

# Swim Meet Simulation Report — Class 2

Based on 50 Monte Carlo simulations across 42 teams.

## Methodology

The simulator uses seed times from the state performance list, event assignments (up to 2 individual events per swimmer, plus relays), and a Markov-style performance state (Good/Average/Bad) with team momentum. Each simulation samples swim times and ranks finishers to compute team points; win and podium probabilities are estimated from the fraction of simulations in which each team placed 1st or top 3.

## Team Summary (Mean, Std, Min, Max, Win %)

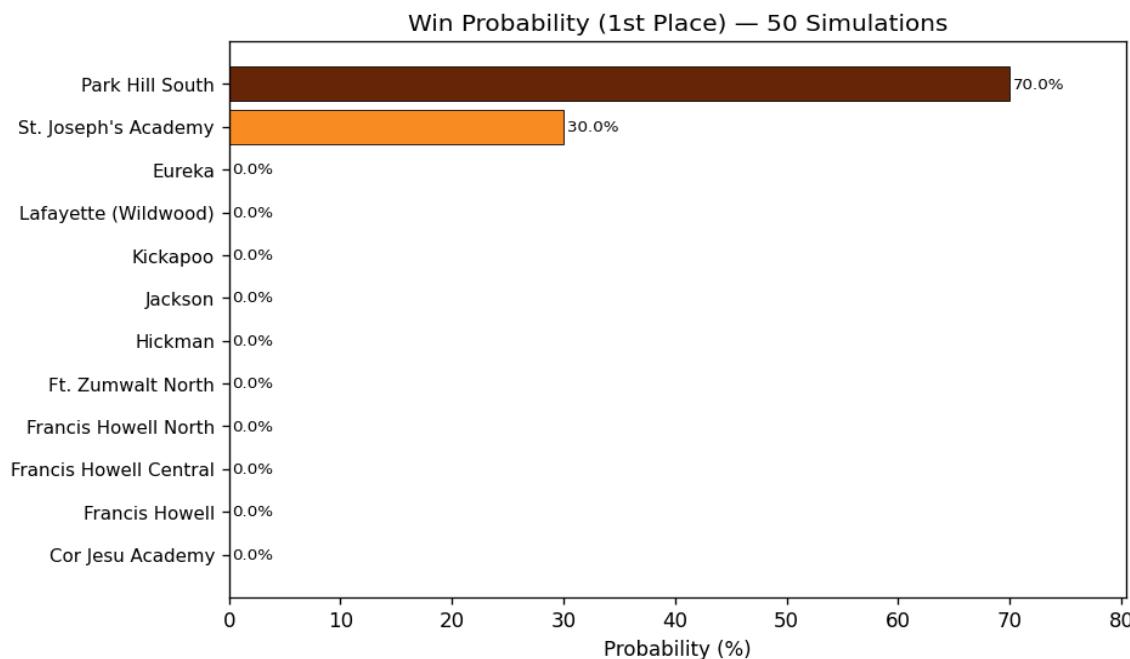
team	mean	std	min	max	win_probability_%
Park Hill South	295.9	14.7	267	322	70.0
St. Joseph's Academy	281.7	12.6	248	308	30.0
Rock Bridge	186.6	10.3	163	206	0.0
Parkway South	161.5	15.0	126	199	0.0
Kirkwood	153.5	13.2	124	176	0.0
Liberty	108.5	14.3	82	149	0.0
Marquette	104.4	14.0	76	139	0.0
Pembroke Hill	100.0	13.0	71	136	0.0
Westminster Christian Academy	98.4	16.9	62	148	0.0
Liberty North	95.5	14.6	60	131	0.0
Staley	82.3	17.6	47	140	0.0
Eureka	81.2	12.5	45	108	0.0
Hickman	77.9	7.6	57	97	0.0
Lafayette (Wildwood)	67.3	14.3	38	110	0.0
Blue Springs South	55.8	13.4	23	94	0.0

## Podium Probability (Top 3 Finish)

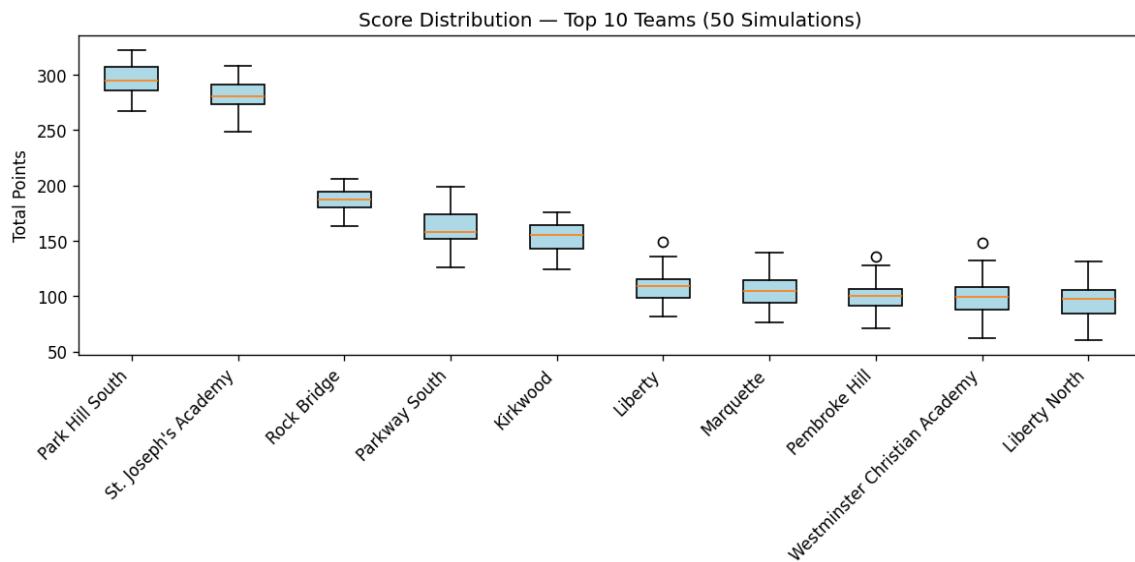
team	podium_probability	avg_rank
Park Hill South	1.0	1.3
St. Joseph's Academy	1.0	1.7

team	podium_probability	avg_rank
Rock Bridge	0.94	3.08
Parkway South	0.04	4.34
Kirkwood	0.02	4.64
Blue Springs	0.0	27.96
Nixa	0.0	33.92
North Kansas City	0.0	33.92
Oak Park	0.0	33.84
Oakville	0.0	33.92
Ozark	0.0	25.0
Park Hill	0.0	25.42

## Win Probability (1st Place)



## Score Distribution (Top 10 Teams)



## Analysis & Commentary

Based on 50 simulated meets, **Park Hill South** is the clear favorite, winning approximately **70.0%** of simulations with an average total score of **295.9 points**. The model reflects seed times, event assignments, and a Markov-style performance state with team momentum. Total scores include both swimming and diving events.

The primary challenger is **St. Joseph's Academy**, with a **30.0%** chance of winning. The gap between the top two teams indicates that the state title is likely a two-school race unless seed data or day-of-meet variance shifts significantly.

The most likely podium (top 3) consists of **Park Hill South**, **St. Joseph's Academy**, **Rock Bridge**, with each of these teams having a high probability of finishing in the top three. Coaches and athletes can use these probabilities to set realistic goals (e.g., contending for a podium spot vs. winning the meet).

This report is generated from a stochastic simulator and should be interpreted as a probabilistic outlook, not a prediction of a single outcome. Actual results depend on many factors not in the model (injuries, taper, relay order, etc.).