

# Santa Ana River - Mill Creek Cooperative Water Project

## Daily Flow Report Summary

Date: 8/29/2016

Time: 6:40:00 AM

| Santa Ana River |                                | Flow Rate (cfs) |
|-----------------|--------------------------------|-----------------|
| <b>A5</b>       | <b>Total SAR Inflows</b>       | 6.4             |
| <b>N2</b>       | <b>Total SAR Deliveries</b>    | 6.4             |
| A1              | SAR PH#3 Penstock (calc)       | 0.0             |
| B1              | BVMWC Highline                 | 5.1             |
| C1              | Greenspot Pipeline             | 0.0             |
| L2              | SBVMWD Parshall Flume          | 0.0             |
| G2              | North Fork Canal Weir          | 0.0             |
| H2              | Edwards Canal                  | 0.9             |
| W1              | Redlands Aqueduct (calc)       | 0.0             |
| v1              | PH3 Afterbay Spill Loss to SAR | 0.4             |

| State Water Project |                             | Flow Rate (cfs) |
|---------------------|-----------------------------|-----------------|
| <b>G</b>            | <b>Total SWP Inflows</b>    | 56.7            |
| <b>V</b>            | <b>Total SWP Deliveries</b> | 56.7            |
| J                   | Northfork Canal             | 11.6            |
| L                   | Redlands Aqueduct           | 27.0            |
| M                   | Crafton Unger Lane          | 3.0             |
| T                   | Newport to BVMWC            | 2.0             |

| Mill Creek |                            | Flow Rate (cfs) |
|------------|----------------------------|-----------------|
| <b>D3</b>  | <b>Total MC Inflows</b>    | 5.5             |
| <b>U3</b>  | <b>Total MC Deliveries</b> | 5.5             |
| K3         | Yucaipa Pipeline           | 0.0             |
| O3         | SBVMWD Spreading           | 0.0             |
| T3         | MC #1 Flow (Cooley Hat)    | 5.5             |

| Reservoir Levels               | Feet |
|--------------------------------|------|
| Observation at SOD             | N/A  |
| Crafton Reservoir Level (21.3) | 18.8 |
| Mentone Reservoir Level        | 21.4 |

| River Recharge               | AF  |
|------------------------------|-----|
| Estimate SAR Recharge        | 0.0 |
| Estimate Mill Creek Recharge | 0.0 |
| Total River Recharge         | 0.0 |

| Location                      | Type   | WY to Date (AF) | Target  |
|-------------------------------|--------|-----------------|---------|
| Santa Ana River               | SAR    | 2,621           | 123,000 |
| Santa Ana River to Mill Creek | SAR-MC | 132             | 0       |
| Santa Ana River               | SWP    | 15              | 0       |
| Mill Creek                    | MC     | 1,040           | 73,800  |
| Mill Creek                    | SWP    | 9               | 714     |
| SBVMWD                        | SWP    | 86              | 0       |
| EV HQ                         | SWP    | 1,159           | 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.

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Date: 8/29/2016  
Time: 6:40:00 AM

### State Water Project

| Inflows |                                |      | Deliveries |                             |      |
|---------|--------------------------------|------|------------|-----------------------------|------|
| A       | BBMWD In-lieu                  | 42.6 | H          | EVWD Treatment Plant        | 0.0  |
| B       | Muni test at Greenspot Station | 0.0  | I          | Santa Ana Low Turnout       | 12.1 |
| C       | Exchange Water                 | 0.0  | J          | Northfork Canal             | 11.6 |
| D       | Purchased Water                | 14.1 | K          | Edwards Canal               | 0.0  |
| E       | Redlands Aqueduct Leakage      | 0.0  | L          | Redlands Aqueduct           | 27.0 |
| F       | Recharge Project               | 0.0  | M          | Crafton Unger Lane          | 3.0  |
| G       | Total SWP Inflows              | 56.7 | N          | BVMWC Boullioun Box         | 1.0  |
|         |                                |      | P          | SARC West                   | 0.0  |
|         |                                |      | Q          | Zanja                       | 0.0  |
|         |                                |      | R          | Tate Treatment Plant        | 0.0  |
|         |                                |      | S          | SBCFCD Grove                | 0.0  |
|         |                                |      | T          | Newport for BVMWC           | 2.0  |
|         |                                |      | U          | M/C spreading at Zanja Tate | 0.0  |
|         |                                |      | V          | EV HQ Irrigation            | 0.0  |
|         |                                |      |            | Total SWP Deliveries        | 56.7 |

### Santa Ana River Inflows

| SAR PH #3 Penstock (calc) |                                  |     | BVMWC Highline |                               |     | SOD Release Subtotal |                                 |     | Total SAR Inflows   |                           |                          |
|---------------------------|----------------------------------|-----|----------------|-------------------------------|-----|----------------------|---------------------------------|-----|---------------------|---------------------------|--------------------------|
| G2                        | Northfork Canal Weir             | 0.0 | A2             | Newport                       | 0.0 | D1                   | BVMWC River PU (USGS)           | 1.3 | A1                  | SAR PH #3 Penstock (calc) | 0.0                      |
| H2                        | Edwards Canal                    | 0.9 | D2             | Boullioun Box Weir            | 5.1 | E1                   | Main River Gage (USGS)          | 0.0 | B1                  | BVMWC Highline            | 5.1                      |
| J2                        | Tailrace Valve to Parshall Flume | 0.0 | E2             | Boullioun 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)     | 1.3                      |
| V1                        | PH#3 Afterbay Spill/Loss to SAR  | 0.4 | B1             | BVMWC Highline                | 5.1 | Z1                   | SOD Release Subtotal            | 1.3 | E1                  | Main River Gage (USGS)    | 0.0                      |
| W1                        | Redlands Aqueduct / Sandbox      | 0.0 | Other          |                               |     | Seven Oaks Dam       |                                 |     | D1a                 | BV Pick-Up gated          | <input type="checkbox"/> |
| Y1                        | Redlands Sandbox Spill           | 0.3 | J1             | Big Bear Lake Release         | 1.6 | w                    | Observation at SOD              | N/A | A5                  | Total SAR Inflows         | 6.4                      |
| minus                     |                                  |     | L1             | SCE SAR AVM (SCADA)           | 6.1 | x                    | SOD Reservoir Elevation (scada) | N/A | Edison Generation   |                           |                          |
| D1                        | BVMWC River PU (USGS)            | 1.3 | X1             | SAR-MC Spread (Red. Aqueduct) | 0.0 | y                    | Debris Pool Elevation           | 0.0 | SAR PH#1 Generating | <input type="checkbox"/>  |                          |
| I1                        | Redlands Tunnel                  | 0.3 |                |                               |     |                      |                                 |     | SAR PH#3 Generating | <input type="checkbox"/>  |                          |
| A1                        | SAR PH #3 Penstock (calc)        | 0.0 |                |                               |     |                      |                                 |     |                     |                           |                          |
| K1                        | PH3# Penstock (SCADA)            | 0.0 |                |                               |     |                      |                                 |     |                     |                           |                          |

### Santa Ana River Deliveries

| Greenspot Pipeline |                             |     | Tailrace Pipeline |                                  |     | SBVWCD Parshall Flume To Basins |                                  |     | Deliveries |                                  |     |
|--------------------|-----------------------------|-----|-------------------|----------------------------------|-----|---------------------------------|----------------------------------|-----|------------|----------------------------------|-----|
| M1                 | SBCFCD Grove                | 0.0 | G2                | Northfork Canal Weir             | 0.0 | J2                              | Tailrace Valve to Parshall Flume | 0.0 | V1         | SAR PH #3 Afterbay Spill         | 0.4 |
| N1                 | BVMWC Highline              | 0.0 | H2                | Edwards Canal                    | 0.9 | K2                              | Northfork Parshall Flume         | 0.0 | W1         | Redlands Aqueduct / Sandbox      | 0.0 |
| O1                 | Newport for BVMWC           | 0.0 | J2                | Tailrace Valve to Parshall Flume | 0.0 | H1                              | SBVWCD Diversion                 | 0.0 | Y1         | Redlands Sandbox Spill           | 0.3 |
| P1                 | SBVWCD Mill Creek Spreading | 0.0 | K2                | Northfork Parshall Flume         | 0.0 | L2                              | SBVWCD Parshall Flume            | 0.0 | Z2         | Cuttle Weir To River             | 0.0 |
| Q1                 | Crafton WC Unger Lane       | 0.0 | I2                | Tailrace Pipeline                | 0.9 | Parshall Flume (SCADA)          |                                  |     | B1         | BVMWC Highline                   | 5.1 |
| R1                 | BVMWC Highline to Boullioun | 0.0 |                   |                                  |     | Irrigation                      |                                  |     | C1         | Greenspot Pipeline               | 0.0 |
| S1                 | Crafton WC Boullioun        | 0.0 |                   |                                  |     | D2                              | Boullioun Box Weir               | 5.1 | I2         | Tailrace Pipeline                | 0.9 |
| T1                 | Tate Pump Station to Zanja  | 0.0 |                   |                                  |     | minus                           |                                  |     | L2         | SBVWCD Parshall Flume            | 0.0 |
| C1                 | Greenspot Pipeline          | 0.0 |                   |                                  |     | B2                              | Gay Overflow                     | 3.8 | minus      |                                  |     |
|                    |                             |     |                   |                                  |     | C2                              | Irrigation                       | 1.3 | J2         | Tailrace Valve to Parshall Flume | 0.0 |
|                    |                             |     |                   |                                  |     |                                 |                                  |     | K2         | Northfork Parshall Flume         | 0.0 |
|                    |                             |     |                   |                                  |     |                                 |                                  |     | I1         | Redlands Tunnel                  | 0.3 |
|                    |                             |     |                   |                                  |     |                                 |                                  |     | N2         | Total SAR Deliveries             | 6.4 |

### Mill Creek Inflows

| Total MC Inflows |                             |     | Other |                                  |     |
|------------------|-----------------------------|-----|-------|----------------------------------|-----|
| A3               | RPU Flow                    | 1.1 | E3    | M/C #1 Penstock Flow             | 5.5 |
| B3               | M/C #3 Penstock             | 4.4 | F3    | Stream Parshall Flume to Yucaipa | 0.0 |
| C3               | SBVWCD Mill Creek Diversion | 0.0 | G3    | Observation at Garnet            | 0.0 |
| D3               | Total MC Inflows            | 5.5 |       |                                  |     |

### Mill Creek Deliveries

| Yucaipa Pipeline |                        |     | MC #1 Flow (Cooley Hat) |                         |     | Total MC Deliveries |                                 |     | Other |                                   |      |
|------------------|------------------------|-----|-------------------------|-------------------------|-----|---------------------|---------------------------------|-----|-------|-----------------------------------|------|
| I3               | Yucaipa Regional Park  | 0.0 | P3                      | Tate Inflow             | 5.5 | C3                  | SBVWCD Mill Creek Diversion     | 0.0 | H3    | Mentone Reservoir Level           | 21.4 |
| J3               | Wilson Creek Spreading | 0.0 | Q3                      | East Weir to Mill Creek | 0.0 | T3                  | Mill Creek #1 Flow (Cooley Hat) | 5.5 | R3    | Boullioun to BVMWC Highline       | 0.0  |
| K3               | Yucaipa Pipeline       | 0.0 | S3                      | East Weir to Zanja      | 0.0 | U3                  | Total MC Deliveries             | 5.5 | V3    | Zanja West Weir to CWC Canal      | 3.0  |
|                  |                        |     | T3                      | MC #1 Flow (Cooley Hat) | 5.5 |                     |                                 |     | W3    | Mill Creek PH #2,3 Afterbay Spill | 0.0  |
|                  |                        |     |                         |                         |     |                     |                                 |     | Y3    | Crafton Reservoir Level (21.3)    | 18.8 |

| SBVWCD MC Spreading |                               |     |
|---------------------|-------------------------------|-----|
| C3                  | SBVWCD Mill Creek Diversion   | 0.0 |
| L3                  | East Weir (MC)                | 0.0 |
| M3                  | BVHL (SAR)                    | 0.0 |
| X1                  | SAR-MC Spread (Red. Aqueduct) | 0.0 |
| O3                  | SBVWCD MC Spreading           | 0.0 |

### SBVWCD Recharge

| Location                        |                             | Type   | Previous Day (AF)      |      | WY To Date (AF)              |         | Target  | Calendar Year To Date (AF) |         | Target  |
|---------------------------------|-----------------------------|--------|------------------------|------|------------------------------|---------|---------|----------------------------|---------|---------|
| A4                              | Santa Ana River             | SAR    | E4                     | 0.0  | I4                           | 2,620.5 | 123,000 | I4                         | 2,263.3 | 123,000 |
| M4                              | Santa Ana Rvr to Mill Creek | SAR-MC | N4                     | 0.0  | O4                           | 132.0   |         | O4                         | 132.0   |         |
| B4                              | Santa Ana River             | SWP    | F4                     | 0.0  | J4                           | 15.0    |         | J4                         | 15.0    |         |
| C4                              | Mill Creek                  | MC     | G4                     | 0.0  | K4                           | 1,039.9 | 73,800  | K4                         | 852.7   | 73,800  |
| D4                              | Mill Creek                  | SWP    | H4                     | 0.0  | L4                           | 9.0     | 714     | L4                         | 9.0     | 714     |
|                                 | Redlands                    | SWP    |                        | 0.2  |                              | 86.0    |         |                            | 86.0    |         |
|                                 | East Valley                 | SWP    |                        | 71.4 |                              | 1,158.6 |         |                            | 1,158.6 |         |
| SAR Passing Cuttle Weir         | 0                           |        | Share of Lost Flow     | 0    | Estimate SAR Recharge        | 0       |         |                            |         |         |
| Mill Creek Passing Garnet       | 0                           |        | Share of Lost Flow     | 0    | Estimate Mill Creek Recharge | 0       |         |                            |         |         |
| Flow in the River Above Alabama | 0                           |        | Flowing Beyond Alabama | 0    | Total River Recharge         | 0       |         |                            |         |         |