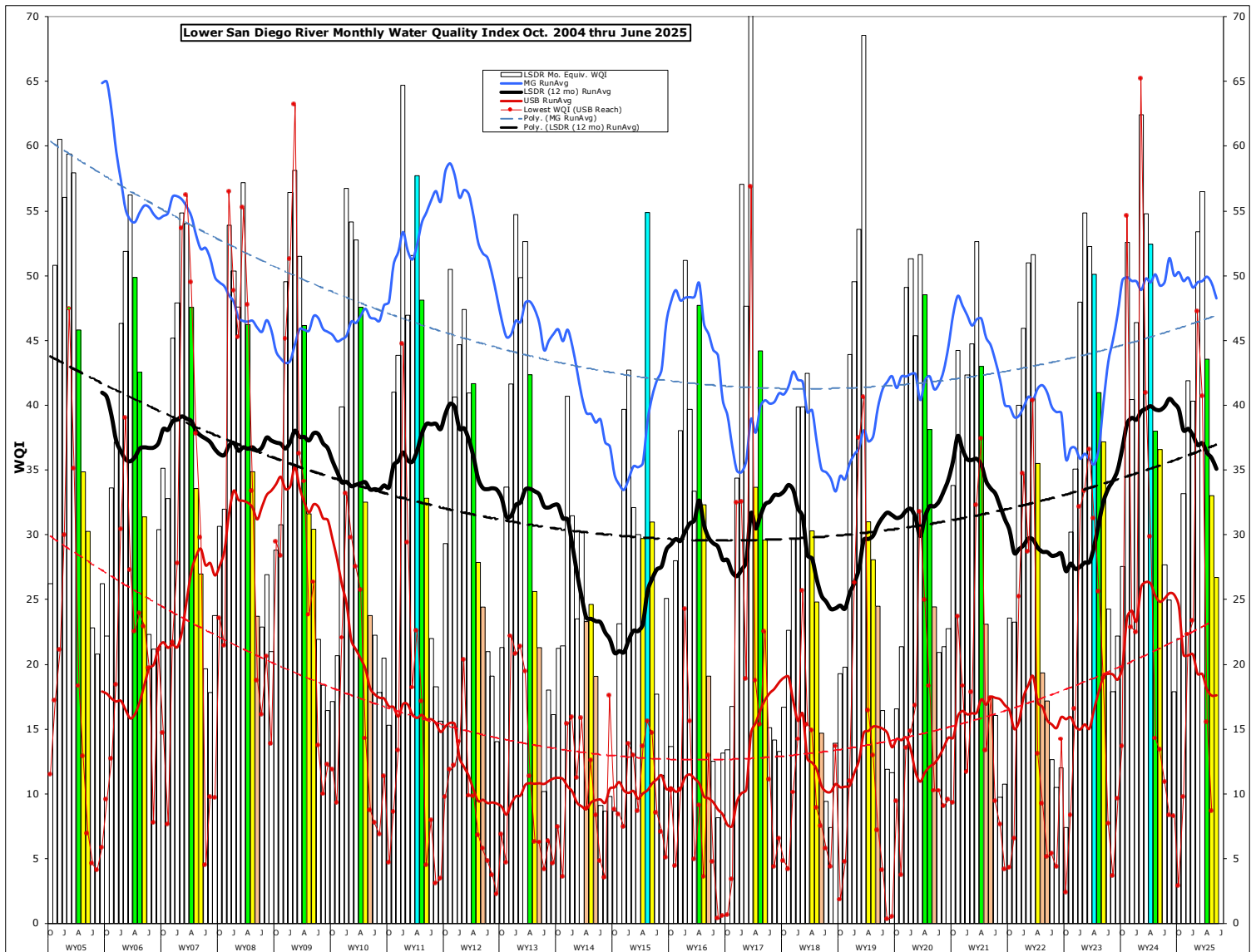


# Monthly WQM Report

## Lower San Diego River - June 2025



## Lower SDR Water Quality Monitoring Data Summary

**Table 1** presents a summary of water quality data monitored by the SDRPF RiverWatch Team within the Lower San Diego River (LSDR) watershed over the last two months. This month's overall index of 27(D-) is down 6 points from last month, at 27% below one year ago and one point (3%) above the 21-yr June norm of 26.

Table 1 - May'25/June'25 WQM Data Summary							
	West - MV	Mid - MG	East - SB	LSDR	Variance From		
[Site #s]	[1-7] May/June	[8-10] May/June	[11-15] May/June	[1-15] May/June	Last Mo. (5/'25)	Last Yr. (6/'24)	21-yr Avg. (June)
Temperature, oC	21.4/23.7	18.1/21.5	19.2/22.4	19.8/22.7	15%	5%	4%
Sp.Cond., mS/cm	2.70/2.99	1.64/1.76	1.91/2.07	2.20/2.41	10%	27%	-3%
DO, mg/L	4.61/3.63	7.56/6.43	3.65/4.92	4.73/4.48	-3%	-15%	4%
DO, % of Sat.	53/44	81/73	40/58	52/52			
pH	7.66/7.69	7.94/8.04	7.83/7.65	7.56/7.66	1.2%	-1.9%	-1.2%
3-day ADF, cfs	5.4/3.4	4.0/1.8	3.7/1.5	4.5/2.3	-48%	-6%	-17%
WQ Index	38/28	48/35	23/23	33/27	-19%	-27%	3%
May/June	C-/D	C+/D	E+/E+	D/D-			
May/June	Fair/ Marginal	Fair/ Marginal	Poor/ Poor	Marginal/ Marginal	Index down 6 points from last month		

Negative variance (declines from norms) and DO deficits (DO < 5.0 mg/L or 52% of Sat) expressed in red.

LSDR **water temperatures** climbed 2.9oC (15% up) from last month to 5% above last June and 4% greater than the 21-yr monthly norm of 21.9oC. The overall **specific conductance** of 2.41 mS/cm is 10% more than last month, 27% above a year ago and 3% below the 21-yr norm of 2.48 mS/cm. The overall **dissolved oxygen** level of 4.48 mg/L (52%Sat.) is 3% below last month, 15% less than last June and 4% above the 21-yr norm of 4.34 mg/L (49%Sat). **Streamflow** over the antecedent 3-days of 2.3 cfs is 48% below last month, 6% less than a year ago and 17% less than the 21-yr norm of 2.8 cfs. This month's overall LSDR **water quality index** (WQI) of 27 (D-Marginal) is 19% (6 points) less than last month, 27% below a year ago June and only one point (3%) above the 21-yr norm of 26 (D- Marginal).

Monthly WQI values occurring over the past two years of RiverWatch record for the three main sections of the lower river system, the overall LSDR average, plus 30-day antecedent average daily streamflow (ADF) and total monthly rainfall (MRF) values, are expressed in **Table 2** on the next page.

<b>Table 2 - WQI Values, Average Daily Flow and Monthly Rainfall (May '23 - June '25)</b>							
	Mission Valley	Mission Gorge	Santee Basin	LSDR		ADF,cfs	TMR,F,in
May	40 (C)	47 ( C+)	39 (C )	41 ( C)	T	19	0.12
<b>June 23</b>	<b>33 (D)</b>	<b>59 (B)</b>	<b>33 (D)</b>	<b>37 (D+)</b>	<b>T</b>	<b>18</b>	<b>0.03</b>
July	19 (E)	39 (C-)	23 (E)	24 (E+)	DW	4.9	0.00
Aug	20 (E)	22 (E)	15 (E)	18 (E)	DW	3.1	0.10
Sept.	17 (E)	35 (D)	22 (E)	22 (E)	T	26	1.75
Oct.	31(D)	34 (D)	21 (E)	28 (D)	DW	4.2	0.01
Nov.	49 (C+)	59 (B)	51 (B-)	53 (B-)	T	28	0.15
Dec.	45 (C)	50 (B-)	31 (D)	40 (C)	T	15	0.46
Jan.	50(B-)	58 (B)	36 (D)	46 (C)	WW	13	2.07
Feb.	58(B)	64(B)	65(B)	62(B)	WW	202	6.12
March	55(B)	67(B)	48(C+)	55(B)	WW	46	1.62
April	60(B)	61(B)	40(C)	52(B)	WW	62	1.92
May	40 (C)	54 (B-)	31 (D)	38 (C-)	T	16	0.03
<b>June 24</b>	<b>40 (C)</b>	<b>51 (B-)</b>	<b>30 (D)</b>	<b>38 (C-)</b>	<b>DW</b>	<b>7.6</b>	<b>0.01</b>
July	27 (D)	43 (C)	25 (D)	28 (D)	DW	3.8	0.00
Aug.	22 (E)	44 (C)	22 (E)	25 (E+)	DW	2.9	0.00
Sept.	18 (E)	19 (E)	20 (E)	18 (E)	DW	1.6	0.01
Oct.	17 (E)	42 (C)	24 (E+)	25 (D-)	DW	1.2	0.01
Nov.	34 (D)	49 (C+)	23 (E+)	33 (D)	T	2.2	0.08
Dec.	45 (C)	53(B-)	33 (D)	42 (C)	DW	3.7	0.05
Jan.	44 (C)	49 (C+)	32 (D)	41 (C)	DW	3.8	0.00
Feb.	49 (C+)	68 (B)	50 (B-)	53 (B-)	WW	27	1.00
March	59 (B)	68 (B)	48 (C+)	57 (B)	WW	55	2.40
April	45 (C)	65 (B)	33 (D)	44 (C)	T	16	0.08
May	38 (C-)	48 (C+)	23 (E+)	33 (D)	DW	6.4	0.2
<b>June'25</b>	<b>28 (D)</b>	<b>35 (D)</b>	<b>23 (E+)</b>	<b>27 (D-)</b>	<b>DW</b>	<b>3.0</b>	<b>0.001</b>

The **cover page** of this report presents monthly WQI values and range (high/low) for the Lower San Diego River watershed over the past 20+ years. Each year's values are expressed as color-shaded bars; **blue (50 or >) A-B/Good**, **green (38-49) C/Fair**, yellow (25-37) D/Marginal, **brown (13-24) E/Poor**, and **pink (12 or <) F/Very Poor**. Running average index values for the LSDR (distance weighted averages of all sites) are shown as a heavy black line. Running averages for the consistently highest (best) quality section of the river (Mission Gorge) are shown as a 'blue' line while the consistently lowest (poorest) reach (Upper Santee Basin) is shown in 'red'. The dashed lines represent overall (21-yr) trends. This month's overall value of 27 (D-) is the 10th time over the last two decades that the June index has been at grade level D (Marginal).

WQI values extending from Sept.'04 thru June '25 are presented in **Chart 1** (next page) together with 12-mo. running averages for each of the five reaches and overall (i.e., LSDR) for the entire lower river watershed. The current running average WQI of 36 is three points (6%) above the long-range norm of 33. The running average low for June of 23 (30% below norm) occurred in 2014. The previous highest running average WQI for the month of 40 (19% above norm) occurred last year (2024). All three sections of the lower river exhibited declines in water quality this month compared to last. The least decline in index was monitored in the Mission Gorge section.

Monthly and 12-mo. running average WQI values for the typically 'poorest' (Upper Santee Basin) and typically "best" (Mission Gorge) reaches of the lower watershed are presented in **Chart 2**. Although water quality measurably improved over this past year; low flow and resurgent growth of aquatic plants with subsequent decomposition associated with accrual of organics, especially in deeper ponded portions of the river, are considered the natural causes of declines in water quality. The greatest downward trends (**red-dashed line**) over time have been associated with the lowest quality reach (Upper Santee Basin) encompassing Mast Park East (#13E) and Magnolia Ave. (#14) sites. The Mission Gorge (**blue line**) section extending from Old Mission Dam through Mission Trails continues to demonstrate the least flux in index values.

Spatial WQI values determined over the last three months, expressed in order of location upstream, are shown in **Charts 3, 4 and 5** on page 6. This month's results (color bars w/values in bold black shown on Chart 5) are lower than last month (middle bar) at all sites. This month only one site remained Good(B), 2 were Fair(C), 7 Marginal(D), 4 Poor (E) and one Very Poor(F). Last month (May): 6 sites were Good, 4 Fair, 6 Marginal, 2 Poor, and 2 more Very Poor. April resulted in 6 Good, 4 Fair, 4 Marginal, and one Poor and another one Very Poor. The greatest declines in index values for June are found in the Upper Santee Basin reach. Over the past three months, the index has declined from C(Fair) in April, to D(Marginal) in May to D- (low Marginal) in June. July values are likely to be found in the Poor (E)-to-Very Poor (F) range at nearly all sites.

Index values are expected to decline further during the next few months of summer based on lower streamflow and DO levels occurring in concert with higher water temperatures and salinity levels (i.e., SpC/TDS) due to lack of precipitation and elevated evaporatranspiration rates. Spring (April-May) of WY25 results were appreciably lower than the previous several years (WYs 23-24). This year's summer WQI values are expected to also be noticeably lower than found over the previous two summers.

(JCK 6/21/25)

