

# Santa Ana River - Mill Creek Cooperative Water Project

## Daily Flow Report Summary

Date: 12/16/2016

Time: 8:00:00 AM

| Santa Ana River |                             | Flow Rate (cfs) |
|-----------------|-----------------------------|-----------------|
| <b>A5</b>       | <b>Total SAR Inflows</b>    | 20.5            |
| <b>N2</b>       | <b>Total SAR Deliveries</b> | 20.5            |
| A1              | SAR PH#3 Penstock (calc)    | 10.8            |
| B1              | BVMWC Highline              | 4.8             |
| C1              | Greenspot Pipeline          | 0.0             |
| L2              | SBVWCD Parshall Flume       | 12.5            |
| G2              | North Fork Canal Weir       | 3.2             |
| H2              | Edwards Canal               | 0.0             |
| W1              | Redlands Aqueduct (calc)    | 0.0             |
|                 | Other                       | 0.0             |

| State Water Project |                             | Flow Rate (cfs) |
|---------------------|-----------------------------|-----------------|
| <b>G</b>            | <b>Total SWP Inflows</b>    | 48.1            |
| <b>V</b>            | <b>Total SWP Deliveries</b> | 48.1            |
| J                   | Northfork Canal             | 4.9             |
| L                   | Redlands Aqueduct           | 21.0            |
| M                   | Crafton Unger Lane          | 0.0             |
| T                   | Newport to BVMWC            | 1.0             |

| Mill Creek |                            | Flow Rate (cfs) |
|------------|----------------------------|-----------------|
| <b>D3</b>  | <b>Total MC Inflows</b>    | 2.0             |
| <b>U3</b>  | <b>Total MC Deliveries</b> | 2.0             |
| K3         | Yucaipa Pipeline           | 0.0             |
| O3         | SBVWCD Spreading           | 2.0             |
| T3         | MC #1 Flow (Cooley Hat)    | 0.0             |

| Reservoir Levels               | Feet   |
|--------------------------------|--------|
| Observation at SOD             | 2136.5 |
| Crafton Reservoir Level (21.3) | 18.8   |
| Mentone Reservoir Level        | 20.5   |

| River Recharge               | AF    |
|------------------------------|-------|
| Estimate SAR Recharge        | 0.0   |
| Estimate Mill Creek Recharge | 100.0 |
| Total River Recharge         | 0.0   |

| Location                      | Type   | WY to Date (AF) | Target  |
|-------------------------------|--------|-----------------|---------|
| Santa Ana River               | SAR    | 504             | 166,000 |
| Santa Ana River to Mill Creek | SAR-MC | 161             | 0       |
| Santa Ana River               | SWP    | 0               | 0       |
| Mill Creek                    | MC     | 84              | 99,700  |
| Mill Creek                    | SWP    | 0               | 0       |
| Redlands                      | SWP    | 10              | 0       |
| Loma Linda                    | SWP    | 487             | 0       |
| EV HQ                         | SWP    | 3,159           | 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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## Daily Flow Report

Date: 12/16/2016  
Time: 8:00:00 AM

### State Water Project

| Inflows |                                |      | Deliveries |                       |      |   |                      |     |   |                             |     |
|---------|--------------------------------|------|------------|-----------------------|------|---|----------------------|-----|---|-----------------------------|-----|
| A       | BBMWD In-lieu                  | 21.0 | 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 | 21.2 | N | BVMWC Boullioun Box  | 0.0 | T | Newport for BVMWC           | 1.0 |
| C       | Exchange Water                 | 0.0  | J          | Northfork Canal       | 4.9  | P | SARC West            | 0.0 | U | M/C spreading at Zanja Tate | 0.0 |
| D       | Purchased Water                | 27.1 | K          | Edwards Canal         | 0.0  | Q | Zanja                | 0.0 |   | Tres Lagos                  | 0.0 |
| E       | Redlands Aqueduct Leakage      | 0.0  | L          | Redlands Aqueduct     | 21.0 | R | Tate Treatment Plant | 0.0 | V | Total SWP Deliveries 48.1   |     |
| F       | Recharge Project               | 0.0  |            |                       |      |   |                      |     |   |                             |     |
| G       | Total SWP Inflows              | 48.1 |            |                       |      |   |                      |     |   |                             |     |

### Santa Ana River Inflows

| SAR PH #3 Penstock (calc) |                                  |      | BVMWC Highline |                             |     | SOD Release Subtotal |                        |       | Total SAR Inflows |                           |      |
|---------------------------|----------------------------------|------|----------------|-----------------------------|-----|----------------------|------------------------|-------|-------------------|---------------------------|------|
| G2                        | Northfork Canal Weir             | 3.2  | A2             | Newport                     | 0.0 | D1                   | BVMWC River PU (USGS)  | 4.9   | A1                | SAR PH #3 Penstock (calc) | 10.8 |
| H2                        | Edwards Canal                    | 0.0  | D2             | Boullioun Box Weir          | 4.8 | E1                   | Main River Gage (USGS) | 0.0   | B1                | BVMWC Highline            | 4.8  |
| J2                        | Tailrace Valve to Parshall Flume | 12.5 | 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)     | 4.9  |
| V1                        | PH#3 Afterbay SpillLoss to SAR   | 0.0  | B1             | BVMWC Highline              | 4.8 | Z1                   | SOD Release Subtotal   | 4.9   | E1                | Main River Gage (USGS)    | 0.0  |
| W1                        | Redlands Aqueduct / Sandbox      | 0.3  |                |                             |     |                      |                        |       | D1a               | BV Pick-Up gated          | 0.0  |
| Y1                        | Redlands Sandbox Spill           | 0.1  |                |                             |     |                      |                        |       | A5                | Total SAR Inflows         | 20.5 |
|                           | minus                            |      |                |                             |     |                      |                        |       |                   |                           |      |
| D1                        | BVMWC River PU (USGS)            | 4.9  |                |                             |     |                      |                        |       |                   |                           |      |
| I1                        | Redlands Tunnel                  | 0.4  |                |                             |     |                      |                        |       |                   |                           |      |
| A1                        | SAR PH #3 Penstock (calc)        | 10.8 |                |                             |     |                      |                        |       |                   |                           |      |
| K1                        | PH#3 Penstock (SCADA)            | 14.4 |                |                             |     |                      |                        |       |                   |                           |      |

| Other |                               |      | Seven Oaks Dam |                                 |        |
|-------|-------------------------------|------|----------------|---------------------------------|--------|
| J1    | Big Bear Lake Release         | 0.9  | W              | Observation at SOD              | 2136.5 |
| L1    | SCE SAR AVM (SCADA)           | 20.0 | X              | SOD Reservoir Elevation (scada) | N/A    |
| X1    | SAR-MC Spread (Red. Aqueduct) | 0.0  | Y              | Debris Pool Elevation           | 0.0    |

| Edison Generation   |                                     |
|---------------------|-------------------------------------|
| SAR PH#1 Generating | <input checked="" type="checkbox"/> |
| SAR PH#3 Generating | <input checked="" type="checkbox"/> |

### Santa Ana River Deliveries

| Greenspot Pipeline |                             |     | Tailrace Pipeline |                                  |      | SBVWCD Parshall FlumeTo Basins |                                  |      | Deliveries |                             |      |
|--------------------|-----------------------------|-----|-------------------|----------------------------------|------|--------------------------------|----------------------------------|------|------------|-----------------------------|------|
| M1                 | SBCFCD Grove                | 0.0 | G2                | Northfork Canal Weir             | 3.2  | J2                             | Tailrace Valve to Parshall Flume | 12.5 | V1         | SAR PH #3 Afterbay Spill    | 0.0  |
| N1                 | BVMWC Highline              | 0.0 | H2                | Edwards Canal                    | 0.0  | K2                             | Northfork Parshall Flume         | 0.0  | W1         | Redlands Aqueduct / Sandbox | 0.3  |
| O1                 | Newport for BVMWC           | 0.0 | J2                | Tailrace Valve to Parshall Flume | 12.5 | H1                             | SBVWCD Diversion                 | 0.0  | Y1         | Redlands Sandbox Spill      | 0.1  |
| P1                 | SBVWCD Mill Creek Spreading | 0.0 | K2                | Northfork Parshall Flume         | 0.0  | L2                             | SBVWCD Parshall Flume            | 12.5 | Z2         | Cuttle Weir To River        | 0.0  |
| Q1                 | Crafton WC Unger Lane       | 0.0 | I2                | Tailrace Pipeline                | 15.7 |                                | Parshall Flume (SCADA)           | 11.9 | B1         | BVMWC Highline              | 4.8  |
| R1                 | BVMWC Highline to Boullioun | 0.0 |                   |                                  |      |                                |                                  |      | C1         | Greenspot Pipeline          | 0.0  |
| S1                 | Crafton WC Boullioun        | 0.0 |                   |                                  |      |                                |                                  |      | I2         | Tailrace Pipeline           | 15.7 |
| T1                 | Tate Pump Station to Zanja  | 0.0 |                   |                                  |      |                                |                                  |      | L2         | SBVWCD Parshall Flume       | 12.5 |
| C1                 | Greenspot Pipeline          | 0.0 |                   |                                  |      |                                |                                  |      |            | minus                       |      |

| Irrigation |                    |       |
|------------|--------------------|-------|
| D2         | Boullioun Box Weir | 4.8   |
|            |                    | minus |
| B2         | Gay Overflow       | 2.6   |
| C2         | Irrigation         | 2.2   |

|    |                                  |      |
|----|----------------------------------|------|
| J2 | Tailrace Valve to Parshall Flume | 12.5 |
| K2 | Northfork Parshall Flume         | 0.0  |
| I1 | Redlands Tunnel                  | 0.4  |
| N2 | Total SAR Deliveries             | 20.5 |

### Mill Creek Inflows

| Total MC Inflows |                             |     | Other |                                  |       |
|------------------|-----------------------------|-----|-------|----------------------------------|-------|
| A3               | RPU Flow                    | 0.0 | E3    | M/C #1 Penstock Flow             | 0.0   |
| B3               | M/C #3 Penstock             | 0.0 | F3    | Stream Parshall Flume to Yucaipa | 0.0   |
| C3               | SBVWCD Mill Creek Diversion | 2.0 | G3    | Observation at Garnet            | 100.0 |
| D3               | Total MC Inflows            | 2.0 |       |                                  |       |

### Mill Creek Deliveries

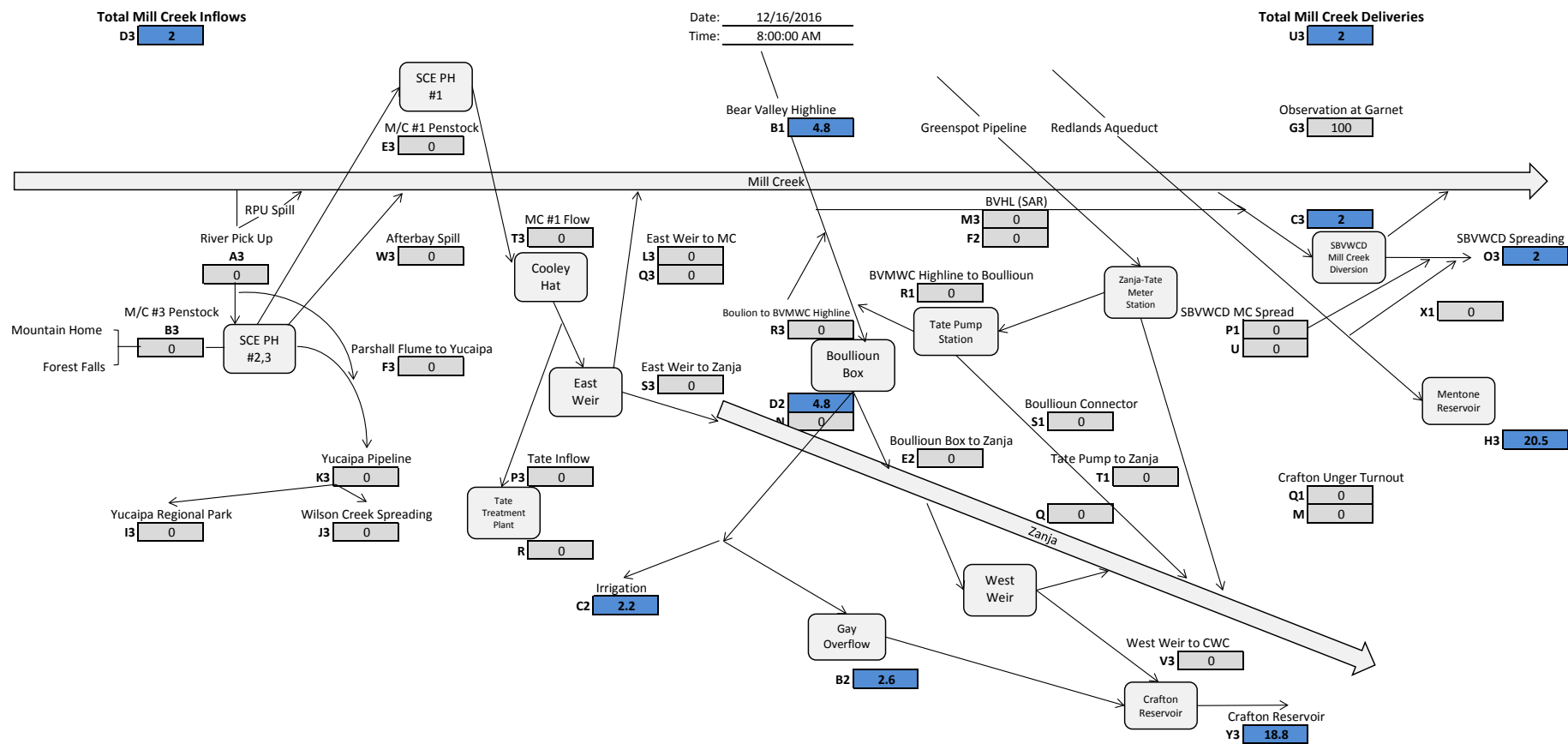
| Yucaipa Pipeline |                        |     | MC #1 Flow (Cooley Hat) |                         |     | Total MC Deliveries |                                 |     | Other |                                   |      |
|------------------|------------------------|-----|-------------------------|-------------------------|-----|---------------------|---------------------------------|-----|-------|-----------------------------------|------|
| I3               | Yucaipa Regional Park  | 0.0 | P3                      | Tate Inflow             | 0.0 | C3                  | SBVWCD Mill Creek Diversion     | 2.0 | H3    | Mentone Reservoir Level           | 20.5 |
| J3               | Wilson Creek Spreading | 0.0 | Q3                      | East Weir to Mill Creek | 0.0 | T3                  | Mill Creek #1 Flow (Cooley Hat) | 0.0 | R3    | Boullioun to BVMWC Highline       | 0.0  |
| K3               | Yucaipa Pipeline       | 0.0 | S3                      | East Weir to Zanja      | 0.0 | U3                  | Total MC Deliveries             | 2.0 | V3    | Zanja West Weir to CWC Canal      | 0.0  |
|                  |                        |     | T3                      | MC #1 Flow (Cooley Hat) | 0.0 |                     |                                 |     | W3    | Mill Creek PH #2,3 Afterbay Spill | 0.0  |
|                  |                        |     |                         |                         |     |                     |                                 |     | V3    | Crafton Reservoir Level (21.3)    | 18.8 |

| SBVWCD MC Spreading |                               |     |
|---------------------|-------------------------------|-----|
| C3                  | SBVWCD Mill Creek Diversion   | 2.0 |
| L3                  | East Weir (MC)                | 0.0 |
| M3                  | BVHL (SAR)                    | 0.0 |
| X1                  | SAR-MC Spread (Red. Aqueduct) | 0.0 |
| O3                  | SBVWCD MC Spreading           | 2.0 |

### SBVWCD Recharge

| Location                        |                             | Type   | Previous Day (AF)      |      | WY To Date (AF)              |         | Target  | Calendar Year To Date (AF) |         | Target  |
|---------------------------------|-----------------------------|--------|------------------------|------|------------------------------|---------|---------|----------------------------|---------|---------|
| A4                              | Santa Ana River             | SAR    | E4                     | 14.5 | I4                           | 504.0   | 166,000 | I4                         | 2,766.6 | 166,000 |
| M4                              | Santa Ana Rvr to Mill Creek | SAR-MC | N4                     | 2.9  | O4                           | 160.9   |         | O4                         | 326.5   |         |
| B4                              | Santa Ana River             | SWP    | F4                     | 0.0  | J4                           | 0.0     |         | J4                         | 15.0    |         |
| C4                              | Mill Creek                  | MC     | G4                     | 2.8  | K4                           | 83.8    | 99,700  | K4                         | 954.1   | 99,700  |
| D4                              | Mill Creek                  | SWP    | H4                     | 0.0  | L4                           | 0.0     |         | L4                         | 17.6    |         |
|                                 | Redlands                    | SWP    |                        | 0.4  |                              | 10.2    |         |                            | 179.8   |         |
|                                 | Loma Linda                  | SWP    |                        | 0.0  |                              | 486.6   |         |                            | 486.6   |         |
|                                 | East Valley                 | SWP    |                        | 42.0 |                              | 3,158.8 |         |                            | 5,071.3 |         |
| SAR Passing Cuttle Weir         | 0                           |        | Share of Lost Flow     | 0    | Estimate SAR Recharge        | 0       |         |                            |         |         |
| Mill Creek Passing Garnet       | 100                         |        | Share of Lost Flow     | 0    | Estimate Mill Creek Recharge | 100     |         |                            |         |         |
| Flow in the River Above Alabama | 100                         |        | Flowing Beyond Alabama | 0    | Total River Recharge         | 0       |         |                            |         |         |

Santa Ana River - Mill Creek Cooperative Water Project  
Mill Creek Stations



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