

Table S1: Aquifer properties, design capacity ( $Q_{MAR}$ ), and infrastructure requirements for MAR

Aquifer	Method to estimate $Q_{MAR}$	Transmissivity T (m <sup>2</sup> /d)	Storativity, S (-)	Maximum continuous recharge duration, t (days)	Maximum head change at borehole ( $\Delta h$ max, m)	MAR recharge method	No.	$Q_{MAR}$ (rounded to nearest 1000 m <sup>3</sup> /d)
M2	Theis	196	0.075	60	39.77	BH	4	23000
M3	Theis	230	0.001	60	59.52	BH	6	49000
M4	Theis	250	0.001	60	64.38	BH	2	19000
M6	Theis	2000	0.001	60	10	BH	4	43000
M7	Theis	1125	2.40E-04	60	16.83	BH	4	40000
M13	Theis	500	1.00E-03	60	10	BH	5	14000
M14	Theis	500	0.001	60	16.7	BH	4	19000
M15	Measured	Based on Rio Seco MARSOL results				IB	5	63000
M18	Modelled	Based on Standen et. al., 2022				IB	1	13000
M19	Measured	Based on pumping tests in Costa et. al., 2021				Poços	10	25000
East of M15	Extrapolated	Based on Rio Seco MARSOL results				Poços	15	38000
BA	Extrapolated	Based on Rio Seco MARSOL results				IB	5	63000