. Not every course in the OCRS system is as accurate in producing PEQs as those just referenced. Some have not been updated (re measured) in years and may have undergone route changes due to construction etc. Some do not still exist. Soon OCRS will be requiring courses to be updated annually to remain posted on the site. You may be confident however, that the courses on which Pace Targets are available have been recently rated or updated and tested for accuracy. Pace Targets will be offered only on these "high confidence" courses with PEQ levels of accuracy described above. It is our goal that OCRS courses at every distance soon will be high confidence courses with Pace Targets available.