

# Santa Ana River - Mill Creek Cooperative Water Project

## Daily Flow Report Summary

Date: 4/14/2017

Time: 7:00:00 AM

| Santa Ana River |                             | Flow Rate (cfs) |
|-----------------|-----------------------------|-----------------|
| <b>A5</b>       | <b>Total SAR Inflows</b>    | 98.8            |
| <b>N2</b>       | <b>Total SAR Deliveries</b> | 98.8            |
| A1              | SAR PH#3 Penstock (calc)    | 47.4            |
| B1              | BVMWC Highline              | 4.4             |
| C1              | Greenspot Pipeline          | 0.0             |
| L2              | SBVWCD Parshall Flume       | 68.0            |
| G2              | North Fork Canal Weir       | 9.9             |
| H2              | Edwards Canal               | 1.1             |
| W1              | Redlands Aqueduct (calc)    | 19.6            |
|                 | Other                       | 0.0             |

| Mill Creek |                            | Flow Rate (cfs) |
|------------|----------------------------|-----------------|
| <b>D3</b>  | <b>Total MC Inflows</b>    | 38.7            |
| <b>U3</b>  | <b>Total MC Deliveries</b> | 38.7            |
| K3         | Yucaipa Pipeline           | 0.0             |
| O3         | SBVWCD Spreading           | 23.3            |
| T3         | MC #1 Flow (Cooley Hat)    | 31.1            |

| State Water Project |                             | Flow Rate (cfs) |
|---------------------|-----------------------------|-----------------|
| <b>G</b>            | <b>Total SWP Inflows</b>    | 0.0             |
| <b>V</b>            | <b>Total SWP Deliveries</b> | 0.0             |
| J                   | Northfork Canal             | 0.0             |
| L                   | Redlands Aqueduct           | 0.0             |
| M                   | Crafton Unger Lane          | 0.0             |
| T                   | Newport to BVMWC            | 0.0             |

| Reservoir Levels               | Feet   |
|--------------------------------|--------|
| Observation at SOD             | 2177.6 |
| Crafton Reservoir Level (21.3) | 14.4   |
| Mentone Reservoir Level        | 20.0   |

| River Recharge                      | AF |
|-------------------------------------|----|
| Estimate SAR Recharge (AF)          | 0  |
| Estimate Mill Creek Recharge (AF)   | 0  |
| Estimated Total River Recharge (AF) | 0  |

| Location                      | Type   | WY to Date (AF) | Target  |
|-------------------------------|--------|-----------------|---------|
| Santa Ana River               | SAR    | 16,793          | 166,000 |
| Santa Ana River to Mill Creek | SAR-MC | 1,041           | 0       |
| Santa Ana River               | SWP    | 1,796           | 0       |
| Mill Creek                    | MC     | 3,975           | 99,700  |
| Mill Creek                    | SWP    | 203             | 0       |
| Redlands                      | SWP    | 33              | 0       |
| Loma Linda                    | SWP    | 487             | 0       |
| East Valley                   | SWP    | 3,668           | 0       |

Notes: Numbers on the Daily Flow Report are a snapshot of water at a given location at the time of the read, normally very early in the morning, and not necessarily what is at that location thruout the day. EVWD blocked the River-pick up due to treatment issues.

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Time: 7:00:00 AM

| State Water Project |                                |            |   |                       |     |   |                      |     |   |                             |            |
|---------------------|--------------------------------|------------|---|-----------------------|-----|---|----------------------|-----|---|-----------------------------|------------|
| Inflows             |                                | Deliveries |   |                       |     |   |                      |     |   |                             |            |
| A                   | BBMWD In-lieu                  | 0.0        | H | EVWD Treatment Plant  | 0.0 | M | Crafton Unger Lane   | 0.0 | S | SBCFCD Grove                | 0.0        |
| B                   | Muni test at Greenspot Station | 0.0        | I | Santa Ana Low Turnout | 0.0 | N | BVMWC Boulliou Box   | 0.0 | T | Newport for BVMWC           | 0.0        |
| C                   | Exchange Water                 | 0.0        | J | Northfork Canal       | 0.0 | P | SARC West            | 0.0 | U | M/C spreading at Zanja Tate | 0.0        |
| D                   | Purchased Water                | 0.0        | K | Edwards Canal         | 0.0 | Q | Zanja                | 0.0 | W | Tres Lagos                  | 0.0        |
| E                   | Redlands Aqueduct Leakage      | 0.0        | L | Redlands Aqueduct     | 0.0 | R | Tate Treatment Plant | 0.0 | V | <b>Total SWP Deliveries</b> | <b>0.0</b> |
| F                   | Recharge Project               | 0.0        |   |                       |     |   |                      |     |   |                             |            |
| G                   | <b>Total SWP Inflows</b>       | <b>0.0</b> |   |                       |     |   |                      |     |   |                             |            |

| Santa Ana River Inflows   |                                  |                |       |                               |            |                   |                                 |                     |                                     |                           |             |
|---------------------------|----------------------------------|----------------|-------|-------------------------------|------------|-------------------|---------------------------------|---------------------|-------------------------------------|---------------------------|-------------|
| SAR PH #3 Penstock (calc) |                                  | BVMWC Highline |       | SOD Release Subtotal          |            | Total SAR Inflows |                                 |                     |                                     |                           |             |
| G2                        | Northfork Canal Weir             | 9.9            | A2    | Newport                       | 0.0        | D1                | BVMWC River PU (USGS)           | 4.2                 | A1                                  | SAR PH #3 Penstock (calc) | 47.4        |
| H2                        | Edwards Canal                    | 1.1            | D2    | Boulliou Box Weir             | 4.4        | E1                | Main River Gage (USGS)          | 47.0                | B1                                  | BVMWC Highline            | 4.4         |
| J2                        | Tailrace Valve to Parshall Flume | 21.0           | E2    | Boulliou Box to Zanja         | 0.0        | minus             |                                 | C1                  | Greenspot Pipeline                  | 0.0                       |             |
| K2                        | Northfork Parshall Flume         | 0.0            | F2    | SBVWCD Mill Creek Spreading   | 0.0        | F1                | Greenspot Spill                 | 0.0                 | D1                                  | BVMWC River PU (USGS)     | 4.2         |
| V1                        | PH#3 Afterbay SpillLoss to SAR   | 0.0            | B1    | <b>BVMWC Highline</b>         | <b>4.4</b> | Z1                | <b>SOD Release Subtotal</b>     | <b>51.2</b>         | E1                                  | Main River Gage (USGS)    | 47.0        |
| W1                        | Redlands Aqueduct / Sandbox      | 20.0           | Other |                               |            |                   | D1a                             | BV Pick-up gated    | <input checked="" type="checkbox"/> |                           |             |
| Y1                        | Redlands Sandbox Spill           | 0.0            | J1    | Big Bear Lake Release         | 0.4        | w                 | Observation at SOD              | 2177.6              | A5                                  | <b>Total SAR Inflows</b>  | <b>98.8</b> |
| minus                     |                                  |                | L1    | SCE SAR AVM (SCADA)           | 57.1       | x                 | SOD Reservoir Elevation (scada) | 2177.5              | Edison Generation                   |                           |             |
| D1                        | BVMWC River PU (USGS)            | 4.2            | X1    | SAR-MC Spread (Red. Aqueduct) | 0.0        | y                 | Debris Pool Elevation           | 0.0                 | SAR PH#1 Generating                 | <input type="checkbox"/>  |             |
| I1                        | Redlands Tunnel                  | 0.4            |       |                               |            |                   |                                 | SAR PH#3 Generating | <input checked="" type="checkbox"/> |                           |             |
| A1                        | <b>SAR PH #3 Penstock (calc)</b> | <b>47.4</b>    |       |                               |            |                   |                                 |                     |                                     |                           |             |
| K1                        | <b>PH3# Penstock (SCADA)</b>     | <b>51.6</b>    |       |                               |            |                   |                                 |                     |                                     |                           |             |

| Santa Ana River Deliveries |                             |                   |    |                                  |             |            |                                  |             |                       |                                  |             |
|----------------------------|-----------------------------|-------------------|----|----------------------------------|-------------|------------|----------------------------------|-------------|-----------------------|----------------------------------|-------------|
| Greenspot Pipeline         |                             | Tailrace Pipeline |    | SBVWCD Parshall Flume To Basins  |             | Deliveries |                                  |             |                       |                                  |             |
| M1                         | SBCFCD Grove                | 0.0               | G2 | Northfork Canal Weir             | 9.9         | J2         | Tailrace Valve to Parshall Flume | 21.0        | V1                    | SAR PH #3 Afterbay Spill         | 0.0         |
| N1                         | BVMWC Highline              | 0.0               | H2 | Edwards Canal                    | 1.1         | K2         | Northfork Parshall Flume         | 0.0         | W1                    | Redlands Aqueduct / Sandbox      | 20.0        |
| O1                         | Newport for BVMWC           | 0.0               | J2 | Tailrace Valve to Parshall Flume | 21.0        | H1         | SBVWCD Diversion                 | 47.0        | Y1                    | Redlands Sandbox Spill           | 0.0         |
| P1                         | SBVWCD Mill Creek Spreading | 0.0               | K2 | Northfork Parshall Flume         | 0.0         | L2         | <b>SBVWCD Parshall Flume</b>     | <b>68.0</b> | Z2                    | Cuttle Weir To River             | 0.0         |
| Q1                         | Crafton WC Unger Lane       | 0.0               | I2 | <b>Tailrace Pipeline</b>         | <b>32.0</b> |            | <b>Parshall Flume (SCADA)</b>    | <b>68.0</b> | B1                    | BVMWC Highline                   | 4.4         |
| R1                         | BVMWC Highline to Boulliou  | 0.0               |    |                                  |             | Irrigation |                                  | C1          | Greenspot Pipeline    | 0.0                              |             |
| S1                         | Crafton WC Boulliou         | 0.0               |    |                                  |             | D2         | Boulliou Box Weir                | 4.4         | I2                    | Tailrace Pipeline                | 32.0        |
| T1                         | Tate Pump Station to Zanja  | 0.0               |    |                                  |             | minus      |                                  | L2          | SBVWCD Parshall Flume | 68.0                             |             |
| C1                         | <b>Greenspot Pipeline</b>   | <b>0.0</b>        |    |                                  |             | B2         | Gay Overflow                     | 1.4         | minus                 |                                  |             |
|                            |                             |                   |    |                                  |             | C2         | <b>Irrigation</b>                | <b>3.0</b>  | J2                    | Tailrace Valve to Parshall Flume | 21.0        |
|                            |                             |                   |    |                                  |             |            |                                  |             | K2                    | Northfork Parshall Flume         | 0.0         |
|                            |                             |                   |    |                                  |             |            |                                  |             | I1                    | Redlands Tunnel                  | 0.4         |
|                            |                             |                   |    |                                  |             |            |                                  |             | N2                    | <b>Total SAR Deliveries</b>      | <b>98.8</b> |

| Mill Creek Inflows |                             |             |    |                                  |      |
|--------------------|-----------------------------|-------------|----|----------------------------------|------|
| Total MC Inflows   |                             | Other       |    |                                  |      |
| A3                 | RPU Flow                    | 15.8        | E3 | M/C #1 Penstock Flow             | 31.1 |
| B3                 | M/C #3 Penstock             | 21.6        | F3 | Stream Parshall Flume to Yucaipa | 0.0  |
| C3                 | SBVWCD Mill Creek Diversion | 1.3         | G3 | Observation at Garnet            | 0.0  |
| D3                 | <b>Total MC Inflows</b>     | <b>38.7</b> |    |                                  |      |

| Mill Creek Deliveries |                         |                         |    |                                |             |                     |                                   |             |    |                                   |      |
|-----------------------|-------------------------|-------------------------|----|--------------------------------|-------------|---------------------|-----------------------------------|-------------|----|-----------------------------------|------|
| Yucaipa Pipeline      |                         | MC #1 Flow (Cooley Hat) |    | Total MC Deliveries            |             | Other               |                                   |             |    |                                   |      |
| I3                    | Yucaipa Regional Park   | 0.0                     | P3 | Tate Inflow                    | 11.0        | C3                  | SBVWCD Mill Creek Diversion       | 1.3         | H3 | Mentone Reservoir Level           | 20.0 |
| J3                    | Wilson Creek Spreading  | 0.0                     | Q3 | East Weir to Mill Creek        | 15.7        | T3                  | Mill Creek #1 Flow (Cooley Hat)   | 31.1        | R3 | Boulliou to BVMWC Highline        | 0.0  |
| K3                    | <b>Yucaipa Pipeline</b> | <b>0.0</b>              | S3 | East Weir to Zanja             | 4.4         | W3                  | Mill Creek PH #2,3 Afterbay Spill | 6.3         | V3 | Zanja West Weir to CWC Canal      | 2.6  |
|                       |                         |                         | T3 | <b>MC #1 Flow (Cooley Hat)</b> | <b>31.1</b> | Total MC Deliveries |                                   | <b>38.7</b> | W3 | Mill Creek PH #2,3 Afterbay Spill | 6.3  |
|                       |                         |                         |    |                                |             | U3                  |                                   |             | Y3 | Crafton Reservoir Level (21.3)    | 14.4 |

| SBVWCD MC Spreading |                                   |             |
|---------------------|-----------------------------------|-------------|
| C3                  | SBVWCD Mill Creek Diversion       | 1.3         |
| L3                  | East Weir (MC)                    | 15.7        |
| M3                  | BVHL (SAR)                        | 0.0         |
| W3                  | Mill Creek PH #2,3 Afterbay Spill | 6.3         |
| X1                  | SAR-MC Spread (Red. Aqueduct)     | 0.0         |
| O3                  | <b>SBVWCD MC Spreading</b>        | <b>23.3</b> |

| SBVWCD Recharge |                                 |                   |    |                               |    |          |                                |    |          |                                   |   |
|-----------------|---------------------------------|-------------------|----|-------------------------------|----|----------|--------------------------------|----|----------|-----------------------------------|---|
| Location        | Type                            | Previous Day (AF) |    | WY To Date (AF)               |    | Target   | Calendar Year To Date (AF)     |    | Target   |                                   |   |
| A4              | Santa Ana River                 | SAR               | E4 | 138.7                         | I4 | 16,793.0 | 166,000                        | I4 | 15,890.3 | 166,000                           |   |
| M4              | Santa Ana Rvr to Mill Creek     | SAR-MC            | N4 | 0.0                           | O4 | 1,041.1  |                                | O4 | 878.5    |                                   |   |
| B4              | Santa Ana River                 | SWP               | F4 | 0.0                           | J4 | 1,795.9  |                                | J4 | 1,795.9  |                                   |   |
| C4              | Mill Creek                      | MC                | G4 | 34.0                          | K4 | 3,975.0  | 99,700                         | K4 | 3,746.5  | 99,700                            |   |
| D4              | Mill Creek                      | SWP               | H4 | 0.0                           | L4 | 203.0    |                                | L4 | 203.0    |                                   |   |
|                 | Redlands                        | SWP               |    | 0.0                           |    | 32.9     |                                |    | 0.0      |                                   |   |
|                 | Loma Linda                      | SWP               |    | 0.0                           |    | 486.6    |                                |    | 0.0      |                                   |   |
|                 | East Valley                     | SWP               |    | 0.0                           |    | 3,668.4  |                                |    | 0.0      |                                   |   |
|                 | SAR Passing Cuttle Weir (cfs)   | 0                 |    | Share of Lost SAR Flow        | 0  |          | Estimate SAR flow (cfs)        | 0  |          | Estimate SAR Recharge (AF)        | 0 |
|                 | Mill Creek Passing Garnet (cfs) | 0                 |    | Share of Lost Mill Creek Flow | 0  |          | Estimate Mill Creek flow (cfs) | 0  |          | Estimate Mill Creek Recharge (AF) | 0 |
|                 | Flow in the River Above Alabama | 0                 |    | Flowing Beyond Alabama        | 0  |          | Total River Flow (cfs)         | 0  |          | Total River Recharge (AF)         | 0 |